

UNITED STATES DEPARTMENT OF AGRICULTURE

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NATIONAL ORGANIC STANDARDS BOARD

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PUBLIC COMMENT WEBINAR

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WEDNESDAY
OCTOBER 13, 2021

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The Board met telephonically at 12:00
p.m., Steve Ela, Chair, presiding.

PRESENT

STEVE ELA, Chair
NATE POWELL-PALM, Vice Chair
MINDEE JEFFERY, Secretary
SUE BAIRD
ASA BRADMAN
AMY BRUCH
BRIAN CALDWELL
JERRY D'AMORE
CAROLYN DIMITRI
RICK GREENWOOD
KIM HUSEMAN
LOGAN PETREY
KYLA SMITH
WOOD TURNER

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STAFF PRESENT

MICHELLE ARSENAULT, Advisory Committee
Specialist, Standards Division
JARED CLARK, National List Manager, Standards
Division
DAVID GLASGOW, Associate Deputy Administrator,
National Organic Program
ERIN HEALY, Director, Standards Division
ANDREA HOLM, Materials Specialist
DEVON PATTILLO, Agricultural Marketing
Specialist, Standards Division
DR. JENNIFER TUCKER, Deputy
Administrator, National Organic Program;
Designated Federal Official

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P-R-O-C-E-E-D-I-N-G-S

12:00 p.m.

MS. ARSENAULT: Alright. Great. Well, welcome, everybody. I see about 83 people on the line with us.

I expect the numbers will jump a little bit as the West Coast people, and maybe beyond West Coast, are starting to log in.

So, if you're online with us on the video, you should see a "Welcome" screen that has some dial-in information.

If you're having trouble with your camera or the audio through the computer, you can always dial in on the phone and join us that way.

I also chatted that information into the chat, which, if you hover over your "Zoom" screen, you'll see a task bar at the bottom.

There is a "Chat" feature and I put some information in there to get us started this morning.

So, let me back up here. So, if you are on the call with us, we ask that you do stay on mute and keep your camera turned off. It helps

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with bandwidth.

Sometimes you may get a message on screen that says your internet connection is unstable. And if you turn off your camera, it usually helps.

For the mic and camera, just for those of you who haven't been on Zoom every single day for the last two years, it is at the bottom of your screen on the left-hand side.

If you hover over your "Zoom" screen, you'll see a microphone that you can mute and unmute yourself there. And then next to it is a video camera and you can start and stop your camera that way.

If you hover over your video tile, you'll see three dots in the upper right side. You can also do those two things from that menu as well, mute and unmute and stop your video.

When you are called on to speak -- for commenters when you are called on to speak, we ask that you unmute yourself and then turn your camera on, if you want.

It's optional. You don't have to be

on camera if you don't want to be on camera, and you can do so in either of those two ways.

We'd ask that you keep yourself on mute otherwise, because we want to minimize background noise, dogs barking -- I'm in between two construction sites. So, I will keep myself on mute for most of the day.

The Chat is enabled. So, if you hover over your screen, you'll see the "Chat" feature at the bottom. Please feel free to chat with each other and shout out to folks.

You should be able to chat with individual people as well as everyone, which will include all of the NOP staff as well, but chats are not part of the public record and it's not a way to comment to the Board.

The commenters had to sign up in advance and Steve has a list in front of him and will call on folks in the order in which they signed up to speak. So, we're not answering questions of that nature in the chat.

So, for speakers, please make sure your name is displayed in your video window. You can

rename yourself.

Going to the upper right of your tile, you can rename yourself. And if your name is not displayed properly, we may not be able to find you if we need to unmute you.

So, just double-check that your name is correct. If not, you can chat me and I can fix it.

Also at the bottom of your Zoom screen you'll see a button that says, "Reactions." There's a raised hand feature in there that the board members will be using, but we ask that you don't use your "Raised Hand" feature because we're not calling on people.

Commenters, again, signed up in advance and Steve will call on you as we go through the day.

Let's see. Oh, you can rearrange what you see on your personal screen. If you hover over your Zoom screen, in the upper right you'll see a button that might say "View," it might say "Gallery View." It's a nine-dotted grid. You can change to "Gallery View" or "Speaker View."

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Jared and Andrea are running the slides today for us and they're going to spotlight my camera, which will be on the speaker timer.

So, that should appear on your screen throughout the whole day. You'll be able to see the timer countdown and hear it very loudly.

If you're having technical issues with Zoom, you can go to their help center. I chatted in the link to Zoom help. They are very helpful.

You can chat with them, call them -- I think those are probably the most beneficial ways -- in realtime.

And the webinar is being recorded as soon as I hit the "Record" button. We won't post the recording, but we will have a transcript that will be available after the conclusion of the Board meeting next week.

So, I'm going to start the recording and turn the mic over to the National Organic Program Deputy Administrator Jenny Tucker.

Jenny?

MR. ELA: Just real quickly, Michelle, and the program -- I'm now -- almost all the Board

is at the bottom of the list for me. Like, at the very bottom.

So, there's only -- Brian's phone is at the top. So, I'm not sure what's going on with that, but FYI.

Go ahead, Jenny.

DR. TUCKER: Okay. Thank you, Michelle. Hi, everybody. I am Jennifer Tucker, Deputy Administrator of the National Organic Program.

Welcome, first, to all of our National Organic Standards Board members. We are becoming very practiced in this online mode of engagement, but I genuinely miss our in-person connections and hope we will be able to return to that in the spring.

I would particularly like to acknowledge our three board members who are beginning their last meetings of this term -- of their terms.

And so, first, our chair for the past two years, Steve Ela. Steve, thank you for everything.

So, this is, by the way, how we applaud

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in Zoom is we wave two hands in front of the camera.

So, we're going to thank Steve Ela and then we are also going to thank Sue Baird.

Sue, thank you so much for your service.

And Asa Bradman, thank you so, so much for your service and congratulations on getting to your final meeting of your five-year terms.

I wish I could give you each a big hug of thanks. Thank you for your hard work and for your service over the past five years. Again, thank you.

To our public commenters, thank you for again engaging in this process with us. Thank you for signing up to have your voices heard.

I also thank our audience. As always, you are important witnesses to this public meeting process and we are glad you are here.

This webinar opens a series of virtual webinars that will occur over multiple days. Two days this week and three days next week.

Meeting access information for all meeting segments is posted on the NOSB meeting page on the USDA website. Transcripts for all segments

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will be posted once completed.

This meeting, like other meetings of the National Organic Standards Board, will be run based on the Federal Advisory Committee Act and the Board's Policy and Procedures Manual. I will act as the designated federal officer for all meeting segments.

Now, Steve is going to take the helm for this session and I'd like to preview and strongly uphold something he's going to review with you.

In an open and transparent process, mutual respect and professionalism is critical.

I was disturbed by some of the disparaging comments made in written comments this round.

If oral comments cross the line into disparagement and personal attacks, the Chair, or another board member, will speak up to stop it.

So, please, please engage, but engage with grace.

To close, I thank the National Organic Program Team, an amazing team that I'm honored to work with every day. And so, we're going to give them an applause as I read their names.

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Michelle Arsenault, who brings us all together each time. Jared Clark, Andrea Holm, Devon Pattillo, Dave Glasgow and our fearless standards director Erin Healy.

I also want to again thank Steve Ela, chair of the Board, who is about to lead his fourth virtual meeting and the final meeting of his term.

So, let's give Steve a big round of applause. Thank you.

And I think I'm now handing off the mic to Erin Healy, Standards Division Director, who will do a roll call of NOSB members and NOP staff.

Thank you for being here.

MS. HEALY: Thanks, Jenny. Good morning or good afternoon to everyone, depending on your time zone.

I am going to read off the roll calls. I'll start with Steve Ela, NOSB Chair.

MR. ELA: I am here.

MS. HEALY: Nate Powell Palm, Vice Chair.

MR. POWELL-PALM: Good morning. I'm here.

MS. HEALY: Good morning.

Mindee Jeffery, Secretary.

MS. JEFFERY: Good morning. Thank you.

MS. HEALY: Good morning.

Sue Baird?

MS. BAIRD: Yes. Thank you. I'm here.

MS. HEALY: Good morning.

Asa Bradman.

MR. BRADMAN: I'm here, too. Thanks.

MS. HEALY: Hello.

Amy Bruch.

MS. BRUCH: Present. Thank you.

MS. HEALY: Brian Caldwell.

MR. CALDWELL: Also here. Thank you.

MS. HEALY: Hello.

Jerry D'Amore.

MR. D'AMORE: Hello from California.

Here.

MS. HEALY: Hello.

Carolyn Dimitri.

DR. DIMITRI: Good afternoon. I'm

here.

MS. HEALY: Hello.

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Rick Greenwood.

MR. GREENWOOD: I'm here also from
California.

MS. HEALY: Good morning.

Kim Huseman.

MS. HUSEMAN: Hello. I'm present.

MS. HEALY: Good morning.

Logan Petrey.

MS. PETREY: I'm present.

MS. HEALY: Good morning.

Kyla Smith.

MS. SMITH: Good afternoon, everybody.
I'm here.

MS. HEALY: Hello.

And last, but not least, Wood Turner.

MR. TURNER: Here. Good morning.

MS. HEALY: Alright. That's everybody.

Jenny already introduced the folks that are on
the call, so I'm going to hand it back to Michelle
-- sorry, back to Steve.

MR. ELA: Alright. Well, I just want
to say what's already been said, but thank you to
all the NOSB members.

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This is a long process leading up to the Board meetings, a lot of work, and I think everybody has really done a great job in getting things to the public and then, as well, to the stakeholders for all the wonderful public comments that have been sent in.

It really does inform our work and oftentimes may change our minds or also help reinforce what we're thinking, but the public comments really do make a difference in our work and I think it's one of the best things about the NOSB is to be the conduit between all of you and the program, but I think it's a rare thing and it's a privilege to be part of that.

So, with that, we'll kind of start jumping into things and just go through some housekeeping items.

Just a reminder, there is a Policy and Procedures Manual about public comments that is published and available in terms of our policies and procedures.

Of those, all speakers who will be recognized signed up during the registration

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period. So, we won't recognize anybody who did not sign up.

When you first start to speak, please give your name and affiliation for the record at the beginning of the public comment.

And if you are a consultant, for example, working for another company, if you would also let us know who you're speaking for just in terms of knowing if you're representing yourself or somebody else, that would be greatly appreciated.

Proxy speakers are not permitted. If you signed up, you are the one that has to give the comments.

And as Jenny already mentioned, and given some of the tenor of some of the written comments, I want to stress again this is a professional meeting and a professional board with people doing their best.

And so, any individuals providing public comment shall refrain from making any personal attacks or remarks that might impugn the character of any individual, and I'm going to say

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company as well.

So, let's keep it professional and talk about the proposals at hand and the sunsets and stick to that and not try and decide what somebody else is thinking.

We do ask, just to help us, that members of the public are asked to define clearly and succinctly the issues they wish to present before the Board.

This will give us, the NOSB members, a comprehensible understanding of the speakers' concerns.

We will call the speakers in order of the schedule. Each commenter will have three minutes to speak.

As always, Michelle has got her favorite timer right up there at the top that will sound when your time is up.

When you hear the timer, please finish your sentence and end your comment. We want to give everybody the same amount of time. So, please be respectful.

And, Michelle, are you ready for that

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preview of what it sounds like?

MS. ARSENAULT: Perfect timing. I just got buzzed by a helicopter.

(Laughter.)

MS. ARSENAULT: Can everyone hear?

MR. ELA: That either means that your egg is done on your egg timer or it's time for you to finish making a comment.

So, just, in general, Michelle will pin that timer at the top of the screen so you can see it.

I will always announce the speaker that we're going to and then I usually will announce who is going to be up next. and maybe even the next couple people, just so anybody, if you're coming up, you'll be ready, you can be ready to unmute yourself and turn on your video, if you so choose.

After your comment, board members will indicate to me if they have questions and I will call on them in the order that they raised their hands.

And I will ask board members if I don't see a raised hand or I don't catch you, please jump

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in and let me know that you did want to ask a question because I sometimes miss that and it doesn't bother me if you let me know verbally. So, don't be shy. And only NOSB members are allowed to ask questions, just to be clear, as always.

At the end of the day, we do have a wait list. And if we're not running too late, I will start calling on people from the wait list.

If you're on the wait list and we don't get to you today, we will do our best to get to you on Thursday. So, please hang in there for both days if we haven't gotten to you today.

And also, if either we have technical problems with somebody or somebody isn't present, we do circle back at the end of the list, circle back to those that weren't present as we work through it just to make sure that we give them a chance and there weren't technical issues preventing them from speaking.

With that, does the Board have any questions about how this procedure works?

(Pause.)

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MR. ELA: Alright. Well, we'll jump into it and we've got a full schedule. So, the only other thing I will say to the board members, as I've said before, because we're so tight, please refrain from making comments to the stakeholders who are giving this testimony, but do ask questions.

So, I guess, use this time for questions, not comments. This is one of the few times we get to interact directly with our stakeholders. So, let's make the most of that time.

Alright. We're going to start off with Tim Stemwedel. The next speaker after Tim will be Daren Stemwedel and then Deborah Stemwedel.

So, Tim, you are first up. Please state your name and affiliation for the record and you can begin your testimony.

MR. T. STEMWEDEL: Alright. Tim Stemwedel. I'm president and owner of California Organic Fertilizers.

As a biologist and agronomist, I find it insane that the NOSB is contemplating placing

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what the Crops Subcommittee agrees unanimously is a natural material, a molecule, ammonia, that's essential to life on earth, on the National List as a prohibited natural substance.

In general, the Crops Subcommittee's report is full of misleading and opinionated statements that should be discarded.

They have failed to see qualified advice so that each NOSB member may fully understand the issue.

It's rather disgraceful that the validity of the TR report has been accepted as factual regardless of the countless respondents pointing out the many flaws.

The Crops Subcommittee failed to compare AE products to existing products to determine negative environmental impact relative to products already in the marketplace.

Composting studies on animal manure show 40 to 60 percent of the total nitrogen is volatilized as ammonia and lost to the atmosphere.

Poultry manure contains synthetic phosphate as feed and chemicals to control

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emissions of ammonia. Liquid fish contains synthetic acids.

I disagree with the NOSB Crop Subcommittee's vote to prohibit AE made using separation stripping processes.

Since you agree by vote that AE is a natural substance, you agree that ammonia, the molecule itself, made using concentration methods or separation stripping methods are the same.

No evidence has been provided that shows the ammonia from separation is different from that of concentration. The only difference is whether or not other ingredients are present.

If I understand the law correctly, concentrated ingredients is a blend and can't be placed on the National List, but this is what you propose.

Since you agree that the ammonia molecule is the same, you are actually proposing to prohibit a group of manufacturing processes which have always been approved for use in organic agriculture.

They agree that separating provides

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more purified product, but viewed that as a negative and no justification.

The acknowledgment that concentrating includes all the soluble ingredients on the base materials, they acknowledged that, the Committee has failed to analyze or consider the non-ammonia ingredients other than carbon, such as salts and sodium and other substances which may be toxic.

The Committee has provided no evidence that separation technologies don't meet criteria defined by OFPA and subsequent regulations.

They claim the organic ag is sustainable and regenerative, but push for regulations against new technology that recycles nutrients, creates green energy, lowers groundwater pollution by nitrates, improve carbon sequestration and increases sustainability of agriculture.

The Committee accepts ammonia as a natural, but clearly does not see the ammonia molecule as equal in all respects to carbon molecules and essential for carbon to function in biology. I ask you to vote no on this proposal.

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MR. ELA: Thank you very much. Are there questions from the Board, if you would raise your hands?

(Pause.)

MR. ELA: Alright. I am not seeing any hands. So, thank you very much for your testimony and we will move next to Daren Stemwedel, followed by Deborah Stemwedel and then Lynn Coody.

So, go ahead, Daren. Please state your name and affiliation and proceed with your comments.

MR. D. STEMWEDEL: Good morning. My name is Daren Stemwedel. I'm the general counsel for California Organic Fertilizers.

The proposal on ammonia extracts stems from an inadequate technical report and the improper influence of interested parties.

The OFPA states the NOSB shall convene technical advisory panels to provide scientific evaluation of materials considered for the National List. Such panels may include experts in agronomy, entomology, health sciences and other relevant disciplines.

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Despite this law, the NOSB uses technical reports and task forces in lieu of such panels.

The policy manual requires that, quote, the third-party contractor must have technical expertise relevant to the petition.

The relevant areas and expertise here are soil health, agronomy, human health, organic crop production and the organic regulatory environment and its enforcement.

The individual hired to draft the TR, Dr. Shivokevich, is not a soil scientist. He's not an agronomist. He does not have a medical background.

MR. POWELL-PALM: I apologize. I'm going to have to jump in here. Please do not speak disparagingly about individuals. Please stick to the topic at hand.

MR. D. STEMWEDEL: You know, with all due respect, sir, I'm a member of the public commenting on a federal rulemaking process.

The First Amendment of the United States Constitution guarantees me the right to make

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such comments particularly where I am raising issues I wish to preserve for potential future litigation.

Your admonition to the contrary is highly improper and, quite frankly, it's another example of issues I want to raise today.

Now, I'm going to continue. If you could please replace the time on my --

MR. POWELL-PALM: No, we don't replace enough time. Please continue.

MR. D. STEMWEDEL: Okay. He is not an organic farmer. He has no apparent expertise in the enforcement of organic regulations.

Unsurprisingly, the TR is replete with errors and misunderstandings of the nature and application of natural ammonia extracts.

The manual also requires the Crops Subcommittee to ensure that the TR is, quote, based on the best available information that could be obtained within the designated time frame.

While the TR has an impressively long list of citations, not one appears to be about the natural ammonia products you seek to ban.

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Why didn't the author of the TR take the time to reach out and ask questions from experts like us who have developed and sell these products for use in organic farming?

The TR repeatedly claims that reports are not available on ammonia extracts, so it will use conventional ammonia as a substitute.

This is absurd. The author of the TR did not attempt to find, or, perhaps, did not know where to find such reports.

NOSB policies also require impartiality both from NOSB members and those contracted to advise their opinions.

And further, substitution of the legally required advisory panel of the NOSB engaged an ammonia task force assembled by the Organic Trade Association.

I do not know who is on this task force.

I asked the OTA, but they would not tell me.

I do know that the author of the petition himself, Mike Menes, is on the Board of Directors of the OTA.

How can the NOSB claim impartiality

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when it sought special guidance from the task force of an organization led by the petitioner?

The OTA also submitted a lengthy written comment, which reads very much like the petition, and nowhere is that conflict of interest disclosed.

MR. POWELL-PALM: Thank you for your comments.

MR. D. STEMWEDEL: This is (inaudible) breach for both the NOSB and the OTA, an organization which is poked in the guise of partiality purporting to be a, quote, unifying voice of the organic industry.

MR. ELA: Okay. Your time is up, so are there any questions from the Board for the speaker?

MR. D. STEMWEDEL: There is also written comment purporting to be --

MR. ELA: Excuse me, sir. If you continue, we will have to mute you. Please respect this.

Are there any questions from the Board?

MR. D. STEMWEDEL: -- (inaudible) is an expert in this to support trade law --

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MR. ELA: Okay. Can we mute the speaker? Thank you. We warned you several times. You continued. So, please respect our process.

Are there any questions?

(Pause.)

MR. ELA: Alright. With that, we will move on to Deborah Stemwedel, followed by Lynn Coody and Allen "Fee-lo" or "Fi-lo." I apologize if I mispronounce your name.

So, Deborah, please state your name and affiliation and start your comments.

MS. ARSENAULT: Deb, you're on mute. There we go. Go ahead.

MS. STEMWEDEL: Thank you. Good morning. My name is Deborah Stemwedel and I'm with California Organic Fertilizers.

"Without facts, you can't have truth. Without truth, you can't have trust." This is a quote from Maria Ressa, who won a Nobel Peace Prize last week for her efforts to safeguard freedom of expression.

It is my hope that NOSB members take this quote to heart. The repeated violation of

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free speech during these meetings must stop.

Many of us joining the NOSB meetings are struggling with trust issues. The handling of the petition to make natural ammonia a prohibited substance is a travesty. It has been completely corrupted by personal bias.

Misinformation has taken on a life of its own. Science has been ignored, disparaged and replaced by gut feelings.

Whether stakeholders are for or against this petition, all of us should be appalled by the way it has been handled.

The rush to bring this petition to a vote demeans the entire petition process and the flaunting of all policies and procedures is an affront to the organic community.

Placing a natural substance on the National List should be taken with the utmost care.

Instead, the Crops Subcommittee has twisted this process to propose listing it out of an abundance of caution. Without facts, you can't have truth. Without truth, you can't have trust.

On March 2nd, the minutes of the Crops

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Subcommittee meeting state that more information is needed. Discussion is had about the inadequacies of the technical report.

The next recorded action is the presentation of a draft proposal on July 27th. None of the minutes between the March 2nd and the July 27th meeting record any new information being considered or shared. This is simply wrong and a breach of the public's trust.

Not a single action required by the NOP has been taken. Not one of the six required criteria has been completed.

NOSB members agree to follow certain standards when accepting their positions. These standards are clearly stated in the NOSB policy and procedure manual.

This manual requires members to have the ability to evaluate technical information and to fully participate in board deliberations and recommendations.

The meeting minutes do not reflect either evaluation or participation and the pending proposal reflects this lack.

I respect the dedication and passion of NOSB members. I believe you have the courage to start this process over and to do it correctly.

I encourage members who feel that the process was rushed, that shortcuts were taken, that science was dismissed in favor of opinion or who simply feel they do not have the expertise to vote, stop this process, refocus the Committee's efforts on a fair, impartial and transparent study of (inaudible). Thank you for your time.

MR. POWELL-PALM: Thank you.

MS. ARSENAULT: Steve, if you're talking, you're on mute.

MR. ELA: Thank you. Are there any questions?

(Pause.)

MR. ELA: Alright. Thank you, Deborah, for your comments. We're going to move on to Lynn Cody, followed by Allen Philo and then Daniel Hazen.

So, Lynn, state your name and affiliation and give us your comments.

MS. COODY: Hi. My name is Lynn Coody

and I'm presenting comments for the Organic Produce Wholesalers Coalition, seven businesses that distribute fresh organic produce across the United States and internationally.

Today, I'm commenting on biodegradable/biobased mulch, sodium nitrate and ammonia extract.

Biodegradable/biobased mulch. OPWC supports the proposed change to the definition to allow at least 80 percent biobased content.

We think the proposal strikes a balance that recognizes the needs of growers, as well as their concerns about plastic mulch films, while providing a mechanism for increasing use of biobased content in agricultural films.

We also ask the NOSB to document and advance in its cover letter the subcommittee's concept that use of a greater-than 80 percent biobased material be required when commercially available.

Sodium Nitrate. OPWC concurs with the proposal to make a technical correction to reinstate the prior annotation for the listing of

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sodium nitrate.

We support this idea as an effort to increase regulatory quality especially for growers of organic produce.

We also urge NOP to implement the Board's prior recommendation on sodium nitrate.

Failure to do so has not only resulted in growers using more sodium nitrate, but also in more confusion about the material's regulatory status.

Ammonia extract. OPWC supports the prohibition of nonsynthetic AE because, after detailed analysis, our primary conclusion is that, as a soluble, bioavailable fertilizer, nonsynthetic AE is not compatible with the NOSB principles of organic production.

We fully support Motion 1. We have concerns about Motion 2 because, on its own, it allows some use of concentrated AE, which we do not think is appropriate for a material that does not meet organic principles.

And we conclude that Motion 3 should be decoupled from the decision on the AE petition so that full implications of new practice standard

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can be considered.

We noted that both the subcommittee and stakeholders on all sides of the issue share a clear intention that the language used to regulate ammonia extract differentiate between AE and other nitrogen-containing fertilizers that have been in long use.

However, the subcommittee proposal did not directly tackle this concern about unintended impacts of non-target materials.

Please put on Slide 2, Michelle. In our written comments, OPWC offers a plan to address this critically important aspect of regulating AE through information to be conveyed in the NOSB's cover letter to the NOP.

Our plan has four main features. It is based on the subcommittee's motions; it proposes language for an exclusion clause that specifically excludes -- sorry, specifically addresses which nitrogen-containing fertilizers would be excluded from definition as an AE and, therefore, not prohibited; it creates a definition for AE that should not require frequent revision; and it

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supports a simplified listing for AE on the National List. Thank you.

MR. ELA: Thank you, Lynn. Are there questions for Lynn?

(Pause.)

MR. ELA: Alright. I am not seeing any. So, thank you, Lynn. We appreciate it.

MR. POWELL-PALM: I think Amy and Brian have hands raised.

MR. ELA: I'm still having trouble seeing my list. So, I apologize. I think I'm going to have to look at the pictures. Thanks, Nate.

Go ahead, Amy, and then we'll go to Brian.

MS. BRUCH: Okay. Thank you, Steve. And, Lynn,, thank you for your contributions today and the written comments. I just wanted to say thank you.

I know this isn't a subject that you talked about, but on the supply chain verification I just wanted to thank your organization for including extended comments on that and then as

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well on the handling standards. I appreciated to read a little bit more on what your group's focus was on that, so thank you.

MS. COODY: Okay. Thanks, Amy. We'll have Mike Dill commenting on that specifically tomorrow, too.

MS. BRUCH: Okay. Perfect.

MR. ELA: Okay, Brian, go ahead.

MR. CALDWELL: Yeah, thanks, Lynn. Just wondered if you had some specific examples of the ammonium discussion where No. 3 captures things that it doesn't mean to.

MS. COODY: No. 3? Motion No. 3? Is that what you're talking about?

MR. CALDWELL: I think that you presented the extra wording to clarify No. 3. Am I not right about that?

MS. COODY: Actually, we presented an exclusion clause. Michelle, could you put that slide back up there? I think it's Slide No. 2. It shows our exclusion clause.

We presented an exclusion clause with the intent that the two motions would be sandwiched

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together, as suggested by the Crops Subcommittee, as an option for presentation in a regulatory sense.

So, basically we would have these two motions together with an exclusion clause added on to help explain which materials would not be included.

So, this would eliminate from the definition of AE, any materials that have just physical filtering or removal of water would clearly be taken out of the bucket of any materials that would be considered to be AE.

So, then since they're not an AE, they are not prohibited and, therefore, farmers can still use things like fish emulsion or compost tea or manure slurry, things like that.

MR. CALDWELL: Okay. I think I see where you're going and it's going to take a while to digest combining everything like this, but thank you very much.

MS. COODY: Thanks, Brian.

MR. ELA: Any other questions for Lynn?

(Pause.)

MR. ELA: Alright. Thank you, Lynn.

MS. COODY: Bye.

MR. ELA: We are going to move on to Allen Philo, followed by Daniel Hazen and then Amalie Lipstreu.

Allen, please state your name and affiliation and give us your comments.

MR. PHILO: Allen Philo with BioStar Renewables regarding proposed motions around ammonium extracts.

Please know I've been under the weather. So, if I cough or have to pause for a breath, just please be patient with me to finish at the end.

We at BioStar Renewables are not in opposition to the proposed motions, but certainly are concerned that they; one, lack adequate definition; two, are ill-defined in their scope, and; three, may be unenforceable.

Consequently, we believe that the motions need to go back to the subcommittee to be reworked before voted on by the full NOSB.

We, at BioStar, would prefer to be a

regulated part of the organic industry with a defined place. Subsequently, the following comments are for the improvement of the proposed motions: To further the goal of the NOSB without creating unintended consequences or unenforceable motions that potentially would not be acted on by the NOP.

I will cover the motion regarding the stripping technologies and my colleague Dan Hazen will cover the other motions.

The broadness of the stripping motion creates concerns that it would encompass all organic fertilizer materials and its objective interpretation of the name "stripping technologies" will lead to arguments about new manufacturing processes and whether existing processes are what is described in the motion.

In order to avoid these issues, we suggest the following changes be made to the motion: One, the motion needs to include the word "liquid" in it to limit the band to liquid fertilizers only.

At the moment, it could be read to

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encompass any dry fertilizer with an ammoniacal nitrogen content.

Two, the motion needs to define "stripping" in unambiguous language and preferably with a quantitative methodology.

An unambiguous definition would be, stripping technologies are those technologies that remove ammonium at higher concentrations from an organic substrate acceptable for field application as per present organic standards resulting in liquids with higher concentrations of ammonium in them than the starting materials. This does not include simple liquid solid separation techniques such as screw pressing, filtering or centrifuging, which remove all dissolved solids at the same rate as ammonium from said parent materials.

As a definition tied to quantitative methodology, we suggest the following definition:

A product is deemed to have been made by a stripping technology if the ratio of ammonium as a percentage of dissolved solids is higher than it was in the parent organic substrate at any point in the manufacturing process being used to create

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the liquid fertilizer.

Organic substrate that would be acceptable for a field application as per present organic standards are acceptable for testing for the original dissolved solids ratio as in lagoon water, digestate effluent, particulate scrubblings, et cetera.

It should be noted that in our manufacturing process of concentration we lose ammonium and the ratio of ammonium to dissolve solids decrease as opposed to the stripping technologies in question where it increases; and testing this ratio, therefore, provides an easily testable quantitative definition.

This methodology would not capture any intended materials of which we are presently aware.

This proposed definition and methodology is able to distinguish a fertilizer made with stripping technologies regardless of the total percent nitrogen in the final product, including products testing as low as one percent total nitrogen.

Again, we advance these definitions as

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solutions to avoid the above-identified issues with the present motion and are neither in favor or oppose the banning of stripping technologies.

Thank you.

MR. ELA: Thank you. Appreciate that.

Are there questions from the Board?

(Pause.)

MR. ELA: I have a question for you if I don't see anybody else. In your reference to that it should be addressed only to liquids and not solids, my understanding is that you can take a liquid and then make it into an ammonium salt that would just be another step in the process after a liquid.

So, could you explain to me more why solids, especially ammonium salts, should not be touched while only liquids should be?

MR. PHILO: The question really comes down to the nonsynthetic/synthetic decision tree.

At that point when something would be precipitated out of solution and become an ammonium salt, technically you would have formed a new molecular compound; therefore, that would not be considered

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a nonsynthetic.

That should be considered a synthetic substance and would actually not be -- there was a first motion you voted on declaring that these things were all nonsynthetic, but even that should only apply to the liquids.

Any solid salt that would precipitate out should automatically, by the rules, already in place be considered synthetic; therefore, these rules should be made to only apply to liquids.

MR. ELA: Okay. Great. Thank you. Thank you for that clarification. Any other questions from the Board?

(Pause.)

MR. ELA: Alright. Thank you very much. We appreciate your comments and I'm glad you made it through considering your health issues.

MR. PHILO: Thank you.

MR. ELA: We're going to move on next to Daniel Hazen, followed by Amalie Lipstreu and then Jane Sooby.

So, Daniel, please state your name and affiliation and start with your comments.

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MR. HAZEN: My name is Dan Hazen. I'm president of Perfect Blend Organics. We'd like to echo the position laid out by BioStar and, due to the time constraints, I'm going to comment on Motions 3 and 4.

There are several issues with these motions regarding what we believe the Board is trying to accomplish in pertaining to the enforceability of the proposed motions.

Also, the motions appear to create unintended consequences on the oversight of fertilizer manufacturing.

First, the intent of the motions appear to limit the total amount of ammonium entering the soil at one time; however, the motion does not limit this in any way.

Consider together if a fertilizer is less than 50 percent ammoniacal N and has a 3 to 1 C:N ratio, there is no limit to the amount of fertilizer that can be applied at one time or in total.

Two, there are no regulations requiring that nitrogen forms or carbon contents be listed

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on fertilizer labels.

This type of enforcement would require testing of individual materials during organic inspection placing too high a burden on the inspectors and the certification agencies.

Three, presently the CDFA and OMRI govern liquid fertilizer with an N total of more than three percent by subjecting them to one scheduled inspection per year and one unannounced inspection as a fraud prevention measure.

If the maximum amount of ammoniacal N allowed in these products is capped at three percent, then potentially any fertilizers in question are no longer subjected to this oversight.

The Board has indicated concerns regarding fraud and it would appear that this lack of oversight would be counterproductive.

In an effort to remedy these issues, please consider the following: One, the concerns that are being raised with ammonium are applicable to all high-nitrogen liquid fertilizers at present.

There's already a statute in place

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governing these products and could be used as a basis for a more enforceable regulation.

The cutoff for nitrogen content, regardless of the form of the nitrogen, would be capped at six percent. There's already a precedent established with the CDFA at this level.

Three, the total cumulative use would be capped at 20 percent of crop needs for any given crop. This avoids issues with stacking. And, four, the products would need to have a C:N ratio of 3 to 1.

This set of proposed rules would, No. 1, keep the burden of enforcement with MROs and allow the continued oversight of fertilizer manufacturing facility, which we encourage.

Two, limit the total amount of nitrogen in liquid form that could be used cumulatively creating a stronger regulation more in line with the spirit of organics.

Lastly, it would also capture liquified forms of sodium nitrate and any other new forms of high-nitrogen liquid fertilizers that would be developed in the future regardless of the form of

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nitrogen in the product.

And since I have 12 seconds left, one last thing to consider. Look at our carbon footprint, what we're talking about.

Let's just say you have 10 million gallons at six percent. That's the quotient of 2,000 truckloads. Three percent, that would take it to 4,000 truckloads. Think of the excessive fuel, wear and tear on our infrastructure.

MR. ELA: Great. Thank you very much, Dan. Appreciate it. It looks like Logan has a question for you.

MS. PETREY: Alright. Thank you. So, I have seen at BioStar -- or, excuse me, Perfect Blend, they do have a product for ammonia extract, is that correct, currently on the market?

MR. PHILO: Yes, we do, ma'am.

MS. PETREY: Okay. How long have you had that product?

MR. PHILO: Well, BioStar's had it registered since 2012. We've been in the marketplace since -- for three years. So, since 2018.

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MS. PETREY: Okay. To your knowledge, do you have farmers that are changing their fertilizer practices and not using as much compost or things that contain a carbon and instead using this product?

You know, the concern is that we're not feeding the soil microbiology through products like this and that there would be a huge replacement.

Didn't know if you saw that among the products that you currently have.

MR. HAZEN: What we see in the industry with our growers and our customers is is that they're using it only for their liquid program.

The one thing that we love about the organic industry and the farmers is they're very, very intelligent when it comes to protecting their carbon base.

And so, what we see is that they -- in the fall, they use a large dry program. We've been in the industry producing a dry granular since 2001.

So, they go out in the fall with a dry

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program and then they follow it up in the spring and summer with the liquid to continue to push that whole biological system.

MS. PETREY: Okay. So, in your opinion, this is not displacing products like the dry fertilizers or amendments and may just be a substitute for already used liquid programs?

MR. HAZEN: Exactly. They're basically replacing things like fish. They're concerned about -- frankly, they're concerned about the synthetics when you kind of look at fish and the whole phosphoric acid issue.

So, again, my hat's off to the organic industry and the growers. They know what they're doing.

MS. PETREY: Thank you.

MR. ELA: Looks like Amy has her hand up. You may be on mute. Hi, Amy.

MS. BRUCH: Hi. Sorry. Hopefully that's the only time I do that. Thank you for your written comments and your oral comments. I just have a couple questions/follow-ups.

When you extract your ammonia from the

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manure, what is done with the leftover manure product?

MR. HAZEN: So, in our particular case, we're concentrating the product. And so, what we do is is the liquid comes through -- as liquid comes through the operation, we're actually using a centrifuge to take out the last bit of -- not the last bit of particulate, but the particulate that is in the product to where it wouldn't allow the product to flow through a drip. And so, again, our carbon and nitrogen ratio is 3 to 1 or higher.

That actual centrifuge product goes right back out into our manure pile and we reprocess it through. So, it's a zero-waste type of system.

MS. BRUCH: Um-hm. What would be the analysis of that final -- of the product, of the waste stream?

MR. HAZEN: Prior to putting it through an evaporation process?

MS. BRUCH: Just post the ammonia being extracted.

MR. HAZEN: Well, we're not extracting the ammonia. The ammonia is actually in the water.

MS. BRUCH: Okay.

MR. HAZEN: It's in the water and so we're not -- again, we're not stripping or anything like that.

So, the liquid, before we concentrate it up, is anywhere from 1-1/2 to 2 percent.

MS. BRUCH: Um-hm. what I'm trying to --

MR. HAZEN: That's total nitrogen. And of that total nitrogen of 1-1/2 to 2 percent, 95 percent of that is ammoniacal, Amy.

MS. BRUCH: Okay. What I'm trying to focus in on is not necessarily the product that you're removing. I'm trying to focus on what's remaining and what you'll return back to manure or what is manure.

I was just trying to understand what that analysis is of --

MR. HAZEN: Well, the liquid -- the ammoniacal -- the liquid, let's just call it the liquid nitrogen, is going to be 1-1/2 to 2 percent in water.

And in that water, you're going to have

a remaining particulate. And through a centrifuge process, we're basically removing that particulate.

And so, that particulate, once it's removed, it's like our traditional, say -- I'm just going to throw out a 442 product. Okay?

MS. BRUCH: Um-hm.

MR. HAZEN: Of that 442 product, the ammoniacal nitrogen in that product is anywhere from a half to three-quarters of a percent in solid form.

MS. BRUCH: Okay. So, there is ammoniacal nitrogen still remaining in solid form in addition to the organic nitrogen.

MR. HAZEN: Correct.

MS. BRUCH: Okay. In more of a 442 form. Okay. And then my last -- or my second question would be, in the liquid program you mentioned to Logan that primarily folks are using this not substituting for their dry program, but the liquid.

How are they applying this liquid? Is it through ground rig, irrigation systems or is there another way to apply?

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MR. HAZEN: The product is designed where it can go through any system. So, you can see it being applied on a drip basis. You can see it applying through pivot irrigation. It can be applied through any type of application that's liquid.

MS. BRUCH: Um-hm. If not applied with water, is there a volatility with it?

MR. HAZEN: No, because it's stabilized and it's stabilized through our dry manufacturing process.

We're the only ones that have been able to actually -- we actually pH balance our product through our dry process, you know, which obviously becomes the liquid process, and so we're not using other type of additives

Of course, the fish has the phosphoric, it's been, you know, grandfathered, but we don't use citric or anything like that.

MS. BRUCH: Um-hm.

MR. HAZEN: It's a proprietary process, Amy, yeah. Go ahead.

MS. BRUCH: Okay. Thank you, Daniel.

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Appreciate that.

MR. ELA: Thank you, Dan. We do appreciate it.

MR. HAZEN: Thank you very much.

MR. ELA: We're going to move on to Amalie Lipstreu, and then Jane Sooby and then Julia Barton.

So, Amalie, please state your name and affiliation and give us your comments.

MS. LIPSTREU: Good afternoon from Ohio. My name is Amalie Lipstreu and I'm the policy director for the Ohio Ecological Food and Farm Association.

I'd like to share a few key points of consideration regarding organic management and climate that I hope will influence your future communications with Secretary Vilsack.

As you know, organic management systems are voluntary and American policymaking prioritizes voluntary measures over regulation.

Support for organic is, or certainly should be, bipartisan.

Organic management systems provide

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multiple ecosystem services of note when we look to solutions to the climate crisis.

You recently noted in your letter to the Secretary in response to the 90-day progress report on actions to address climate, that organic farms start from the vantage of having a higher soil organic carbon suggesting that there is potential for these farms to contribute to climate change mitigation.

Certainly research from the Rodale Institute also confirms that greater water holds in capacity and infiltration of organically managed soils, which is critical for long-term adaptation and food systems resilience.

It's rare that we acknowledge how organic management systems combine suites of practices that work synergistically.

As promising as incentivizing cover crop use is, planting cover and burring it down with Roundup, it's not going to get us where we need to go on soil health, climate mitigation or food systems resilience.

Organic farmers nurture the soil

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biology that's key to meeting many of these challenges that we face.

And finally, organic is holistic. It's not focused on any one environmental outcome and uses the systems-based approach that builds long-term resilience.

I recently had the opportunity to ask Deputy Secretary Bronaugh/Under Secretary Moffitt, how they plan to promote organic agriculture as a key solution to climate change, USDA plans for future investments in the NOP, and support for farmers transitioning to organic (inaudible). This is really good news and yet it's not enough.

I want to thank you for writing the letter to Secretary Vilsack noting the lack of USDA inclusion of organic agriculture in the 90-day progress report.

Please continue to communicate with the Secretary the importance of investing in, acknowledging and, yes, promoting organic management systems as a path to climate adaptation and food systems resilience.

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As we face an existential crisis, we all need to hold the executive branch accountable to promote and market organic management systems.

MR. ELA: Thank you. Are there questions from the Board?

(Pause.)

MR. ELA: I'll just ask one real quick one. How do you think we should, you know, in terms of, you know, continuous improvement in organics, how do you think we should, like, in the more immediate sense, tie into how organics are beneficial for climate change?

You know, what are the -- I mean, you just named a bunch of tangible things. But if we were going to document that, how would we document it at this point?

MS. LIPSTREU: Well, you know, I think in talking about the benefits of organic systems for climate change, it's really important that we don't get reductionist the way that we see with some potential solutions that are out there and that are being talked about for climate change.

I think the, you know, the beauty of

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organics, again, is this holistic, synergistic nature of, you know, the voluntary suites of practices that people are using, not just soil health, but also the water infiltration, the water-holding capacity as well as, you know, some of these other issues around carbon, both mitigation and sequestration.

So, I know there's a lot of questions out there in terms of sequestration ability. I think we can certainly look and say that, you know, when we compare organic systems to other alternatives out there in terms of this holistic nature and the accountability, that's where we really need to hold up the national organic program as a model that needs to be promoted.

MR. ELA: Great. Alright. Any other questions?

(Pause.)

MR. ELA: Great. Thank you so much. We are going to move on to Jane Sooby, followed by Julia Barton and then Robert Long.

Jane, please state your name and affiliation and give us your comments.

MS. SOOBY: Thank you, Steve. Hello.

I'm Jane Sooby with CCOF, California Certified Organic Farmers, and I'd like to thank the staff of the National Organic Program, the members of the National Organic Standards Board and all of the stakeholders on this call and all the calls and meetings next week for their dedication to organic.

Our comment is we'd like to express that CCOF is in alignment with and thanks the Crops Subcommittee for their call for the NOP to move forward on a current method of listing EPA List 3 inerts and a parallel process to List 4 inerts.

The continued inclusion of EPA's List 4 and 3 -- yikes. Sorry. The continued inclusion of EPA's List 4 and 3 and some materials annotations is challenging because EPA's regulations have changed, but NOP's references to them have not.

Along similar lines, the Handling Subcommittee's proposed fish oil annotation refers to external third-party certifications.

CCOF noted, in our written comments, that incorporation by reference of other

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certifications may lead to certifier inconsistencies in determining what sustainable certification programs are acceptable under the fish oil annotation.

CCOF's larger point is that challenges in maintaining certifier consistency and organic integrity can arise when organic regulations are linked to regulations or verifications outside of NOP jurisdiction.

As a rule, NOSB and NOP should determine the specific elements of the cited laws or external verifications they wish to incorporate into the standards and use generic language that reflects those requirements.

In addition, as the Crops Subcommittee apply noted, removing List 3 inerts from the National List would severely limit the ability of organic growers to control and monitor a number of crop-threatening pests, and CCOF joins them in urging the NOP to move forward on a current method of listing List 3 inerts, and a parallel process to List 4 inerts, to maintain certifier consistency and protect organic integrity. Thank you.

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MR. ELA: Great. Thank you, Jane.

Questions for Jane or comments?

MR. BRADMAN: I have a question.

MR. ELA: Go ahead.

MR. BRADMAN: Just, I guess, a little bit more on the question of third-party certification and definitely I think that would be a new and, you know, part of a recommendation if we go this route with fish oil.

At the same time, you know, there's not the resources and infrastructure for the NOSB and the NOP and I think, in general, regulatory issues around many issues and resource use for organic, to really oversee and regulate use of those materials.

I mean, I think, you know, this came up also with other marine materials like use of seaweed, you know, situations where extracting resources from one environment and putting it into the organic system.

So, you know, what are your thoughts on when we're dealing in this case with a product part of the five percent in handling the setting,

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but, you know, there's going to be resources that are used in organic agriculture that are kind of beyond the reach of really overseeing them within the current structure.

MS. SOOBY: Yeah. And we've seen that in the organic livestock and poultry in the OLPP rule as well, invocation of other parts of the federal codes.

And, you know, at a minimum, it would be useful to have guidance on specifically what resources to use to verify those certifications or, you know, allowing certifications.

MR. BRADMAN: Thank you.

MR. ELA: Logan has a question.

MS. PETREY: Yes. Thank you. Okay. As a certifying body, we'll just start off with the ammonia extract and the motions in that petition. We have the 3 to 1 carbon-nitrogen ratio and then it would be limited to 20 percent.

As a certifying body, do you see that that would cause issues with inspectors to monitor or to enforce that?

MS. SOOBY: You know, that's kind of

outside the scope of my comment.

MS. PETREY: Yes, ma'am.

MS. SOOBY: So, I'm sorry, I can't answer that question.

MR. ELA: Alright. Logan, anything else?

MS. PETREY: No, sir.

MR. ELA: Anybody else?

(Pause.)

MR. ELA: Alright. We will move on. Thank you so much, Jane.

We are going to move on to Julia Barto, followed by Robert Long and then Terry Shistar.

Julia, please go ahead, state your name and affiliation and give us your comments.

MS. BARTON: Thank you. Good afternoon. My name is Julia Barton with the Ohio Ecological Food and Farm Association. I'd like to thank you for your work and to share comments on three topics today.

Field and greenhouse container production. OEFFA has been meeting informally with partner organizations discussing the topic

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of hydroponics and container production.

Hydroponics is not a settled issue. We do not agree that hydroponics are able to be certified based on a full reading of OFPA.

Further, we'd like to lift up the latent and related container issue. We submitted a joint letter to the Board noting areas of agreement and requesting that the suddenly missing agenda item of field and greenhouse container production return to the NOSB work agenda in active form.

We would happily provide detailed input as to the forward movement of this agenda item with the shared goal of improved transparency and consistency and bringing us into greater alignment with the global organic movement, including the recent IFOAM position on hydroponics.

Racial equity. OEFFA appreciates the work of the current administration bringing equity issues to the floor within USDA and the efforts of NOC to bringing these issues to light within the organic community.

We support NOC's written racial equity comments and also have two specific requests.

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First, please reorganize NOSB subcommittees to include a diversity, equity, inclusion subcommittee to begin to discuss and address race issues in organics.

It was suggested that perhaps two subcommittees could be combined to make room for a DEI subcommittee.

Imagine what we could get done if our organic leadership board took up this topic on a regular basis, posed ideas and sought community feedback.

Secondly, please add fairness standards to the NOSB work agenda and work to develop them.

IFOAM's fairness principles are a good starting point for discussion and we urge the NOSB to engage with the public in a group effort to develop social justice standards for the national organic program.

Finally, the timing and format of meetings. Our colleague Mike Dill and organically grown company shared an interesting idea during the NOC pre-NOSB meeting a couple of weeks ago.

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Mike suggested we break the NOSB meetings into four meetings. One meeting during the summer and winter each focusing on big-picture issues, and one meeting each spring and fall as they are now focused on materials.

Further, we could suggest that two be held in person and two be held virtually, thereby mitigating concerns regarding winter travel, spreading out the workload and reducing up-front costs.

OEFFA Grain Growers also continue to suggest solutions to the spring and fall meeting schedule, which they feel systematically disenfranchises many stakeholders, including many farmers across the U.S., who are particularly busy during that time of the year.

We look forward to your updates about how we might improve access to the meetings as you discussed in the proposal shared by the policy subcommittee. Thank you.

MR. ELA: Thanks, Julia. Are there questions?

MR. BRADMAN: I just want to ask more

about the idea of fairness standards. I think that is a really interesting and important goal in many contexts in terms of farmwork and other settings as well.

I'm curious how broad is the thinking on this? And I apologize that I haven't gone through all the written comments yet, so I'll get to it.

MS. BARTON: We did not go into great detail on the fairness standards in our written comments other than to ask that it be added to the work agenda echoing NOC's leadership on this issue.

I will say that OEFFA is part of the agricultural justice project and does certify to the AJP standards, and we'd be happy to discuss that with you further, Asa, if you're interested.

That group has worked for a long time on fairness standards and I think we have a lot of room to grow within organic and this is one of the arenas in which, you know, we have an opportunity for that growth.

MR. BRADMAN: Yeah, I agree. Thank you.

MS. BARTON: Thank you.

MR. ELA: Any other questions?

(Pause.)

MR. ELA: Thank you very much, Julia.
Greatly appreciate it.

MS. BARTON: Thank you.

MR. ELA: We are going to move on to Robert Long, followed by Terry Shistar and then Kiki Hubbard.

So, Robert, please state your name and affiliation and start with your comments.

MR. LONG: Good morning. I'm Robert Long with Braga Fresh Family Farms. I've been farming organic vegetables in the Monterey, San Benito and Santa Cruz Counties for 15 years.

I've been part of companies that are some of the largest organic producers in the country growing in excess of 10,000 acres per year, producing millions of pounds of leafy greens and other row crop commodities every week of the year.

I am the fourth generation in my family to grow vegetables in the Salinas Valley, but the first to do so organically.

My employment relationships have

allowed me to continue a proud family farming tradition while at the same time pushing ahead with pioneers and bringing the organic movement to the mainstream.

I do not want to use ammonia extract as part of my farming practices because I believe it is a short-term fix that is not in the spirit of the organic method.

An organic farmer incorporates specific tillage, nutrient and irrigation management practices with the goal of increasing soil health, microbial activity and fertility.

There is an interconnectedness of all of these components that must come together over the long term to build a successful organic system.

The organic farmer does not have the tools in his toolbox to push a crop towards a desired outcome.

I feel that the use of ammonia extract would be a step backwards from the principles of organic growing and lead us down a path that converges with conventional practices, and this is not what the organic seal represents.

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As an organic farmer dedicated to his craft, I know full well that we can rely on traditional organic principles to grow vegetables in the marketplace that are on par with conventionally produced vegetables. The consumer demands it and we do not fall short.

Farming any system is hard organically or conventionally. I can understand the attraction of ammonia extract with its high plant-available nitrogen, which would let me provide a quick nitrogen fix for my crops, but I do not agree that allowing it for use in organic is the right path for organic farming.

Our organic farming practices are about more than just producing vegetables. They are part of a movement to take better care of our soil and our --

MS. ARSENAULT: I think we just lost him.

MR. ELA: We lost him.

MS. ARSENAULT: Yeah. He dropped off the call. Alright.

MR. ELA: Well, we'll move on and I know somebody had a question there for him. If we can

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get him back on, we'll let him finish his testimony and go to questions.

MS. HUSEMAN: I think there was about 45 seconds left on the timer.

MR. ELA: Exactly.

MS. ARSENAULT: Thank you.

MR. ELA: Right. So, we'll see if we can pick that back up. Meanwhile, while we're trying to get him back, let's move on Terry Shistar, followed by Kiki Hubbard, and then Jay Feldman.

So, Terry, would you like to go ahead and state your name and affiliation and comments?

MS. SHISTAR: Sure.

MS. ARSENAULT: Terry has slides.

MR. CLARK: They're the auto ones. So, Terry, just let me know when you want to start and I'll start your slides.

MS. SHISTAR: Just start right now. My name is Terry Shistar and I'm on the board of directors of Beyond Pesticides. This is a three-minute review of our comprehensive written comments.

This year has brought us more

(inaudible) ecological collapse, wildfires, insect apocalypse, crashing populations of marine organisms, creatures large and small entangled in plastic, more species extinct or at risk of extinction, rising global temperatures, horrific storms and pandemics.

Our organization focuses on one of the most blatant examples of environmental abuse, the dispersal of toxic chemicals across the landscape.

Organic can be a big part of the global solution only if it doesn't stray from its core values and practices.

We are not interested in what's less harmful, we urgently want to prevent ecological collapse.

some issues on the agenda have already been decided by the NOSB -- why are we not advancing? I'll just keep talking.

The NOSB must assert its statutory duty to reduce substances allowed and prohibited in organic production by reaffirming its positions.

OFPA says the National List must be based on the recommendations of the NOSB. Please

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insist that the NOP respect recommendations on carrageenan and sodium nitrate, List 3 inerts, and excluded methods.

NOP must implement the 2018 recommendation to protect native ecosystems through regulations and guidance.

We support the letter to Secretary Vilsack encouraging organic for climate change mitigation.

The most important barriers to organic integrity are systemic. For example, better enforcement tools can assist in returning organic integrity to dairy only if NOP and certifiers enforce access to pasture and promulgate a strong regulation on origin of livestock.

Our comments on crop include copper sulfate as toxic to aquatic organisms and humans and should not be used in rice paddies which replace natural wetlands and provide alternative habitat for animals threatened by the loss of wetlands.

We do not need another antibiotic. We support the proposals on ammonia extracts. Zein is synthetic if made with corn gluten meal from

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wet corn milling. It's not essential for organic production and processing and can be produced organically by this alternative practice.

The fish oil annotation lacks the necessary transparency to determine whether it meets OFPA criteria. Bycatch must not be used for fish oil in organic food.

The NOSB needs a comprehensive examination of cleansers, sanitizers and disinfectants to inform decisions on chlorine and other materials. Thank you.

MR. ELA: Thanks, Terry, and I apologize for the lag in your slides. I know that didn't help you at all, so thanks for persevering with that.

Are there questions for Terry?

MR. BRADMAN: I just want to note, and perhaps this can bring out more discussion about fish oil and third-party, kind of outsourcing the third-party certification, but I want to mention that the definition there is for "byproduct," not "bycatch."

And I think maybe we need some

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definitions there, but very distinct source material.

"Bycatch" would be the inadvertent harvesting of marine organisms versus "byproduct," which is use of materials that were not the primary focus of harvesting. So, I just want to make that distinction.

MS. SHISTAR: Yes. Thank you, Asa. I just think it should be made explicit that "bycatch" is not allowed.

MR. ELA: Any other questions for Terry?

(Pause.)

MR. ELA: I am not seeing any. I'm just going to circle back around.

Did we get Robert Long back, by any chance?

MS. ARSENAULT: He is back on the line, Steve.

MR. LONG: Yeah. I did jump back in. Apparently, I had some critical updates that needed to be installed.

(Laughter.)

MR. ELA: Well, fair enough. You had

about 45 seconds left and I don't know if you know exactly where you dropped off, but if you'd like to continue, we'll let you continue.

MR. LONG: Yeah. I just had a couple quick, quick points to wrap up. I was saying organic farming practices are about more than just producing vegetables. They are part of a movement to take better care of our soil and our planet.

And I feel that consumers are aware of these efforts that we undertake and we need to maintain their trust and confidence in the organic seal.

And I would ask that we please support farmers who are doing the hard work necessary to build healthy soils as required by organic farming principles and vote to prohibit the use of ammonia extracts from natural sources as crop inputs. Thank you.

MR. ELA: Great. Thank you. And we do have a couple questions for you. Nate, why don't you start off.

MR. POWELL-PALM: Alright. Thank you for your comments. Could you speak a little bit

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to what you imagine the incentive for rotate crops and can the landscape of crop rotation and soil health would become if this was a widely available product that folks were confirmed to be allowed to use from --

MR. LONG: I think the incentive to rotate crops as a farmer is just to build a healthy cycle that you don't get locked into monoculture agriculture where you're just producing lettuce crop after lettuce crop.

A healthy rotation leads to healthy farm, healthy plants and, yeah, I think that's the incentive is to be able to have those -- that healthy ecosystem for your plants to thrive in.

MR. POWELL-PALM: And if you had ammonia extract and that was an option, would you see that incentive to rotate being consistent or would that decline?

MR. LONG: I would think that you still need a healthy rotation because even though you've got the fertility component, a strong fertility component in the extract, you still -- that's not going to help you in terms of fighting -- managing

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disease and pests.

So, I think they are kind of independent of each other.

MR. POWELL-PALM: Thank you.

MR. ELA: Logan.

MS. PETREY: That was very well stated.

I agree with you. I'm a grower also and, yes, crop rotation is definitely needed for -- you couldn't grow lettuce back to back to back no matter what you had.

MR. LONG: Right.

MS. PETREY: So, on your farm, so you have 15 years' experience, you're in California, more of an arid climate; however, leafy greens, I mean, the quality is extremely necessary. I understand. We try to do it over here in (inaudible) difficult.

I'm just curious. Do you use any fertilizers with readily available nitrogen currently?

MR. LONG: Not as part of a normal program, no. I've used them spot treatments to see what they do, how they work, but, no, I think

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those are mainly used as a crutch in problem areas and the bulk, yeah, safely say 100 percent of the program is --

MS. PETREY: Yeah. So, you would not program, you would not bank on using things with readily available nitrogen in them to grow your crop.

MR. LONG: Right.

MS. PETREY: However, is your crutch necessary? Are you saying you would use it or you do use it or is this more of like a trial?

MR. LONG: More of a trial basis, yeah, to see is there a benefit, is there a difference, do they have a place more in terms of --

MS. PETREY: Okay. And when you mean sticking mean to growing a good quality crop like on a trial basis because that would be more immediate, or is it a long-term trial (inaudible) the soil microbiology?

Is it like a year, like an ongoing trial, or is it just an immediate -- does this help me with make a good crop?

MR. LONG: Yeah, in the immediate

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circumstance.

MS. PETREY: Okay. Certainly. Yeah.

I mean, I understand. Like, if I get a five-inch rain, which happens in season, there's definitely -- that's a crutch, I guess you could say, especially when --

MR. LONG: Right. And does it help? It's good knowledge to have. It's good knowledge to understand what different fertilizers do to your crops on different soils, different ranches, yeah.

It's valuable knowledge to have. Do we need theses things? Do we not need these things? Yeah.

MS. PETREY: And so, you found that you mostly do not need it. Like you said, you (inaudible) 100 percent, that's correct?

MR. LONG: Correct, yeah.

MS. PETREY: And in what all states do you farm in or what all areas do you --

MR. LONG: Primarily California in Southern California in the desert and Yuma.

MS. PETREY: Okay. Thank you.

MR. LONG: Yeah.

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MR. ELA: Alright. Thank you, Robert, and thanks for jumping back on. Appreciate it.

MR. LONG: Yeah. Thanks for the time back there. Appreciate it.

MR. ELA: So, we're going to move on to Kiki Hubbard, followed by Jay Feldman and then Frank Austin.

So, Kiki, state your name and affiliation and take the floor.

MS. HUBBARD: Thank you so much. Hi, everyone. I am Kiki Hubbard and I'm the director of advocacy and communications for Organic Seed Alliance.

We are a mission-driven organization that works to ensure that organic farmers have the seed they need to be successful.

And we're so grateful for the work of NOSB and NOP especially during an ongoing pandemic that requires us all to meet virtually.

My comments that follow focus on the Materials Subcommittee's work on excluded methods.

We have been very supportive of the subcommittee's work on this topic, which, I

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believe, has now spanned nearly ten years.

We support the proposals -- all the proposals. Again, NOSB has already unanimously passed on this topic and we're really grateful to see the topic back on the agenda this month.

Regarding the discussion document at hand that focuses on cell fusion and protoplast fusion, we recognize that cell fusion is already clearly listed as an excluded method per the regulatory definition; however, we do support the NOP Policy Memo 13-1 that deems cell fusion and protoplast fusion when conducted within taxonomic plant families as allowable.

And we believe this method of cell fusion, again, when employed within taxonomic families, we believe it should be moved to the list of methods that are not excluded, but, for absolute clarity, also add cell fusion that's operating outside of taxonomic families to the list of excluded methods.

We encourage the NOSB to present recommendations on the remaining TBD methods at the next meeting as we continue to hear from organic

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plant breeders, seed growers and other stakeholders that there is a sense of urgency in wrapping up this work and providing more clarity.

We believe that the lack of clarity is risking slow progress toward another organic integrity goal, which is to plan as much organic seed to organic acreage as possible.

An important point of context here is that most organic farmers still use conventional seed for at least part of their operation.

So, enforcing some of these excluded methods decisions will be difficult outside of certified organic seed production. And this is just one reason why we believe strongly that organic growers should be consistently required within the confines of the rule for us to source more organic seed.

We think that measures that result in more consistent enforcement of the organic seed requirement, including showing measurable progress year to year, will resort -- excuse me, will result in organic seed companies more confidently investing in organic seed production,

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which will only expand availability.

And as more acreage is planted, organic seed -- it's going to be easier to enforce these excluded methods decisions as well and we believe that the organic seed trade will experience a strong incentive to adhere to the principles and the values of the organic community as they pertain to plant breeding methods and that's it. Thank you for your time and service.

MR. ELA: Great. You gave us two seconds back. Thanks. Are there questions? Brian has a question for you.

MR. CALDWELL: Yeah. Thanks very much. I have a bunch of questions and I think I only have time for one or two, but the first one is, organic seed is simply any seed that's allowable being grown under organic conditions; is that not correct?

MS. HUBBARD: And that does not include excluded methods or prohibited substances.

MR. CALDWELL: But not being able to use excluded methods is true for any organic grower, right?

MS. HUBBARD: Correct.

MR. CALDWELL: But there's issues with basically determining whether a given variety has used excluded methods in its background; is that correct?

MS. HUBBARD: There are some examples where it is difficult to trace, and that is the case for some of the methods listed as "to be determined."

MR. CALDWELL: Right.

MS. HUBBARD: Yeah. Go ahead.

MR. CALDWELL: So, I'm a little bit unclear as to why -- I'm totally in favor of organic growers and farmers being required to use a lot -- almost exclusively of organic seed, but I don't see why organic seed would actually help us to -- using organic seed would help us to police or enforce the excluded method.

MS. HUBBARD: Well, for starters, regardless of whether they're easy to trace or not, and some of them can't be traced, of course, we -- the organic program has no authority over seed suppliers that, you know, are supplying certified

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organic seed or handlers.

And so, for starters, it would be easier to enforce especially for those methods that can more easily be traceable.

You're correct that regardless of organic or not, those methods that are hard to trace, you know, will be difficult within the confines of organic.

I think the important point there is, though, that there's regulatory authority for certified organic seed.

Also, beyond excluded methods organic seed represents so much more than what is not included, including the plant breeding techniques and environmental conditions in which it was bred and produced.

And so, we don't want to lose sight of the benefits of organic seed, more proudly, and the importance of organic seed as a fundamental first input to the integrity of the end product.

That is progress that I think we should be striving for.

MR. CALDWELL: Great. Thank you, yeah.

I'm totally all for having use of organic seed, but I just wanted to see what that -- exactly what that connection was between the sort of enforceability of excluded methods and organic seed and I think you've clarified that. So, thank you very much.

MS. HUBBARD: You're welcome.

MR. ELA: Okay. Any other questions for Kiki? Mindee's got one for you.

MS. JEFFERY: Hi. Thank you, Kiki, for all your work on this issue. Maybe this is too big a question to answer in a moment, and I get it, but do you see any value in the NOSB sort of structuring its work around excluded methods to more of some of its remaining TBD list issues being coupled with the organic seed question and the excluded method issue being a little bit, like, more wrapped up in the decision-making around, like, major genetic insertion techniques and sort of the plant breeding techniques moving over so that the workflow moves over from plant breeding and seed as a paired issue and excluded methods being its own package of NOSB work.

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MS. HUBBARD: So, if I'm understanding you correctly, Mindee, separating out the plant breeding aspect of excluded methods?

MS. JEFFERY: Yes.

MS. HUBBARD: Is that what you're asking?

MS. JEFFERY: Yes.

MS. HUBBARD: Gosh. I don't know if I can answer that. I might need to give --

MS. JEFFERY: Yeah, that's fair enough. I realize it's a really big question, but something I think in general I'm interested in hearing from the community if there is -- if that workflow could be highly functional.

MS. HUBBARD: Yeah. I guess I would just reiterate something I've already said, which is just this urgency in wrapping up the existing methods listed in the framework that was developed in 2016.

I think that can be done and would really provide necessary (inaudible) to the community and I hope -- will hopefully allow to the NOSB, if you're interested, in further work

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that would strike, then, the enforcement of the organic seed requirement and make it more consistent.

MS. JEFFERY: Thank you.

MS. HUBBARD: Um-hm.

MR. ELA: Anything else?

(Pause.)

MR. ELA: Thank you so much, Kiki.

MS. HUBBARD: Thanks all.

MR. ELA: Appreciate it. We are going to move on to Jay Feldman, then Frank Austin and then Kate Mendenhall.

Jay, please state your name and affiliation and take the floor.

MR. FELDMAN: Hi. I'm Jay Feldman, Beyond Pesticides, former NOSB member. Consumers and farmers together built organic in response to a failure of chemical-intensive agriculture to protect health and the ecosystems that nurture life.

This foundation supports the organic market and must be reaffirmed every time that the NOSB leaves its transparent decision-making

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process subject to public scrutiny and input.

The NOSB deliberations start with the default standard in the Organic Foods Production Act that prohibits synthetics in organic production allowing synthetics only as an exception through the National List review process.

In reaction to the low bar that allows toxic chemical use in chemical-intensive agriculture, the bar for allowance of synthetics in organic is intentionally set high.

We only earn organic consumers' trust in the organic label with rigorous and stringent review and oversight.

Two key principles in the law essential to the comments that Beyond Pesticides has submitted on every substance at issue before the NOSB at this meeting: No. 1, board decisions must protect against cradle-to-grave adverse affects informed by technical reviews independent of costs or benefit claims.

This is distinguished from chemical-intensive agriculture where claims of

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benefits permit hazardous toxic chemical use.

Two, only after determination of no adverse affects, the Board must determine essentiality of the substance under review. Determining that a synthetic is necessary given alternative practices and materials is a precautionary standard which acknowledges possible uncertainties and externalities.

How do these principles affect decisions at this meeting? Here are two examples.

Unfortunately, you cannot allow bioplastic mulch and ensure protection from adverse affects.

Given what is known about degradation, we must be certain that microplastic particles in any amount are not being released into the very soil system that is foundational to critical microbial soil life.

Two, on essentiality we can no longer allow copper sulfates in a market that has done very little, if anything, to cultivate dry land rice with intermittent irrigation, an organic farming system that was heralded for rice in the seminal

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National Academy of Sciences book Alternative Agriculture.

As you act on the agenda for this meeting, we urge you to view Beyond Pesticides' written comments.

With these principles, consumers and farmers have built an organic market worth tens of billions of dollars that was unthinkable 30 years ago.

We will continue to grow only if consumers trust in your decisions. Your decisions are not solely that list of materials that are allowed, but about systems of land management that are compatible with nature and a future that regenerates life.

Taking on the challenges that confront the climate crisis, biodiversity collapse and the future pandemics of public health threats, your decisions on organic, as instructed by the law, must be holistic, must be visionary, must be our future.

With that, I thank you for your service.

I (inaudible).

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MR. ELA: Thanks, Jay, and nice pacing there at the end getting it down to zero. Any questions for Jay?

MR. BRADMAN: Yeah, I've got a quick question.

MR. ELA: Go ahead.

MR. BRADMAN: I mean, maybe this is too much of a comment, but I do think the bioplastic mulch is a complex issue in that, in my mind, you know, we've mistakenly allowed the use of polyethylene films that are used across the organic landscape and have huge environmental impacts at many different levels.

And I know, you know, you've stated before we shouldn't be doing a -- kind of a comparative risk assessment and, you know, of course there's also the question whether we have adequate information to do a comparative risk assessment, but, you know, I guess that's more of a comment than not, but do you want to opine more on that on the possible --

MR. FELDMAN: Yeah. And I appreciate the thought so that you get to these issues

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especially on the comparative risk assessment, which is something we're all very familiar with in terms of EPA analysis of allowable toxics.

We've got to take ourselves, as you know, outside of that mindset and begin to think holistically.

If we've allowed a material that has detrimental impacts, we shouldn't compare a new allowance to that decision -- that previous decision.

What's most troubling to me in this age of fossil fuel-based materials is that, you know, the intent at least with the allowance of plastic in agriculture as it stands now in organic agriculture, is this concept of removal from the site because we want to protect, at all costs, the soil health, impacts on microbial activity in the soil, and then now we're concerned about sequestration.

So, to the extent that we're adding any microplastics in that context, we're really doing a disservice to organic farmers and to the larger existential issues that you mentioned.

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MR. BRADMAN: Yeah.

MR. FELDMAN: It is challenging. I understand.

MR. BRADMAN: Yeah. And also, I guess, in my mind, the removal is incomplete and I, you know, I see that with plastics all up and down the Salinas River and in the Monterey County landfills.

And, you know, I have pictures of huge piles of drip tape, which of course is a water conservation tool, but I see piles of drip tape just, you know, breaking down in the environment.

So, I mean, that's the kind of thinking perhaps this --

MR. FELDMAN: And that's an enforcement issue in many ways. You know, our comments really go to other alternative mulching systems and that's where continuous improvement comes in, but we don't view the bioplastic mulch as continuous improvement.

We view it as a stopgap that introduces new elements of uncertainty and potential harm that is devastating in the long run and virtually impossible to clean up once we realize our mistake.

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MR. ELA: Great.

MR. BRADMAN: Thanks.

MR. ELA: Thanks, Jay. Sure appreciate it. We are going to move on to Frank Austin, and then Kate Mendenhall and then Ramy Colfer.

So, Frank, please state your name and affiliation and take the floor.

MR. AUSTIN: Sure. My name is Frank Austin. I'm a director at Clear Frontier Ag Management. We invest in farmland, predominantly organic farmland, across the U.S.

I'd like to thank the NOSB for having me today and I would like to provide you with some comments on the SOE.

I'd really like to begin by saying congratulations on that. It's, I think, a really phenomenal piece of law and regulation I hope we can move forward.

And the reason for that is that, you know, when I think about the U.S. government's role in protecting American organic farmers, I've seen that, to date, the government has really sort of fallen short and that new regulations are needed

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and that modernization is needed, and I do believe that your proposal will ultimately provide the first step towards that modernization.

Year to date, 400,000 metric tons of soybean meal have been imported from India. Each year we have thousands of metric tons of cracked corn coming in from Turkey.

These are just two examples of countries that do not have comparable organic standards and, in some cases, no organic standard at all.

As these imports come in and they are likely fraudulent, they cause price shocks across regional markets, ag economies in our country, and ultimately jeopardize the cash flow of our farmers.

When we think about organic farming as one of the most profitable and sustainable food production systems we have available to us today, I think that it's very important for us to also consider the (inaudible) impact that bad actors have on farming families across this country. So, again, I'd like to congratulate you on what you've outlined.

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One final thought for you would be that I believe that open data sharing is going to be very critical in this.

I think that having open access information, giving the public access to that information, is going to be very important in terms of identifying and improving the integrity of organic standards in general because, simply put, regulations, they can be great on paper, but bad actors will try to skirt, you know, the law.

So, ultimately I'd like to have a discussion with you today about that. I'm happy to answer any questions that you have and, again, thank you for having me.

And finally, again, really excellent work with the SOE. I hope it goes through and I cannot, you know, say enough good things about it.

MR. ELA: Thank you, Frank. Are there questions?

(Pause.)

MR. ELA: I am not seeing any. So, Frank, thank you so much for your --

MR. AUSTIN: Thank you for having me.

MR. ELA: -- comments. I am going to do one more speaker and then we will take a break.

We're doing well on time, but I always know that that sometimes can be a fleeting victory. Staying on time can disappear really quickly.

But, Kate Mendenhall, if you're willing to go before break, then we'll take a break and then come back to Ramy Colfer and Michael Crotser.

So, Kate, state your name and affiliation and take the floor.

MS. MENDENHALL: Thank you. Thank you, NOSB members, for the opportunity to speak before you today.

My name is Kate Mendenhall. I'm the executive director of the Organic Farmers Association.

OFA was created to be a strong national voice, an advocate for domestic certified organic farmers.

Our policy positions are created through a nationwide grassroots process that invites participation of all domestic certified organic farmers and then our certified organic farm

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members vote on these policies.

We operate a strict "one farm, one vote" policy so all farmers have an equal seat at the table.

Today, I will address three areas; public comment process, ammonia extract and sodium nitrate.

For public comment process, we have found a more diverse group of organic farmers able to participate in the oral testimony virtual format and encourage you to continue to offer this platform.

Without both the webinar and in-person oral comment opportunities, it seems that there is less time for comments, so we encourage you to keep this a priority of the NOSB process.

We also encourage you to address the rules for how comment slots are assigned to make sure that organic farmers have some priority to testify to the Board.

Many of the registrations occur during high farm production cycles and the oral comment slots often fill up weeks before the deadline often

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with multiple people from the same company or organization.

For the ammonia extract prohibition, OFA recently adopted a policy position which states: OFA supports prohibiting the use of ammonia extract for use in organic production because such use is incompatible with OFPA and good soil health practices.

Therefore, we support the first two National List motions to add stripped ammonia and concentrated ammonia at 205.602, nonsynthetic substances prohibited for use in organic crop production.

For sodium nitrate, we have testified before on OFA's policy position, which states: Consistent with NOSB's April 2011 recommendation, the Organic Farmer's Association supports re-listing sodium nitrate on 7 CFR 205.602 without annotation. This rulemaking action would make sodium nitrate prohibited in organic farming and eliminate the use of this soluble plant-available fertilizer, which circumvents natural nutrient cycling and organic soil management.

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Therefore, we support the subcommittee's motion to reinstate the listing of sodium nitrate at 7 CFR 205.602(g), prohibit nonsynthetic, but we wish it was more restrictive.

When we have discussed both ammonia extract and sodium nitrate with our farmer policy committees, the larger topic about soluble nitrogen comes up.

OFA encourages the NOSB to review soluble nitrogen as a whole rather than addressing individual nitrogen products or forms.

Cultural management like preventive practices that limit the need for external and off-farm input for building a healthy agroecology system is a critical piece of building organic matter and good soil health.

Organic is a solution for climate change because we have demonstrated standards that celebrate and demand good soil health as an essential component for organic certification for decades. We must protect that for the future of organic. Thank you.

MR. ELA: Thank you, Kate. Looks like

we've got a question from Wood.

MR. TURNER: Kate, thanks for your comments. I just wanted to make a comment about -- in support of your suggestions about the public comment process and I think those are really interesting and I think we should really take that into consideration as best we can.

I'm curious are you suggesting, though, that organic farmers, because of the barriers that you have described, are really missing an opportunity?

I mean, are you hearing that from your members that they're missing an opportunity to participate in this process?

MS. MENDENHALL: I have heard people who have tried to submit and have not been able to get on.

And so, then they can sign up for the waiting list, but they are -- I think it's hard to ask a farmer to come and sit through a four-hour meeting in the case that they might get pulled onto the waiting list.

So, I think it would help if they knew

that the NOSB really wanted to hear from farmers and that there was some time set aside.

I think if that time wasn't filled up by farmers, then it could be filled up by other factors, but reserving some time to hear those voices, I think, is really important.

MR. TURNER: Super helpful. Thank you.

MR. ELA: Kim has a question.

MS. HUSEMAN: Thanks, Steve. And thanks, Kate, for your comments. Very much appreciated.

Maybe it's following along with Wood's comment, is it always -- it does strike a nerve to know that stakeholders, growers that provide organic goods, may not have an equal opportunity or an opportunity to be able to speak.

And speaking -- and maybe it's more of a comment, than a question, I'll get to my question as well, but I think in the virtual formats being able to allot time by not having to travel, et cetera, has been promoting to farmers who are dedicated especially -- we're in the month of October. This is a big harvest time period for

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most people, but this format could provide that opportunity.

I believe we had 20 days before the comment time period was full. So, it seems like -- are there other suggestions that you would have other than, you know, I feel like 20 days is pretty ample time to be able to sign up before, you know, this time period has been filled.

What other, you know, I guess we are open to suggestions. I am concerned if you feel like there's not enough time where the spring and fall is plant and harvest.

I feel like the Board has -- and the program has done a nice job with both the virtual format and extended time periods to provide opportunity for farmers. So, what else can be done?

MS. MENDENHALL: I think when you say "20 days," it sounds like a really long time, but the reality is that this is a really busy time of year.

And so, there's advocacy groups like Organic Farmers Association that we're waiting and

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waiting, waiting to see when is registration going to open. And then we hear it's open and then we try to email our farmers.

They may not read it for 5 days, so now we're down to 15 days and, you know, it's just -- it's a busy time of year and so they need multiple reminders during harvest season.

So, maybe having a set time when registration will open with a little bit more advance warning so we can give folks, you know, something that they can mark on their calendar might help.

And I think just, you know, like I said before, having a section of the comment period reserved for farmers might also make it seem more important that their voices are heard and more responsibility to weigh in.

MS. HUSEMAN: Okay. Thank you very much. I appreciate it.

MR. ELA: Alright. Logan, I saw you had our hand up, but it's lowered. Did you have a question or do you want to move on?

MS. PETREY: Kim nailed it. She

mentioned, you know, the planting/harvesting windows and they're extremely busy, but she got it. Thank you.

MR. ELA: Okay. Just didn't want to ignore you. Yeah, I've never missed an email for weeks before, so -- during harvest, but -- great.

Well, looks like that's all the questions, Kate. Thanks for your comments.

We are scheduled for a break at this point. We're running pretty well on time, but let's take a 15-minute break.

I just want to make sure we stay on schedule. So, let's come back at the top of the hour.

And I won't do any time conversions on that, so we'll see you in 15 minutes.

(Whereupon, the above-entitled matter went off the record at 1:45 p.m. and resumed at 2:00 p.m.)

MR. ELA: Well, I guess it's lunch for some and afternoon tea for others, but -- and then there's in between, but I don't -- it looks like it's the top of the hour, so we'll jump back into

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it.

So, we have coming up Ramy Colfer, then Michael Crotser and then Adam Seitz. So, Ramy, if you would like to state your name and association and then jump into the comments, that would be great. Go ahead.

MR. COLFER: Alright. Thank you. My name is Ramy Colfer. I work as a research economist for True Organic Products.

Before coming to True, I spent 18 years working at Earthbound Farm where I was involved with the farming of organic leafy vegetables.

Organic farming is an attempt to produce safe, highly nutritious food in a more natural way utilizing crop rotation, cover crops, natural carbon-rich organic soil amendments and beneficial habitat plants that attract and harbor beneficial insets.

Like nature, it requires time to build up these systems. Ammonia extract products are made by using a very energy-intensive process to separate and concentrate ammonia and ammonium from manures.

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These products are natural analogues.

The synthetic ammonia, the same ammonia they used in fertilizers every day in conventional agriculture around the world.

Feed materials are widely used in organic agriculture, but we likely see similar problems to those seen in conventional agriculture.

Some of these include increased nitrous oxide emissions, a potent greenhouse gas, increased nitrate leaching and nitrate runoff, acidification of soils, reduction of soil organic matter and reduction in microbial diversity in the soils.

To understand the negative effects of ammonia extract in organic farming, please see the Technical Evaluation Report for AE and a comment letter by UC-Davis professor Dr. William Horwath.

And while it is good to capture ammonia emissions from industrial manure waste, this ammonia should be government-incentivized to be used in conventional agriculture, not forced into organic agriculture where it is philosophically

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incompatible with organic principles.

Currently used organic input such as compost, cover crops and natural organic fertilizers, all add thousands of pounds of carbon per year per acre to organic farms. AE would add little to no carbon to the soil.

Innovations in organic agriculture should be consistent with organic principles. Organic innovation should include cultural practices that improve soil quality focused on regenerative agriculture and reduced tillage.

New organic input should be focused on biologically based products that improve soil microbial activity, reduce plant stress, stimulate plant health and naturally reduce plant pests and diseases.

For example, appropriate focus on organic innovation might be microbial and plant-based products.

Innovations in organic agriculture should fall under the umbrella of organic principles.

Do we really want to embrace

technologies that make natural analogues to synthetic fertilizers and pesticides? Is this progress?

We thank the NOSB for its hard work and support the motions proposed by the Crops Subcommittee on AE. Thank you.

MR. ELA: Are there questions? Logan?

MS. PETREY: Alright. Thank you. Okay. So, in True, you have the -- I think it's the guano added to your products; is that correct?

MR. COLFER: We use guano as an ingredient, yes.

MS. PETREY: Okay. So, and it's readily available, so do you see that it's used as a main fertilizer or is it more -- do you see like a seasonal production increase, you know, during the -- or, excuse me, during the winter and things like that?

MR. COLFER: Yeah. I mean, if you look at our products that contain guano, the amount of ammonia is quite low.

MS. PETREY: Okay.

MR. COLFER: It's less than one percent.

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MS. PETREY: But it's got the sodium nitrate part, which is available, is that right, or is that and --

MR. COLFER: None of our products have sodium nitrate.

MS. PETREY: Excuse me. The nitrate and the (inaudible) guano or so, but the total -- I guess when you look at the amount of available nitrogen and the, like, (inaudible) 2-1/2 of so, what is the percentage of availability?

MR. COLFER: It's less than 10 percent -- I mean, 1 percent.

MS. PETREY: Okay.

MR. COLFER: It's right below 1 percent. In fact, yeah, almost all of the nitrogen is in the organic nitrogen form.

MS. PETREY: Okay. Thank you.

MR. ELA: Nate, go ahead.

MR. POWELL-PALM: Ramy, could you speak a little bit to -- the question I have is it sounds like the chemical difference between synthetic ammonia and AE is very little.

What effect would having widely

available AE on the market play in fraud and seeing synthetic ammonia work its way more and more into organic systems?

MR. COLFER: Yeah. I'm going to let you ask that question to Jake Evans. He's going to speak later today, but absolutely. I mean, it's almost impossible to catch fraud using testing.

And there's already, you know, examples where it's happened previously in organics and even currently. So, I do think, yeah, it's really Pandora's box.

MR. POWELL-PALM: Thank you. I'll hold that question. Appreciate it.

MR. ELA: Other questions?

(Pause.)

MR. ELA: I have one. You know, in the review of the various articles on whether ammonia extracts promote soil biology or discourage it, you know, there were several comments that AEs, when you add them, encourage soil biology by releasing more nitrogen from the carbon in the soil.

One of my concerns is that, yeah, you

release it from the carbon and it's great this year, but you -- down the road you're robbing the bank and -- but could you speak to that or what you see in your experience?

MR. COLFER: Yeah. I think that's the thing. I mean, when you have carbon amendments, you know, it requires microbial breakdown of the products.

And if you have something that's very high in carbon, it can even, you know, grab onto available carbon in the soil, but really, I mean, all that nitrogen that's not breaking down immediately is being stored in the soil as equivalent of organic nitrogen and like an organic matter.

And when you add just straight nitrogen, the soil -- I mean, the basis, you know, the thing that microbes need in the soil is, you know, a nitrogen -- an organic nitrogen source and a carbon source for a balanced diet.

And if you just give them nitrogen, really it's going to grab carbon out of the soil.

So, you know, over time it will drive down that

organic matter soil and we see that all over the world, right, where ammonia is widely used.

And I'm afraid, yeah, that such things could start happening in organic farming if ammonia was available as a standalone product.

MR. ELA: Great. One more question from Logan. Then we'll move on.

MS. PETREY: Yeah. Thank you. Okay.

I'm sorry. And just a note on -- you said, like, the carbon nitrogen, you know, to have an imbalance, when you do have the nitrogen that becomes available and it is lost due to leaching or things like that when we do make, you know, applications again with those products, do you find that there are buildups of things like phosphorous or potassium or other salts in the soil because we cannot typically add products that just have the nitrogen component that would be readily available to add what was lost due to that leaching event?

MR. COLFER: Yeah. I think that's where, as a grower, you know, you have to really choose your amendments properly, you know.

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You might use plant-based, you know, compost instead of manure-based to avoid salts or phosphorous.

And organic fertilizers are made such that they don't overdo it on the phosphorous and it's less available to, you know, much of the phosphorous is in calcium phosphate form. So, it's very slow to release. It takes years, really.

So, I think it's, yeah, kind of on the organic grower to monitor the soil nutrient levels and make sure nothing's excessive, but it absolutely can be done, yeah. It's -- yeah.

MR. ELA: Alright. Well, thank you very much. Appreciate your comments.

MR. COLFER: Yeah, I appreciate it. Thank you, guys.

MR. ELA: We're going to move on to Michael Crotser, then Adam Seitz and then Abby Youngblood after that.

So, Michael, please state your name and affiliation and start with your comments.

MR. CROTSEY: Good afternoon, everyone. Can you hear me alright?

MR. ELA: We've got you. Go ahead.

MR. CROTSER: Great. I'm Michael Crotser and I'm the director of certification at CROPP Cooperative.

We appreciate the work of the NOSB and the NOP to support organic agriculture. Thank you for the opportunity to speak today.

My comment today relates to the modernization of the organic supply chain traceability discussion document.

This document's intent is to build on the strengthening of organic enforcement proposed rule and human capital.

CROPP is participating with the Organic Trade Association's fraud prevention program.

The purpose of this program is to identify supply chain risks, determine vulnerability and develop mitigation measures to reduce fraud.

Our goal is to assure product integrity and this plan will be our primary tool to meet SOE requirements.

We assess external tools in the aid of

fraud prevention and we have worked with TraceGains, our supplier management program, and the Organic Trade Association, to utilize TraceGains' Smart Alert System.

We also use the NOP enforcement activities, which include fraudulent certificate disclosure, the enforcement dashboard and the organic integrity database.

Although valuable, these tools do not represent data in realtime, lack mandatory reporting and have limits to evaluate vendors.

We ask the NOP to evaluate their existing resources and adapt these resources as needed.

Modernization of the supply chain is needed. Certifiers are conducting more detailed mass balance traceback audits.

We applaud these technological solutions for consistent and robust traceability exercises.

This could include the organic link concept, which will connect lot numbering systems through the supply chain.

This concept is hard to imagine especially how it would fit in with current organic system plans of our diverse operations. The plant community would be an example.

Because the SOE rule mandates that certifiers share information, confidentiality of client data is at risk.

The proposal also underestimates the burden of maintaining transactions in the organic link and less integrated with existing technologies.

To give perspective, CROPP has roughly 1800 organic farms and 90 co-packers on a complex supply chain.

We support the need for improvement, but this will be a heavy lift that needs a full risk benefit analysis before implementing.

I want to thank the NOSB, the NOP and the organic industry for time to speak today and I'm happy to address any questions. Thank you.

MR. ELA: Are there questions?

(Pause.)

MR. ELA: Okay. I have a question. I

don't know if you can answer this since you really were speaking more to the fraud in general -- or, you know, on the supply chain.

So, I don't know if you can speak to production practices, but in terms of verifying, like, maintaining or increasing soil organic matter, you know, as required by the CROPP -- the OSP, what's your biggest difficulty in doing that and verifying that?

MR. CROTSEY: Well, I think the primary tool that certifiers look for improving, one common thing that they look at, as well, organic matter, but I think, from the perspective of our farms and the certifiers that they have, is really a lot of limitations to the amount of time and resources certifiers have to go in and dig deep into soil biology and soil health.

A lot of their work done at inspection is mostly spent with paperwork and verifying inputs and materials, transaction certificates and so on.

We do have the luxury, so to speak, as the majority of our farms are dairy and because of manure cycling, typically our organic matter

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values are likely higher than maybe some row crop farmers out there, but generally I think assessment by certifiers, where their soil is, as far as biology goes, is a limiting factor.

MR. ELA: Thank you. Any other questions?

(Pause.)

MR. ELA: Thank you so much, Mike. Appreciate your comments. We can move on to Adam Seitz and I'm just going to say in general to all the stakeholders, I will butcher your names universally. So, I apologize for mispronunciations and everything.

I keep coming up on these and like, oh, no, I'm going to mess this one up, too. So, I'll try and do it to everybody so I don't selectively butcher somebody's name, but Adam Seitz and then Abby Youngblood and then Robert Rankin.

So, Adam, please state your name, affiliation and give us your comments.

MR. SEITZ: Yep. Good afternoon. My name is Adam Seitz and I serve as a senior reviewer and policy specialist for Quality assurance

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International, an NSF international company and a leading provider of organic certification services worldwide.

Check your local grocery and you'll definitely find the QAI mark well-represented on the shelves. First, thank you NOSB and NOP for your efforts and for the opportunity to comment.

Fish oil. Considering the previously discussed annotation option, QAI agrees that the current iteration is the best proposed option in terms of meeting its purpose and the ability for certifier enforcement.

Carrageenan. QAI certifies, at minimum, 41 operations that use carrageenan in their organic products.

While not advocating for or against removal of carrageenan from the National List, we do want to highlight the following subcommittee review that statement that, quote: Eliminating carrageenan may be achievable through the elimination of many processed foods where it is considered essential by manufacturers, end quote.

This is a risky proposition and

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sentiment for the organic industry. Minimally processed organic fruit, vegetable, milk and egg sales predominate the organic market, which is fantastic, but organic-processed foods also take a large slice of the organic market pie. Organic farmers need all available organic markets.

Research priorities. With appreciated the spring presentation by NIFA detailing how the NOSB research priorities directly impact the Agency's research funding requests for applications. This truly puts the importance of these research priorities in context.

On this front, we'd like to encourage the adoption of more research topics under the food handling and processing category.

For example, a static research topic priority for evaluating the essentiality and suitability of alternatives to National List substances in applicable food formulations can serve two purposes.

One, research project outcomes could inform NOSB decisions regarding the sunset

(inaudible) National List substances.

Two, several recent initiatives in the organic industry have focused on building an engaged, competent and valued organic workforce.

Professors, graduate researchers and undergraduate researchers and students in university food science departments across the country would benefit from funding for organic-focused research projects.

Providing funding opportunities for such projects would help train and expose future organic food formulators and future organic program quality managers to the needs and expectations of the organic market increasing access to our organic foods research priority. Thank you for continuing to include this as a priority.

Finally, I'd like to read a letter QAI received from a young organic advocate earlier this year.

In an envelope with a hand-drawn recycle symbol, Rebecca writes: QAI, I am very proud of buying organic foods because of my healthy

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lifestyle. Organic isn't just non-GMO, it's (inaudible) healthy ingredients, humane treatment of animals for meat, dairy and eggs, free from pesticides and so, so good for the earth and its resources. I'm willing to buy any organic foods.

Only downside is they cost more. Once again, I'm so proud of myself to buy organic foods for a healthy lifestyle. Thanks a bunch. See you later.

MR. ELA: That's great. Questions for Adam?

MR. BRADMAN: I have a question. I'm really interested in your comment about perhaps more research priorities around food handling and processing and that could be compatible with organic.

I mean, I think you're right there and what comes to mind especially is around colors and, you know, the availability of organically sourced both in terms of source crops, but also in the development of colors.

And I'm curious if you have more things to say on that or perhaps it's in the written

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comments.

MR. SEITZ: Yeah. Actually, I did not include anything in the written comments on this front, but, you know, I took a look at the past, oh, maybe seven years' worth of meeting packets and agendas to see what similar research topic or priorities might have been included.

And there were some regarding celery powder and trying to find alternatives to that in the context of its sunset review.

I think, in general, just keeping a broad topic around evaluating alternatives or essentiality regarding any of the National List ingredients would be helpful just because I think, you know, having taken many courses in the food science department, I can say that there wasn't a lot of discussion about organic products or organic expectations or formulating organic products.

So, I would see it really as a good way to expose future food scientists to those concepts.

I'd love to think about some additional topics that could be included, but really do think

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just having a generic item around examining formulations and essentiality of -- or the essentiality of National List ingredients in applicable formulations.

For example, for carrageenan, you know, if we had -- if a program received funding around looking at the essentiality and those sorts -- those types of formulations in which it's used in, that could really help to provide unbiased information to the NOSB, you know.

You have some folks saying it's essential, some folks saying it's not essential.

Well, you know, take a look at it in the context of a food science lab.

MR. ELA: Kyla.

MR. BRADMAN: Thanks.

MS. SMITH: I was just going to promote the open docket for something like that, Adam. So, as items come to you and once the open docket is opened up, which tends to be very shortly after the end of the meeting, Michelle's really on top of that, please feel free to include those in the open docket.

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MR. BRADMAN: Thanks. We'll take a look.

MR. ELA: Alright. Thank you so much. Do appreciate it. We're going to move on to Abby Youngblood, then Robert Rankin and then Darryl Williams.

So, Abby, please state your name and affiliation and give us your comments.

MS. YOUNGBLOOD: Hi. Good afternoon. I'm Abby Youngblood, executive director at the National Organic Coalition, and I would like to start by thanking the Board for the letter you drafted to Secretary Vilsack highlighting the important role for organic agriculture in mitigating climate change.

NOC is urging you to pass the three motions to prohibit ammonia extracts and to limit the use of high-nitrogen fertilizers. This is the most important action you can take to solidify organics' role as a climate-friendly system that relies on soil building rather than the conventional "feed the plant" mentality.

NOC also supports the NOSB's proposal

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to make a technical correction for the sodium nitrate listing to ensure this material is reviewed going forward.

We remain frustrated that the NOP has not implemented the previous 2011 NOSB recommendation. It's another example of the lack of accountability on the part of the NOP.

Last week, NOC held our community-wide pre-NOSB meeting with more than 100 participants, including many of you.

The meeting included a robust discussion about the structural reforms NOC has proposed to advance organic at USDA.

We have put forth five recommendations to elevate the NOSB, which is the bedrock of the public-private partnership and I will highlight just two issues which emerged at our meeting last week as the highest priorities.

First, we've called on USDA to reduce barriers to NOSB service. So, this means providing farmers who serve with stipends to cover the cost of hiring on-farm labor during NOSB meetings and it means finding creative ways to

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ensure that individuals from lower resource organizations can serve.

It also means allowing NOSB members to hire assistants who can help with research and preparation to ease the workload associated with NOSB service.

The second issue that emerged as a top priority last week is the need for a better process going forward to ensure that the NOP acts on NOSB recommendations.

We're asking that the NOP provide a written explanation within 60 days for all NOSB recommendations, including how they will implement the recommendation and the time line.

For recommendations that the NOP does not plan to implement, we're asking for a clear written public justification.

One area where the NOP has failed to act is on excluded methods. The NOSB had some a tremendous amount of work to clarify which methods are excluded, which ones are allowed and why. The NOP must codify these recommendations.

Building off of that work NOC urges the

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NOSB to make determinations on the remaining TBD methods and we support listing cell fusion and protoplast fusion within the same taxonomic family as allowed. Thank you for your (inaudible) of these comments.

MR. ELA: Perfect timing. Are there questions for Abby?

(pause.)

MR. ELA: I'll just jump into one really quickly here, but, Abby, I know in the written comments and you just said you support the ammonia extracts, the recommendation from the Crops Subcommittee.

What do you see as the crucial aspect of that that concerns you with the use of ammonia extracts?

MS. YOUNGBLOOD: I think I would emphasize first that ammonia extracts do not meet the OFPA criteria. So, they're not consistent with organic principles and they really move us farther from this ethos of fostering soil fertility, building soil systems and more towards this "feed the plant" mentality.

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I think there's also an issue of consumer trust and I think some of our members like PCC Community Markets is seeing how much consumers are looking to purchase food that's climate-friendly.

So, organic has the opportunity to demonstrate the powerful role that organic is playing, but we have to have that consumer trust that organic really is, in fact, doing that.

And if we move away from this holistic system, I think others have pointed out, my colleague Amalie, it's about climate change, but also about water quality and biodiversity. So, moving away from that system is problematic and could result in a loss of consumer trust.

MR. ELA: Logan.

MS. PETREY: Yes. Do you think that all fertilizers are -- should be more of a holistic approach instead of, you know, we have, like, potassium sources that we're really just focusing on the potassium itself and not necessarily applied with others.

Do you think that what you're saying

with the nitrogen applies for other things as well?

SSS: I'm not sure. I guess I would take it back to the nitrogen issue in that one of the -- from our perspective, the intent has always been to limit high-nitrogen fertility products in organic, and that's part of what's kind of spelled out in the preamble to the organic regulations.

But the way in which we had intended as an organic community to place those restrictions by identifying specific materials that are nonsynthetic with annotations, we think that that system isn't working well.

So, I'm not exactly answering your question, but I just want to point out the need for a more holistic system to address the use of high-nitrogen fertility sources in organic.

MS. PETREY: Okay. Thank you.

MR. ELA: Nate.

MR. POWELL-PALM: I'm really trying to not be the muted one of the session. So, could you please speak, Abby, a little bit to that consumer perception in confidence point that you just made?

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I think when we talk about fertilizers, the overarching theme is that fertilizers in organics don't pollute and they don't rush through soil. They're more stable. They ultimately are cycling, you know, a lot of this greater ecosystem that's on a farm, including livestock integration, a mixture of nitrogen-producing and nitrogen-feeding plants like legumes and cereal crops or corn.

Could you speak a little bit -- I know you mentioned a consumer perception point of view as it relates to climate change, but also could you speak to sort of from an environmental health point of view?

MS. YOUNGBLOOD: Well, I think you were doing a good job just now speaking to that, but I think, you know, it's -- I think there is an expectation among some consumers looking for organic that you're going to see an organic operation using cover cropping, crop rotations, having compost be part of the system and, to the greatest extent possible, having a system that is trying to cycle nutrients rather than relying on

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off-farm inputs.

Of course there's some off-farm inputs, but it's a system that is holistic in that way.

And so, I think that that's something that folks are looking for.

I think the growing awareness of the impact of our food choices on climate change is driving some consumer awareness and I think, you know, there are other issues that consumers are looking for and they are expecting that the -- that organic means the highest standards when it comes to protecting the environment.

And so, you know, having fertility systems that don't pollute would be part of that.

MR. POWELL-PALM: Thank you.

MR. ELA: See, I'm going to mute myself now. Saved you, Nate. Anybody else?

(Pause.)

MR. ELA: Alright. Thank you, Abby. Very much appreciate it. We are going to move on to Robert Rankin, then Darryl Williams and then Jaydee Hanson.

Robert, please state your name and

affiliation and proceed with your comments.

MR. RANKIN: Thank you. Robert Rankin, executive director, International Food Additives Council.

IFAC is an association representing manufacturers and end-users of food ingredients, including handling materials permitted for use in organic food.

IFAC supports the re-listing of agar-agar, animal enzymes, carrageenan, cellulose and silicon dioxide.

All of these ingredients are used in alignment with organic principles and are essential to meeting the needs of the organic community.

IFAC strongly disagrees with the Handling Subcommittee's recommendation to de-list carrageenan.

Carrageenan is one of the most unique and versatile food ingredients and is preferred due to its ability to bind protein, promote gel formation (inaudible) stabilize and substitute for fat in a variety of applications.

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Carrageenan also helps to improve the palatability, mouthfeel, nutrient delivery and appearance of many organic foods and provides a plant-based alternative to animal-based ingredients used in vegan and vegetarian products.

Carrageenan is essentially because it does not have a suitable replacement in all applications and its removal would result in inferior products containing multiple additives to achieve the same function or, in some cases, products being discontinued altogether.

Carrageenan also does not have an organic alternative, another part of OFPA's essentiality criteria.

Based on an INNOVA search for organic food products launched over the past five years, IFAC found 160 new organic products containing carrageenan launched in the U.S. with seven products launched in 2021 to date, including plant-based frozen lasagna, a nondairy cheese blend, nondairy chocolate-flavored confections, pot stickers, protein shakes and fruit-flavored smoothies.

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From 2016 to 2020 there were 153 new product launches of foods with carrageenan in organic nondairy drinks, protein shakes, puddings and frozen desserts as well as dairy-based products, meat products, plant-based meat alternatives, regular and gluten-free snacks, tortillas and frozen pasta meals.

IFAC would like to iterate the positive attributes of seaweed cultivation on the environment sustainability.

Seaweed farming creates valuable marine habitats, improves water quality and does not require the use of farmland, fresh water, pesticides or heavy machinery to harvest the seaweed.

IFAC member companies have invested in initiatives to support sustainable seaweed harvesting and create responsible economic opportunities for local citizens.

In response to public comments posted to the docket, carrageenan is not carcinogenic.

No credible research has found carrageenan to be carcinogenic. And if it was, it would not be

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permitted for use in food.

We also remind the Board that carrageenan is not degraded carrageenan or poligeenan. Carrageenan has very different physical and toxicological properties than degraded carrageenan and poligeenan, which are produced by intentionally degrading carrageenan under extreme conditions not found in the body.

These harsh conditions are not applicable to the production of food-based carrageenan.

There is no degraded carrageenan or poligeenan in any commercial food-based carrageenan that is used in conventional or organic food products.

Since the NOSB's last review, there have been no changes in the global regulatory permissions for carrageenan.

Based on international organic equivalency programs, organic foods containing carrageenan are permitted throughout Europe, South America and Asia.

In fact, Europe recently renewed its

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list of additives permitted in organic food, which includes carrageenan.

Finally, we know public comments in the Handling Subcommittee report discussed the NOSB's previous vote to de-list carrageenan.

Past NOSB discussions should not (inaudible) the current evaluation of materials.

Thank you.

MR. ELA: Thanks, Robert. That was a big breath at the end there.

MR. RANKIN: Almost done.

MR. ELA: Almost done. Fair. Are there questions for Robert? Mindee's got one.

MS. JEFFERY: Thank you. That was a long list of essential uses that you just provided us with. Thank you very much.

I was wondering if that's in your written comments specifically.

MR. RANKIN: The functionality and examples of where carrageenan is preferred to alternatives is.

We actually got the list of product launches from the INNOVA search after the deadline

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for the written comments.

So, I'd be happy to provide that if that's helpful for the Board. Otherwise, the functionality and characteristics that carrageenan provides for foods is in our written comments.

MS. JEFFERY: Thank you. And your list, is it essentiality in the sense of it seems like it works better in some places than in others and would you say that list is the essential uses or it's like a -- is there like a differentiation and sometimes they use it because they're allowed, but they could use something else, and there is also a list of truly essential uses?

I'm making a distinction that might not be that real. I'm hoping to hear your perspective on it.

MR. RANKIN: Yes. I think for a lot of formulators and consumers essentiality might be a personal decision.

And obviously there are examples of formulators who have replaced carrageenan or moved on and chosen to use either multiple additives to

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achieve the same function carrageenan provides or potentially remove that product from the market.

So, in terms of the comparison to other additives or ingredients that are permitted on the list, yes, there are some replacements in some cases.

I would argue that there is not an exact one-to-one replacement in all cases. And, in some cases, one could not replace carrageenan with an alternative.

So, in my read, in my review of the, you know, the OFPA and related, you know, requirements, if an ingredient is essential in one application, it's considered essential and, you know, certainly formulators and consumers continue to have the option to avoid products containing ingredients or anything if they choose to do so.

MS. JEFFERY: Thank you.

MR. RANKIN: thank you.

MR. ELA: alright. Amy.

MS. BRUCH: Sure. Thank you, Steve.
Thanks, Robert, for your written and oral comments.

I just had a question.

I wanted you to expand a little bit more on the health merits. You briefly touched on the fact -- or your opinion on it being labeled a carcinogen.

Are there any other health issues that you could expand on or debunk regarding carrageenan such as the intestinal ulcers or irritable bowel syndrome, et cetera?

MR. RANKIN: Well, we did address that to some extent in the written comments. I wish we didn't have to because a lot of this research has been disproven and debunked by other research that tried to replicate what those researchers proved or said they prove.

I think there are questions as to the materials the researchers used that --

(Discussion off the record.)

MS. ARSENAULT: Hold on one second, Robert. Let me just --

MR. RANKIN: So, there is research that was developed and, you know, I think, in our view, that research did not use carrageenan as its test sample.

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And so, there was some research that was attempting to replicate that work and was not able to, which questions, in our mind, what substance that research was using.

In terms of intestinal, you know, issues, certainly we've seen, you know, comments and allegations toward that.

You know, I think, you know, what we are learning more and more about the microbiome and our insides, are that everybody is very different depending on our lifestyle and what we eat all the time.

And so, you know, I don't know -- I wouldn't -- well, in my opinion, you can't pin a particular outcome down to one ingredient that you may consume on some sort of a basis.

This requires quite a bit of very detailed research and studying of the diet and lifestyle and the person's body and things to determine whether anything could be causing a certain issue.

So, in my view, there is not any proven data to show that carrageenan causes negative

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outcomes in those situations here I think we're referring to.

MS. BRUCH: Okay. Thank you.

MR. ELA: Then we'll do Wood and Jerry and then we'll move on to the next speaker.

MR. TURNER: Thanks. Robert, thanks.

You may have said this in your response to Mindee's question, but I just want to make sure I understand it.

I feel like just anecdotally or sort of (inaudible) I see a decline in the use of carrageenan in the marketplace, but it seems like you're talking about over the last ten years or so.

Your numbers were compelling to me, though, that it is growing -- it feels -- it almost sounds like there is almost more of a proliferation of it over the last several years than I was really perceiving and I'm just -- can you speak to that again?

Is it being used more or is it -- or has the rate of use in products slowed?

MR. RANKIN: So, I appreciate your

question and I, too, was surprised -- happily surprised to see how many products had been launched over the past five years that contain carrageenan.

I don't have data on what products may have gone away that had carrageenan or the reformulated, so I will say, first, I don't have that data, but I will focus on the fact that companies are continuing to launch products -- innovative products that consumers seem to want that contain carrageenan.

And whether it's an opinion on the National List or a preferred ingredient, which I would argue it probably is, the data shows that companies are using it and want to continue to use it.

And, you know, some of those examples I provided are, you know, gluten free, nondairy, meat alternatives. Things that when you look to the future, those are products that consumers increasingly want.

And like I said before, having it as an option for companies allows them to launch those

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products, it allows, you know, companies to consider other options and, again, companies and consumers to consider not purchasing those products if they don't want to.

So, gain, I think that the data shows that companies still want to use it and are using it, and that is evidence that consumers are looking for those types of products. So, that's all I have on that.

MR. TURNER: I appreciate that. Thank you.

MR. RANKIN: Thank you.

MR. ELA: Yeah, Jerry, and then we'll move on.

MR. D'AMORE: Robert, thank you very much. Appreciate all that. My thought -- or my thoughts were overtaken by both Amy and Wood there.

And I think those were great questions and I think you answered them well.

You referred to the data. I would like to ask the question as to the why and, you know, so you have the initial health concerns, then you had a drop off in product and the use of that product

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in mixes, and I don't care what the data says. I'd like just to know is there a why attached to that?

So, if you have an overwhelmingly strongly put health concern at some point, then you have refuting data. Without leading the witness, I'd like to ask you, do you think there's a correlation there?

In other words, you get the strong health concerns, the drop off, and then very hardened also by the new products.

is there a continuum there that might suggest that the initial health concerns caused users who might like to have carrageenan to say, I just can't -- I just can't risk it?

MR. RANKIN: I think absolutely. The allegations and the discussion that was had and has been being had for over ten years certainly led to consumers, you know, providing input to companies, which then made decisions on the products.

Obviously not all companies decided to reformulate and, in some case, maybe thought that

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they couldn't or, you know, wouldn't, which I'm glad to see. And now, it seems that there are more products coming to the market and at the same time, you know, in my opinion, again, the science that was put out to support some of those negative outcomes has been refuted and debunked and so that, I think, hopefully gave consumers and food companies comfort that this is not the issue that maybe some had suggested it might be.

And so, that has potentially, you know, been illustrated in what you just talked about, Jerry, and what you're saying as far as what we're looking at right now as far as the environment.

So, that sort of seems to line up pretty well.

MR. D'AMORE: Yeah. Well, thank you very much for your thoughts and your time on that.

In my mind, it's a slow ship to turn around once you've had some negativity to it. So, thank you.

MR. RANKIN: Thank you all.

MR. ELA: Nate, I'm wanting to move on.

Is your question --

MR. POWELL-PALM: Very pithy. And I

apologize if I missed it, Robert. Could you -- the products that you mentioned that were new to market using carrageenan, those were all certified organic products?

MR. RANKIN: I would need to check that data, Nathaniel. If I could, go back and check on that and then maybe send something to someone, Michelle or someone --

MR. POWELL-PALM: That would be very helpful.

MR. RANKIN: -- to give you all that information ahead of next week.

MR. POWELL-PALM: Thank you.

MR. RANKIN: Sure. Thank you. Happy to.

MR. ELA: Good job on the pithiness, Nate. We're going to move on. Thanks, Robert. Appreciate it.

We're going to move on to Darryl Williams, and then Jaydee Hanson, and then Marie Burcham.

So, Darryl, please state your name and affiliation and you have the floor.

MR. WILLIAMS: Good afternoon. My name is Darryl Williams and I'm a senior technical reviewer and policy specialist for Quality Assurance International.

First thing is biodegradable, biobased mulch film, BBMF. QAI supports the NOSB's efforts to outline and obtain resolutions for BBMF if the result is practical for organic producers and has a positive environmental impact.

We would like to know what biobased percentage is currently available for use. If 80 percent biobased content is not available now, we would like to know when the industry plans to have an 80 percent biobased film commercially available.

These are important questions to know before defining a percentage that is to be evaluated by certifiers, then used by organic producers.

We urge the NOSB to ensure that the defined biobased percentage is achievable by the industry as of the date the new definition is published.

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Sodium nitrate. QAI agrees that the older annotation, at a minimum, needs to be re-listed to ensure sodium nitrate isn't possibly understood to be allowed for unlimited use.

If it will be re-listed under the old annotation, guidance should be issued for proper and accurate nitrogen, soil or tissue testing and how to verify the 20 percent nitrogen requirement without any standard for what each prop type requires.

Sodium nitrate was reviewed by the NOSB in 1995 and voted for allowed use with restrictions.

After the allowance, many certification agencies still did not allow the use of sodium nitrate prior to full implementation by the USDA rule.

The organic sector wanted to phase out in 2003 and again in 2011, but almost 20 years later it is still allowed for organic agriculture.

Internationally European Union, Canada, Mexico, Japan, IFOAM and Codex standards do not allow sodium nitrate.

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The NOP's allowance of this input only hinders trade agreements and causes unnecessary paperwork for both certified entities and certifiers. Harmonization of all organic regulations should be top priority.

Public comment process. QAI would prefer that the Board maintain the pre-pandemic format of hearing oral comments both virtually prior to the in-person meeting as well as in-person at the public NOSB meetings.

We see value in both formats. the virtual format provides opportunities for participation from more organic stakeholders, and the oral comments at in-person meetings provides tones, expressions and ultimately a real-person experience.

Virtual oral comments provide commenters that cannot attend, farmers, small businesses, people with illnesses, communicable or noncommunicable, it offers them an avenue to deliver oral comments.

QAI sees value in both virtual and in-person meetings as more employees can

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participate in the virtual format while the in-person meeting provides unique opportunities to connect with organic stakeholders.

QAI supports livestream meetings. You'll see it in my comments. We thank you guys for all your work, time and commitment and expertise, and thank you for the Board for allowing us to comment.

MR. ELA: Thank you very much. Are there questions? Brian has one.

MR. CALDWELL: Yes. Thanks a lot for that. I want to just relate some of this to the ammonia extract discussion and I assume you have expertise on that as well.

MR. WILLIAMS: Go ahead. I'm going to tell you right now I am a food scientist and a handler and my farm experience is like nil. So, I have to let you guys --

MR. CALDWELL: Okay.

MR. WILLIAMS: But I am more than willing to try my best to -- this is like my first time even playing with sodium nitrate.

MR. CALDWELL: Alright. Well, is there

another person from QAI who is going to talk who would have more expertise there that I should ask or --

MR. WILLIAMS: I think -- well, Adam Seitz already went on. I think he's still here. He's more handling, too, but -- I'm not sure if he can jump back in.

MR. CALDWELL: We'll just --

MR. WILLIAMS: We don't have anymore spots this afternoon. I apologize.

MR. CALDWELL: We'll just go forward and if you have insights, great. If not, that's fine.

MR. WILLIAMS: Sure.

MR. CALDWELL: The first one was whether you could elaborate on the difficulties that you might find with the 20 percent requirement for, you know, basically high-end fertilizers in the ammonium extract, you know, discussion -- or proposal.

And the second one is, though, do you think that, again, those ammonium extract points that we made in the proposal would require more testing either on farm or perhaps at the

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manufacturer level for some products.

MR. WILLIAMS: So, from what I have read, you know, sodium nitrate used in different -- even a specific state, it depends on elevation, soil, you know. There's so much involved in what the ratio you're going to use.

So, that was kind of where I was going with the guidance on where we get our information --

MS. ARSENAULT: Darryl froze. Let's see if it fixes itself.

MR. ELA: Yeah. Well, if he comes back on, we'll return to the question, Brian, so -- but meanwhile I think we'll move on.

Like I say, if he comes back on, we'll let him finish that thought.

MR. CALDWELL: Great. Thanks.

MR. ELA: Yeah. So, okay, next up is Jaydee Hanson, and then Marie Burcham, and then Alice Runde.

So, Jaydee, state your name and affiliation and start your comments.

MR. HANSON: I'm Jaydee Hanson. I'm the

policy director at the Center for Food Safety and I'm going to be focusing my comments entirely the question of BPA and ortho-phthalates.

Synthetic chemicals called phthalates or BPA and BPS are found in hundreds of consumer products.

They are a problem in organics because they're used as food context substances. They're used in plastic mulches.

A new study came out this week that says that exposure to people ages 55 and 64, that ten-year block, to these chemicals is causing 100 to 107,000 premature deaths a year. That's 1/7th of the deaths we've had this year from COVID. So, it's huge number.

The National Organic Program was going to do research on BPA in 2018. I was told that if we wanted research to be done, we had to approach the Secretary of Agriculture because it was at that level that the decision not to do the research was done.

People with the highest levels of phthalates in their bodies have a greater risk of

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death from any cause, but especially cardiovascular.

The study that was published this week estimates that these deaths are costing the U.S. between 40 and 47 billion a year.

These chemicals are used in plastics to make them softer, to make them, you know, to make better tubing, to make better linings in cans, to make all of these things, but while doing so they interfere with the body's endocrine system and they're linked to developmental, reproductive, brain, immune system problems and others.

The challenge of these chemicals is it takes such a small amount of them to have a huge effect.

And the study I quoted from this week was looking at a large study of adults 55 to 64, but when you look at some of the things that are being connected to these chemicals with children, it's awful. And it's awful that organic food would still have these chemicals in it. Thank you very much.

MR. ELA: Well timed. Amy has a

question for you, Jaydee.

MR. HANSON: Sure.

MS. BRUCH: Jaydee, thanks for your information and there's actually several written comments in regards to what you were talking about and we appreciate you bringing this up.

You made reference to a study that was released. Is it possible for you to share that study or the link to I?

MR. HANSON: Yeah. It's from the journal Environmental Pollution and the lead author is Leonardo Trasande, who is a professor of pediatrics and environment medicine at the New York University Langone Health center.

MR. HANSON: Okay. Thank you.

MR. ELA: If you want to send that to Michelle, Jaydee, that would be great. She can --

MR. HANSON: Yeah. Be happy to do that. What we're finding, you know, is that, you know, five years ago when I wrote, there's a lot of data. Now, there's even more data about how we need to get these out of our food.

And one organic company -- Amy is going to -- when we showed them the data and they're now owned by General Mills, they said, okay, we're taking it out.

Some other companies shown the data have not taken it out and we have resisted, you know, targeting those companies in a boycott or something because we want all of organics to say, this won't be in organics, so that we don't have to go company by company.

MS. BRUCH: Okay. Thank you.

MR. ELA: Thanks.

MS. BRUCH: Thanks for sharing that with Michelle also. I appreciate it.

MR. ELA: We've got Wood and then Esa.

MR. TURNER: Jaydee, I really appreciate the comments and really appreciate the information you provided. I just want to make sure I'm clear on what you're saying just within the context of sort of our work agenda as it currently exists.

Are you saying that the research priority that we have published is not sufficient?

Are you saying we're beyond the point of needing

more research on this? Is that the idea?

I just want to make sure I'm clear on the core of your message. I just want to --

MR. HANSON: Well, we've had, you know, years that we've been waiting on the research. Meantime, other researchers have done some really good work that we need to be looking at and we need to be acting on that.

This is a challenge for organic because we have, for the most part, not looked at food contact substances. This comes in from food contact substances, including stuff that gets into the soil and water, but it's a food contact substance problem.

MR. TURNER: Thank you.

MR. ELA: Asa.

MR. BRADMAN: I have a question here. I think what you're saying is really important. When we talk about food contact, we should be thinking both in terms of packaging and also processing and handling.

And I thought, in fact, I'd be working on BPA for the last five years, but my question

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is is that one of the issues that came up, you know, five years ago and has come up is under OFPA, you know, where do we have the authority to, you know, opine and regulate on food contact materials and particularly packaging materials as one component.

And I think it's important for everyone to hear your thoughts on that as we go forward and hopefully these issues are more central.

MR. HANSON: Yeah. Well, you know, I think that we've got some really good lawyers at Center for Food Safety and I, frankly, haven't asked them to go to a scientist and a policy guy, you know.

If, you know, the ideal thing would be that this would be a no food. And, you know, if we can't find a way and offer to keep it out of organics, then what will end up happening is that there will be a list of good organic companies and not so good organic companies that haven't got it out of their food.

We don't want that. So, we've got to find a way to keep this out of organic food or it will further complicate the organic brand.

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MR. BRADMAN: Thank you. Yeah, I agree.

MR. ELA: Great. Thank you, Jaydee.
That's all the questions I see. So, do appreciate
it.

MR. HANSON: Thank you very much.

MR. ELA: We are going to move on to Marie
Burcham, followed by Alice Runde and then Christie
Badger.

So, Marie, state your name an
affiliation and give us your comments.

MS. BURCHAM: Good afternoon, members
of NOSB and NOP. My name is Marie Burcham and I
am the policy director for the Cornucopia
Institute.

Cornucopia asks that the NOSB
reclassify carrageenan as a synthetic before
voting to remove the substance from the National
List.

When asked to evaluate substances, the
NOP and NOSB must consider that if a substance will
be harmful to your health.

Our extensive recent comment flags
recent research showing that carrageenan causes

inflammation.

This research has not been debunked.

That harm is especially relevant to sensitive populations, including those suffering from chronic illness such as IBS and Crohn's and other inflammation-mitigated disorders.

The organic marketplace is premised on a higher standard for human health that requires closer scrutiny.

While conventional food system may take years to align with research, the organic marketplace requires thoughtful action from NOSB and policymakers.

I would like to take off my Cornucopia policy hat for a moment and speak briefly with chronic illness and a disability and as a disability rights advocate.

The integrity of the organic label and the standards for human health are deeply personal to chronically ill individuals such as myself.

Organic food is justifiably recommended by doctors to help treat chronic illness. A diet of organic food lowers exposure

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to substances that fuel inflammation such as pesticides and livestock drugs.

Even the smallest doses of these chemicals can affect the day-to-day functionality and welfare of someone with chronic illness.

It's why the organic label has become necessary and a safe haven for so many. While not the original intent of the label, many individuals now rely on organic farms and brands as a source of the only food they can trust.

Of course, concerns of accessibility and inequity in the organic marketplace are right alongside as issues.

In the meantime, I ask NOSB and NOP to consider what integrity within the organic food system can mean for people with certain disabilities and chronic illness. It's a matter of life and death.

Personally, I have a condition called alpha-gal, an increasingly common acquired allergy to mammal products.

Many folks with alpha-gal have compromised health due to and in addition to their

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severe allergy and seek out organic and vegan alternatives on doctor recommendation, but the same products that are necessary for our well-being can threaten it.

Carrageenan cross reacts with this allergy and will often cause life-threatening reactions such as anaphylaxis.

If carrageenan was always named on the ingredient panel or listed as an allergen, this would be less concern, but carrageenan does not always appear on labels.

Sensitive individuals cannot guarantee their safety by eliminating processed foods because labeling laws do not require transparency and carrageenan is used as a processing aid such as in the cream used to make ice cream or when it's used to filter alcohol.

Carrageenan is also used on edible films or to pump poultry and other fresh products.

There is even a possibility that carrageenan is being used as protective films on organic produce, again, undeclared.

People with alpha-gal and other chronic

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illnesses like Chron's should not be disregarded when considering human health concerns.

Even though society devalues disabled people, the organic label does not need to follow suit.

As Cornucopia's policy director, I implore both NOP and the NOSB to consider the actual research which we reference and summarize in our written comments the new research showing (inaudible) health effect has not been debunked.

Thank you very much.

MR. ELA: Thank you. Are there questions?

MR. BRADMAN: I have a quick question.

MR. ELA: Um-hm.

MR. BRADMAN: Could you add more on the use of carrageenan as a fruit or vegetable coating?

I share your concerns about unlabeled ingredients.

MS. BURCHAM: Yeah. Sure. So, we did include some reference to research about it being used as a protective film in organic produce, but essentially -- or just in produce in general, not

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necessarily organic.

So, we don't know how much is being used in organic, but that's a real concern especially for people with sensitive health.

It's being used as protective films to limit food from becoming rotten quicker. So, it's preventing respiration and bruising and things like that.

So, it's very common in certain fruits, soft-bodied fruits, tomatoes, things like that.

And we're not sure how prevalent it is, but I can tell you as someone with severe chronic illness, I can't necessarily trust organic food anymore, like fresh produce anymore because of this issue.

And my doctors are very concerned for the chronic illness community in general because of the lack of labeling.

MR. BRADMAN: Thank you.

MR. ELA: Wood.

MR. TURNER: Thanks for your comments.

I think you may -- I just want to make sure I'm clear on this and the discussion of carrageenan

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as a coating is helpful to me. So, thanks for that question, Asa, but I -- is the context that carrageenan would not be labeled simply in the context of it being used as a processing aid?

I just want to make sure I just -- that's a comment that struck me and I just want to make sure I understand that.

MS. BURCHAM: Yeah. Sure. So, when it's being used as a processing aid, it doesn't -- legally it does not need to be included in the label. Certainly companies could include it on the label, but, in general, they do not.

So, processing aid meaning like the cream used in ice cream. And since the cream is being labeled as an ingredient, it's not necessarily including its use of alcohols, but it's to just used in processing.

So, we're seeing it in edible films. That's more of a handling issue. And also to, like, add texture and plumping to other fresh products.

So, it's not just a question of processed food necessarily. I don't know if I'm

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answering your question.

MR. TURNER: No, that's helpful. I'm just trying to -- sorry. I'm trying to parse a lot of comments that I'm remembering from the written comments as well as conversations we've had internally and I just want to make sure I understand.

MS. BURCHAM: Yeah, it's definitely undeclared on a lot of labels and that is a serious concern. I think if it was always declared, then for sensitive individuals it would be less of a concern, but that is not the case.

MR. ELA: Anything else?

(Pause.)

MR. ELA: Thank you so much. We do appreciate it.

MS. BURCHAM: Thank you.

MR. ELA: We are going to move on to Alice Runde and Christie Badger, followed by Harry Rick.

So, Alice, please go ahead. State your name and affiliation.

MS. RUNDE: Thank you. Good afternoon. My name is Alice Runde. I'm the coalition manager

for the National Organic Coalition. My comments today pertain to several topics.

On racial equity, the National Organic Coalition, or NOC, has previously presented data in context to both the USDA and the NOP regarding the persistent structural racism in our agricultural system which has excluded many black, indigenous and other farmers of color from their ownership, farming and participation in the organic movement over time.

In our written comments, we turn to our own system and reflect how the NOSB and the US organic community can keep the tenets of fairness and inclusivity at the forefront of our work.

Our full recommendations are outlined in our written comments, but I will highlight two of them here.

First, to make sure this topic receives the time and attention it deserves, we ask the NOSB to establish a diversity, equity and inclusion, or DEI, subcommittee to lead this work on the part of the Board.

The subcommittee's future

recommendations should include changes that would make the certification process more accessible to producers of color, make organic food more affordable and available and ensure that organic farmers -- or organic farming pays living wages for farmers and farm workers.

The NOSB should work with the NOP to establish a structure that invites and compensates stakeholders to offer guidance and feedback to the DEI subcommittee.

Second, NOC recommends that the NOSB engage in a public consultation process to develop fairness and social adjustment standards to the NOP. The NOSB should add this topic as a work agenda item.

On oversight improvement to deter fraud, NOC appreciates the CACS committee work -- sorry, working to identify gaps that require further action to address enforcement challenges.

While we appreciate the importance of the technological aspect of this work, the most challenging barrier to organic integrity continues to be systemic within the USDA and the NOP.

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While we think the SOE rule is important, there is more work to be done. I refer you to our full comments where we provide additional details.

On carrageenan, during the spring 2021 meeting several NOSB members expressed our concern that the current NOSB is discussing something that a former board made a solid, significant decision on.

They further noted that unless there is significant, new material to be addressed, the fall 2016 NOSB recommendation to delist should be respected.

We could not agree more. Why are we asking the NOSB and organic stakeholders to spend time and energy on developing new recommendations that circumvent the USDA's responsibility to advance longstanding NOSB recommendations.

And finally on oral and written comments, we agree that there is disproportionate access to the NOSB, much of which takes place behind the scenes.

We are grateful for the integrity of

those NOSB members who refuse to take part in such backdoor dealings. Transparency is a core tenet of how we work.

Due to the differences in access to the in-person meetings, we are in favor of multiple ways for stakeholders to engage in this process.

Virtual, in-person and written comments should all be weighed and considered equally. Thank you for the opportunity to comment today and the time you all spend on these important complex issues.

MR. ELA: Thank you, Alice. Are there questions?

(Pause.)

MR. ELA: I am not seeing any, so thank you so much for your comments. We are going to move on to Christie Badger and then she will be followed by Harry Rice and Aimee Simpson.

So, Christie, please go ahead and state your name and affiliation.

MS. BADGER: Thanks, Steve. Good afternoon. My name is Christie Badger and I'm a consultant with the National Organic Coalition.

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Thank you for your time and service on the Board.

Biochar frm manure burning. We wholeheartedly support the comment from a NOC member who stated, manure is one of the best soil amendments and to waste it by turning it into ash is nonsensical.

Manure on its own will build the soil, feed the soil and aid in sequestering carbon. Turning it into ash from manure burning does not enhance these qualities.

Kasugamycin. Antibiotics in organic production are contrary to consumer expectations.

Organic livestock producers are prohibited from using antibiotics.

Antibiotic resistance poses serious threats to human health. Using antibiotics in organic agriculture contributes to those threats.

Kasugamycin is incompatible with organic practices. The NOSB must vote no.

Biodegradable/biobased mulch. Continuous improvement is a cornerstoen of organic production. Should this annotation change be made, continuous improvement must be addressed

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within the statutory language.

We suggest that an appropriate wording would be, when greater than 80 percent biobased/biodegradable plastic film becomes commercially available, producers are required to use them given that they are of the appropriate quality, quantity and form.

This terminology is known to certifiers, inspectors and producers of organic operations, applies the commercial availability statement and allows for variances based on functionality.

To be clear, though, NOC feels strongly that more research is needed into biodegradable/biobased mulch film before allowed for use in organic production.

Zein. As per the published materials, there are no stakeholders in favor of listing zein on the National List.

Zein does not fill a unique functionality that is not already filled by currently allowed substances. Zein can be manufactured organically.

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If, against the recommendation of stakeholders, zein is listed, the NOSB must explicitly prohibit use for nanoencapsulation. We strongly recommend that this petition be denied.

Copper sulfate for use in aquatic rice systems. Upon further investigation into this listing, we are left with more questions and concerns.

Is the practice of skirting the regulations by claiming the disease control use in aquatic rice systems a common practice?

If so, are certifiers aware of this practice and what are they doing to address it?

Drainage practices need to be better understood with clearly defined parameters of what is and is not allowed in organic production.

In the interest of (inaudible) improvement, we strongly support the Crops Subcommittee recommendation for a comprehensive review of copper sulfate as a research priority.

Thank you.

MR. ELA: Thank you, Christie. Are there questions from the Board?

(Pause.)

MR. ELA: I have one if nobody else does.

So, coming back to biochar there's certainly been discussion on the Board, but we really don't have criteria that -- and I think this comes out with ammonia extracts and a number of our products that we're being asked to recycle waste streams from conventional industries through the organic system.

Do you think -- I mean, you know, the argument here is the paralysis of the manure is different than burning.

I know it's a technical question, but it actually, I think, is pretty important to how this petition goes.

Do you have any thoughts on that and how to interpret the paralysis versus ash?

MS. BADGER: Steve, I think this is one that the NOP has actually already been clear on and they have said that paralysis is the same as burning.

So, this is one we actually do have guidance from the NOP on. Thank you.

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MR. ELA: Thank you. Any other questions for Christie?

(Pause.)

MR. ELA: Thank you so much, Christie. Very much appreciated.

MS. BADGER: Thank you.

MR. ELA: We are going to move on to Harry Rice, and then Aimee Simpson, followed by Greg Rawlings.

So, Harry, please state your name and affiliation and you have the floor.

MR. RICE: Thank you. My name is Harry Rice. I am with the Global Organization for EPA and DHA Omega-3s, or GOED for short.

We represent the worldwide industry for EPA and DHA, the primary long-chain omega-3 fatty acids found in fish oil.

Our membership is built on a quality standard unparalleled to the market and our mission is to increase consumption of EPA and DHA and to ensure that our members produce quality products that consumers can trust.

Today, I'm going to address the

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Handling Subcommittee's August 13th discussion document on the fish oil annotation.

As expressed previously, GOED supports sustainable fishing practices and views a modification to the fish oil standard -- or annotation, excuse me, as an acceptable solution to address sustainability concerns and to ensure that fish oil is compatible with organic practices.

The proposed fish oil annotation in the August 13th discussion document is a minor modification of annotation Option No. 2 included in the Handling Subcommittee's discussion document dated 18 February 2021 on the same topic and discussed during the spring 2021 meeting.

Annotation Option No. 2 was supported by GOED in its 12 April 2021 written comments and its 22 April 2021 oral comments.

The current annotation, with this minor modification, does not change GOED's support of the annotation.

That said, GOED supports the fish oil annotation as written in the Handling Subcommittee's August 13th discussion document.

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That is, GOED supports the addition of the following text to the current fish oil annotation: Sourced from fishing industry byproduct only and certified as sustainable against a third-party certification that is International Social and Environmental Accreditation and Labeling (ISEAL) Code Compliant or Global Seafood Sustainability Initiative (GSSI) recognized.

As always, thank you for your time and tireless efforts.

MR. ELA: Thank you very much.

MR. BRADMAN: I have a question. Is the industry clear and is there a potential confusion of the word byproduct with bycatch? And do you have a definition of both and if you could explain how byproduct is used to produce a fish oil.

MR. RICE: So byproduct is not the primary catch. It would not be for the primary purpose and I'm stumbling here because I'm thinking about what your question was.

MR. BRADMAN: Let's go with the first part. Do you have a definition of byproduct and

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bycatch? I mean I know there's many definitions of bycatch and that's regulated by NOAA in many contexts, but I'm curious. I just want to verify because I have a distinct understanding of byproduct and I want to make sure that agrees with your understanding.

MR. RICE: Yes, so I have to apologize.

You took me off guard with this question. There is a formal definition of byproduct, but I'm not recalling it right now. So my definition that I'm going to give you is just my understanding and that's what is not caught for the primary purpose of consumption. The bycatch is inadvertent catch would get caught in the net, if you will. So they are very different and I think that's what you're getting at, if I'm understanding you.

MR. BRADMAN: Just to confirm, a byproduct is a product derived from a catch that is secondary to the primary purpose of the catch?

MR. RICE: Yes, yes. Because the industry does not catch anything specifically for fish oil. It's all secondary. If you want, I can get back to you on this issue to give you a formal

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definition. I'm not trying to evade the question, I just don't want to answer it incorrectly.

MR. BRADMAN: Yeah, okay, no, thank you. I mean that's my understanding and I did do research on that, but--

MR. RICE: Okay.

MR. BRADMAN: But I would like--I probably should have reached out to you earlier, I would like to get that definition.

MR. RICE: Yeah, absolutely I can get that to you. No problem. Should I send that through Michelle?

MR. BRADMAN: Yes and it's probably something we want to submit to the open docket, too.

MR. RICE: Okay, so submit through regulations.gov?

MR. BRADMAN: Yeah.

MR. RICE: Okay. No problem.

MR. ELA: Or you can send it directly to her as well.

MR. RICE: Okay.

MR. ELA: Either way.

MS. ARSENAULT: Actually, send it to me. The docket is not open and you can't submit comments right now.

MR. RICE: Okay.

MS. ARSENAULT: Thank you.

MR. RICE: I'll do that.

MR. ELA: So I just, Asa asked the question and I'm certainly not as versed in all the terminology here, but in my head and especially like when we talk about fish emulsions and the crop side, byproduct is the remnants left after processing a fish for other uses versus the catch not intended for human consumption. I tend to think of byproduct as the bits and pieces after processing whereas you're saying in terms of handling it's a very different definition. Am I hearing that right?

MR. RICE: I think that's fair to say, yes.

MR. ELA: Okay. Good. That actually is good to know because I've never made that distinction in my head. Other questions for Harry? (Pause.) Thank you so much. We do

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appreciate it.

MR. RICE: Thank you. Thanks. Bye.

MR. ELA: We are going to move on to Aimee Simpson and then Greg Rawlings and Jill Smith. After Jill, we are going to take another break. So, go ahead Aimee. State your name and affiliation.

MS. SIMPSON: Hello. My name is Aimee Simpson and I am the Director of Advocacy and Product Sustainability for PCC Community Markets, based in Seattle, Washington. As a certified organic retailer, it is our mission to ensure that good food nourishes the communities we serve while cultivating vibrant, local, organic food systems.

An integral part of this mission is to ensure that the organic food systems we support are recognized for the benefits they provide to our communities and the environment, especially in the face of climate change.

We want to thank the NOSB for drafting its letter to Secretary Vilsack concerning opportunities for advancing organic as a climate change solution. In addition to the

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recommendations highlighted by the NOSB, we would also support the development of clear soil fertility standards as required under OFPA and an accompanying, strengthening of the Organic Systems Plan requirements to reflect those soil fertility standards. We would also support the enforcement of existing organic standards and other climate-friendly practices already required under OFPA, such as the pasture rule.

Beyond these steps, we must continue to eliminate gaps in organics, strengthen the integrity of the organic label and evaluate all aspects of organic production with a lens of eliminating practices or inputs that are inconsistent with overarching organic principles and our growing understanding of climate-smart agriculture.

This includes finalizing origin of livestock, organic livestock and poultry practices and strengthening organic enforcement rules. This also includes, however, applying additional whole system scrutiny to the inputs and practices currently allowed in organic. For example,

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nonsynthetic ammonia extracts, we are supportive of their exclusion. As one of our organic producers stated when asked if it was a necessary tool, they said heck no, that stuff will mess up your soil. Similarly, we know that antibiotic use, such as kasugamycin, in crops have far reaching impacts on biodiversity and the health and safety of all and do not support its inclusion in organic.

We also must continue to look beyond the soil and assess the impacts of our food production and the inputs on our connected marine and aquatic ecosystems. To this end, we continue to support the NOSB's efforts to delve into the complex category of sustainable fishery management and harvest standards and support the proposal to limit fish oil sourcing to byproduct meeting a third party sustainability certification.

Ideally, we would like to see organic develop its own aquaculture and wild fish sustainability standards to ensure strong alignment with organic principles, but in the interim, we understand the necessity of

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identifying an external reference point. We would, however, encourage continued scrutiny of the proposed GSSI and ISEAL certifications as appropriate reference points that meet the expectation of the organic community and consumer.

Finally, we must expand access and inclusivity in organics so that the understanding and practice of organic as a climate change solution becomes more widespread. Barriers to organic engagement and certification are barriers to true climate solutions and we support a continued effort to study and identify ways to remove those barriers, especially for our byproduct communities and producers. Thank you.

MR. ELA: Thank you, Aimee. Brian has a question for you.

MS. SIMPSON: Yes, Brian?

MR. CALDWELL: Yeah, thanks, Aimee. You mentioned soil fertility standards and I'm just wondering what kind of standards you folks are envisioning, you know, that would be applicable in the wide variety of soils and regions across the country.

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MS. SIMPSON: Yeah, I mean I think that that's part of where there's a lot of confusion and inconsistency. You know, soil fertility processes are required under 6513 and there are really no guidelines as to beyond saying crop rotation and, you know, those general kind of guidance as to what people should be doing to foster that and I think with our increasing awareness of regional soil sensitivities, climate change, carbon sequestration, all of that I think that we need to capitalize on that growing knowledge and really develop some stricter standards for organic system management plans. And yes, they would have to be kind of individualized, but I think that the growing science that we have going on right now and our understanding in organic needing to invest in that and really show that connection is worth that effort.

MR. CALDWELL: Great. Thank you.

MR. ELA: I have a question kind of related to that and it's kind of the flip of what you said when you asked consumers about ammonia extracts and they said heck no. If they found out

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that, I mean and you know this is somewhat true with just with sodium nitrate and some of these other things, but if they said, you know, if we were using them and they found out about that, what do you think would be the response?

MS. SIMPSON: I think, you know, so just to clarify, the people that we were talking to were our local organic producers. I usually, you know, in this kind of input scenario I like to try to reach out to some of our, you know, stronger partners to say hey, do you have an SSE for this, like is this is something that's really critical and that's where the response was like absolutely not, this is not good for my soil management systems and really throws everything off. As far as from the consumer perspective, you know, I think whenever you dig down into this kind of stuff, it gets really complicated really fast for consumers, but if you step back and you say, you know, on the whole we know that this disturbs the soil fertility and soil health, but we now know is critical to climate change and carbon sequestration and climate friendly agriculture,

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then the answer is very clear for them in that they are saying no, we don't want.

In fact, climate change and climate conscious practices are probably one of the number one concerns and we conducted materiality assessments of this recently. It is like one of the top concerns for consumers and I think that anything organic can do to ensure that its label is not eroding the confidence in its support of climate friendly agriculture is a win on the consumer front.

MR. ELA: Thank you. Anybody else? Somebody had their hand up and it dropped, I think, but I may have missed it. Oh, Mindee, go ahead.

MS. JEFFREY: Thank you. Aimee, I really appreciate all your comments and the depth of work that you do at PCC. I'm just curious if you can provide us with some perspective around consumers interacting with organic labels and organic labeling claims. In your experience, do consumers expect the word organic and organic labels to mean the same thing across all categories and all places in the marketplace? For example,

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if a consumer sees a towel and it has the word organic on it, do they expect total organic engagement with enforcement and integrity across personal care, supplements, the grocery aisle, produce? Do they see the label as meaning the same thing in all categories?

MS. SIMPSON: Absolutely. I mean any time there's a label like consumers, I mean, even our most invested consumers they just want to have confidence that that stands for the same standards wherever they see it. As a retailer, I mean, you know, even though we do a lot of effort to educate on the nuances and, you know, me personally with my background, you know, I know that it's not necessarily the same. OFPA only covers a certain scope, but it's always hard to communicate that.

As a retailer, our reliance on certifications on organic as being one of the strongest legally backed standards out there is critical especially as we continue to seek those kind of increasing complexities as to what's being put into food, how it's being produced and expanding beyond that. If we had more confidence,

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you know, that organic means this in health and body care and textiles and because we are continuing to have to expand our standards and the expectations that consumers are pursuing in our stores, then that just makes our job easier. So, you know, I would say yes the goal is consistency across all categories and all standards. Now, I understand there's some nuances to that, but the simpler we can be and the more consistent we can be, the easier it is to meet what the consumer expects.

MS. JEFFREY: I appreciate your perspective and experience. Thank you.

MR. ELA: Anybody else? (Pause.) Thank you so much, Aimee. We do appreciate it.

MS. SIMPSON: Thank you.

MR. ELA: We are going to move on to Greg Rawlings and then Jill Smith. We'll take a break and then after the break, we'll come to Jerry Hatfield. So, Greg, please state your name and affiliation and start your comments.

MR. RAWLINGS: Hi, good afternoon. My name is Greg Rawlings. I work for Jacobs Farm/Del

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Cabo. I am an organic grower for about 25 years now here in the central California coast. Currently we're growing a lot of culinary herbs, squash and tomatoes. I am speaking today on ideally, you know, not allowing ammonia extract into the organic food system. The reason is I addressed this Board earlier this year about the same thing, but the reason is that it breaks the symbiosis between the soil biota, the bacteria and the fungus that's in the soil and the plant and that biota is what gives organic fields their flavor. It's what gives the organic production systems, you know, the nutrients that come from a soil and it's really what organic is meant to be. You know, the old standard of feed the soil to feed plant versus the conventional idea of just feeding the plant. When you feed the soil, you're feeding the soil biota which is really, you know, kind of just a more detailed, nuanced way of putting it.

But there's a whole bunch of bad things that happen when you do break that symbiosis. You know, the soil biota because it's filling up the

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space in the soil and has a strong productive ability, what you're doing when you break that symbiosis is you are allowing diseases to move into your fields, you know, nitrogen and when you put those soluble nutrients, like ammonia extract, into the soil you're allowing those plants to grow really fast, you know, initially, but the reason why they're growing so fast is they're no longer sharing any of their productive capabilities with the soil biota, which the soil biota then starts to recess as, you know, the profile in the soil begins to recess and is smaller and smaller and that allows an open door for disease, plant diseases to come in.

The other thing that happens that's really bad for organic fields when we apply the soluble nutrients is that pests are more attracted to especially high nitrogen of crops, fields with high nitrogen availability in them. Ammonia extract is the worst of a whole line of soluble nutrients, but kind of going back to what Michelle was saying about maybe a soil, you know, like an overall soil system, you know, an NOP that would

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allow for better soil health really what it should be looking--and I realize it's diverse across the country, but really what the organic program should be looking for is less soluble nutrients every year.

How can we shift all of the fields and all of the organic production away from soluble nutrients to, you know, things that you put in the soil before you plant or apply, you know, compost or something after you plant rather than liquid.

You know, anything that's a liquid soluble nutrient is affecting your soil biota, which is diluting the taste and the flavor of your crops and also diluting the organic brand. Thank you.

MR. ELA: Thank you. Amy has a question.

MS. BRUCH: Hi Greg. Thank you so much for your comments today. I just had a question.

In the mid west our crop rotations, we usually do complementary crop rotations, high nitrogen consumer with a low nitrogen consumer crop or a crop that actually contributes nitrogen to the soil, such as a legume. In your area and with the

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crops that you say you grow, is that possible to also do those type of intentional rotations, not just a crop rotation to say you're doing a crop rotation, but a crop rotation that's meaningful, that complementary in terms of soil health? And can you speak to that just a little bit for me, please?

MR. RAWLINGS: Of course. We do every year. We plant everything that's fallow over the winter, you know, this area is a little different from the rest of the country. We really get only rain in the winter time and then all, you know, the rest of the season's dry. You know, what I figured over time is that we don't have enough water to put cover crops in the summer, you know, spring, summer, the fall, but in the winter every field.

We don't have any bare fields. They're all planted either with perennials like rosemary that we grow or spearmint or they're planted with a cover crop. Ninety-five percent of our cover crops have nitrogen thick (inaudible) in them and I definitely would encourage organic farmers, or really even the conventional farmers, to plant cover crops as

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it's a great source of nitrogen and it also builds the organic matter which can feed that soil biota later on in the crop cycle. So, yes, we definitely use cover crops.

I would highly suggest here, you know, the traditional cover crop in this area is maybe like 30 percent oats, 40 percent vetch and 30 percent bell beans, you know, but those specific species will change as you go across the country, depending on what grows in your particular area and when you also get free water. You know for us the free water is in the winter so we grow winter cover crops, but in other parts of the area where you get summer rains and stuff, summer cover crops are, you know, cover crops in between seasons in the summer is also a great idea in my opinion for sure.

MS. BRUCH: Great. Thank you, Greg. Appreciate it.

MR. ELA: Looks like Logan is up next.

MS. PETREY: So I'm super jealous, you said you only get rain in the winter when you don't grow. So you don't get much rain during your

growing season, is that right?

MR. RAWLINGS: I mean I'm looking at like a mist right now. We get a lot of fog and mist so we get like disease producing wet spells, but there's no moisture actually into the ground.

So, yes, it's just definitely a mist.

MS. PETREY: Right, so with that moisture in the air and you said you have disease like on the leaves, so foliar diseases, fungal diseases, things like that. You mentioned with high nitrogen crops you can have pest pressures, like insect pressures that may be worse. In my experience, when I get deficient in nitrogen, I actually see more foliar diseases. Do you see that also? It's like once I get, because I do get rain, once we get rain, nitrogen is gone, that's when the onset of plant diseases actually can occur.

Do you see that--like if you ever have any nitrogen deficient plants, it seems like you get a lot of fog, I can see it right there, but do you see that the diseases are worse?

MR. RAWLINGS: You know traditionally we have a really different climate than you do,

so you know it's really very different. I haven't noticed nitrogen deficient plants get more disease, particularly foliar diseases, but we don't like nitrogen deficient plants. We want to supply enough compost pre plant that we survive through those times, yes, you know, for sure.

MS. PETREY: And your fertility program is a pre plant program and you're able to maintain that nitrogen all the way through your crop? I think cilantro--I remember speaking with you last spring. You grow a lot of cilantro?

MR. RAWLINGS: Yes.

MS. PETREY: And mint?

MR. RAWLINGS: So we have like cilantro and dill are 60 day crops and then we go all the way up to rosemary and we have five blocks of spearmint that have been in the ground for 30 years.

You know, so generally what I picture is, you know, something that if we need nitrogen in a field, we can put some pelletized, you know, like 7-5-7, which would be blood meal and bone meal to get something that we need within like 45 days. You know, something that's like, you know, 45 days to

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three months, seven meal is good stuff to do. Then anything more than three months, you really want to jump into compost because that's more of like instead of a month time period that kind of starts in two months, but it goes for like two or three years, you know, so when I'm timing the fertility for the specific crops, you know, when we're picking that crop is really important.

MS. PETREY: Right.

MR. RAWLINGS: And then once we get to perennial crops, then we're applying compost between our harvest. So we'll harvest something and then we'll apply compost, you know, generally over the top of a perennial field and then wait for the next, you know, harvest kind of thing.

MS. PETREY: Okay. Thank you.

MR. RAWLINGS: Thank you.

MR. ELA: Thank you. Make you want to move to California, Logan?

MS. PETREY: It's tempting.

MR. ELA: I know. Rick and then Asa.

MR. GREENWOOD: Okay, am I on?

MR. ELA: Yeah, you're on, Rick.

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MR. GREENWOOD: Okay. I just wanted to make a comment. We've spent a lot of time talking about fertilizer and crop rotation. I'm an organic tree farmer, avocados. We can't rotate our trees and so it makes a very different kind of farming. I think it's important for all of us to recognize when we start talking about soil standards and national standards and all the others, it's important. There's so many regional differences in terms of soil and how you manage your crops. I can't even put cover crops under my trees because it's all shaded. Also, Logan, we only had four inches of rain last year. So, it's all irrigation. I just think that's an important point because we are a national program and a national organization and there are an awful lot of regional differences that we need to take into account when we start coming up with standards and regulations. Thanks.

MR. ELA: Asa?

MR. BRADMAN: I meant to ask this question of Robert Long, too, but the AE extract has really brought up a lot of discussion about

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nitrogen and you know I'm interested, you know, if we're using manures for conventional agriculture , we're essentially recycling synthetic nitrogen into corn into cows and they poop it out or chickens and then we use that poop to grow organic crops. I think that's really important recycling it, but I'd like to see and I'm curious, do you have estimates of the nitrogen for your crops that come from crop rotation and legumes and nitrogen fixation versus manures and blood meal and things like that, that are from conventional animals.

MR. RAWLINGS: You know in some ways the feedstock of our compost, we do two different types of compost, but the feedstock of our fertility based compost is cow manure and green waste. But in many ways I consider compost to be a bacteriological and fungal product and not really, you know, it's changed from--

MR. BRADMAN: Sure.

MR. RAWLINGS: What the feedstocks were. To give you a general idea, when I take soil I usually take soil samples before I fertilize at

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all and when I first stocked the fields that I'm currently working about 10 years ago, we were seeing maybe 15 pounds an acre of nitrogen when I did the pre soil samples. Now after years of compost and organic methods, we're seeing 50 to 75 pounds of nitrogen, pre plant and pre fertilization. We tripled the amount of nitrogen and that's from compost of previous years, that's from a good soil biota, that's from the soil biota moving through the organic matter and transferring that into the plant. That's kind of one of the things that I really like to see.

I use nitrogen as a limiting factor for the growth of my plants. I want to see that cycle of that nitrogen between the organic matter and the biota breaking it down so I want to see it, kind of think of it as instead of just feeding the water, I'm drip feeding the nitrogen to the plants over time. The best way to do that is with compost, a good biota and then you're breaking down the organic matter that's there as you keep adding more and then you're talking the lifetime of that cycle is years, even a decade before you really see the

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end results of what your soil is going to eventually be like full time.

MR. BRADMAN: Thank you.

MR. ELA: Nate?

MR. RAWLINGS: Does that answer your question?

MR. ELA: Nate, your hands been going up and down, so.

MR. POWELL-PALM: I know. Everyone like I just have another question after everyone asks these good questions, so mine's going to be quick.

MR. ELA: Okay.

MR. POWELL-PALM: So, Greg, would you describe that your inputs, like the blood meal you mentioned and everything that's more an acute fertilizer for your plants' needs, would you describe them as contributing much to the building of your soil?

MR. RAWLINGS: You know we try to use as little as possible so we're trying to use the longer--I used to use (inaudible) nutrients a long time ago when I was a young organic farmer. As

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I learned more and as I saw the effects of those, especially on the flavor, I moved completely away from them. Ideally I'm putting in as little of the blood meal and stuff as I can for that particular crop.

MR. POWELL-PALM: Sure.

MR. RAWLINGS: However, if you're planting like a cilantro or a dill crop, and it's only 60 days in the soil you can't hope that your compost is really going to supply a lot of that nitrogen need of that crop, so you do have to put it in. So it's really like the windows of the crop, but I'm trying to get the most insoluble, hardest to break down nitrogen for each crop window, for the crops that I'm growing if that makes sense.

MR. POWELL-PALM: It does.

MR. RAWLINGS: So always looking to use insoluble.

MR. POWELL-PALM: Just a quick follow up to that, would you say that the real work of building your soil comes from that need to incorporate nitrogen fixing plants, like your vetch that you mentioned and your beans, that

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that's where the real workhorses exist?

MR. RAWLINGS: No, I would definitely say sure, those are building, those help. I would say it's the soil biota which starts--

MR. POWELL-PALM: Sure, yep, yep.

MR. RAWLINGS: Some soils have it, other don't. You can apply if you have a good diversified source of compost that is maybe 30, 40 percent animal manure and 60 to 70 percent green waste and made well, that's generally going to be your best source of the biota, which is going to be the best. That's the most important thing in your soil is the biota (Simultaneous speaking.)

MR. POWELL-PALM: Sure and that biota, I apologize for interrupting you. I want to keep it quick. The biota is really from the manure contributing to that compost, but that biota wouldn't carry over in the AE. You lose basically all of that really, you know, interacting biota that ultimately goes to be an important component of soil building. Is that correct?

MR. RAWLINGS: I'm not sure about the production of AE. However, it's the soluble

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nitrogen itself that's going to, you know, I seriously doubt although I don't know how they make it.

MR. BRADMAN: Sure.

MR. RAWLINGS: I seriously doubt that much soil biota would transfer through that but the problem itself is the actual material breaking the symbiosis between the soil in your field--there's soil biota in every field that could be better or it could be worse and it can always get better by adding compost, a good and I'm going to define that as a well made compost. The problem with soluble nutrients is that it's breaking that symbiosis that's already in the soil. I don't know what the AE bring with it, but I know that's going to damage the soil that's already in your field and the biota that's already in your field.

MR. POWELL-PALM: Appreciate it. Thank you.

MR. ELA: I'm going to jump in. Thank you, so much, Greg, appreciate it. We're going to go to one more speaker before the break. We've been doing really well and staying on time and now

we're lagging a bit. After the break, we'll have Jerry Hatfield and Mark Kastel, but Jill, state your name and affiliation and give us your comments.

MS. SMITH: Hi, thanks everyone. I'm Jill Smith representing the Western Organic Dairy Producers Alliance and come from organic dairy and crop production myself here in Washington state.

I thank you all for the opportunity to provide comments today. I'll try to be quick so we can get to that break.

I've actually revised my comments as we've gone along today to further address comments submissions and organic producer participation in general and I think Greg was a great example of that with all of the information that he just shared. I think that was hugely valuable.

Looking at organic dairy, we've recently seen the irreparable damage within the industry with the loss of milk contracts in the northeast. Contracts continually lost over the years in the western states and the continued consolidation making for fewer markets available

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for organic dairy families. We're actively losing families and farms who have served as role models within organic agriculture. Many point to this damage being caused by a lack of regulations and enforcement in areas such as origin of livestock.

I truly believe this has discouraged many of our dairy producers from engaging with the NOSB or continuing to provide comments. There's a growing feeling of not being heard or seen with their time and opinions not leading to change or results. I know personally our organic dairy producers have become completely frustrated with this process after fighting for a final OOL rule for years. Yet, I think it's a huge benefit to every single one of us to hear from our organic producers and I would encourage everyone to consider how we can get greater involvement again from them, given that they're the ones who are directly impacted by these changes.

I personally would like to see specific time set aside for organic producers to provide comments and I think our great advocacy groups can aid in recruitment of farmers and helping them

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prepare their thoughts and express their information. I think we need to change the feeling that producers aren't being heard and better relay information to them about open topics and how they may impact them directly on the farm. I'd encourage the use of virtual comment periods so that we have accessibility and as we seek a diverse group of voices, I think we also have to consider how we financially support producers who share their time at NOSB meetings or even look to serving on the board moving forward. A producer's time is valuable, especially the time of year when we have these meetings and I think we need to discuss how we can support their participation.

With fairness, accessibility and time constraints in line, we may need to consider limiting the number of comments made by a single organization. Having a diverse group of commenters will lend itself to a broader discussion and more information being shared. We appreciate your support in highlighting the value of organic agriculture in your letter to Secretary Vilsack and feel like organic agriculture serves as a model

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to show others how we can use climate-smart practices.

Thank you, again, for your work and commitment to the organic dairy industry. I appreciate the time today to offer my comments.

Thanks everyone.

MR. ELA: Thank you. Are there questions? (Pause.) I am not seeing any. Thank you so much, Jill. We really appreciate your thoughts.

MS. SMITH: Thank you.

MR. ELA: So we're running 20 minutes behind at this point not an unusual situation, so let's just take a 10-minute break and then we'll jump back into it and go through our final list of speakers for today. If we have a little bit of time, we'll try and catch some people on the wait list as well. So, let's come back, let's just say at the top of the hour, that's actually 11 minutes, we'll be generous. Easy to say. See you at the top of the hour.

(Whereupon, the above-entitled matter went off the record at 3:49 p.m. and

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resumed at 4:02 p.m.)

MR. ELA: Okay sorry about that, nothing like a call from Farm Service Agency to happen in the middle of an organic meeting. We'll jump back into it here.

First of all, let's start off with Jerry Hatfield and then we're going to move to Mark Kastel and then Waldo Moraga. So, Jerry, state your name and affiliation and you can make your comment, please.

MR. HATFIELD: Yes, I'm Jerry Hatfield. I'm a retired USDA ARS plant physiologist and I thank the NOSB and the NOP for allowing me to make comments and everything.

I'm going to approach this from a scientific point of view and I probably will step on a lot of your toes, but so be it. That is the fact that as I've gone through the technical report and I've gone through the minutes, I think you've come up with a conclusion that's now looking for evidence. If we take a look at this from a science-based perspective, I don't consider what you've done as a thorough review of the literature

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and a comprehensive review of the analysis of all of this and I think there's a lot of perception more than factual evidence of what's going on.

I'm going to point out a few of these because I did go through those reports very clearly because I wanted to see what the scientific evidence who are looking at ammonia extracts and their positive or negative effects on all of this.

On page 29 of your Minutes, it talks about more research is needed and if more is needed, why can you come up with the very definitive conclusions that you have in this whole report? For example, on page 40, there is no reference to support this very definitive statement does not contribute to plant health. It just makes that statement but there's no reference to it. Another is on page 28 and 37, it's in reference to weighing. It talks about nitrogen influencing the denitrifiers in there. But as you start looking at this system and the degradation of organic matter, there are other complicating factors. You've got tillage. You've got the crop rotation. You've got all these other factors. Nitrogen is not the only

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factor and the form of nitrogen is not the only factor.

In fact, you cite me in that report and some of the comments that I gave originally in terms of looking at a meta-analysis in all of this and I think this is what this whole approach needs.

If you look at another case, there's a lack of evidence, there's a lack of references that are cited in there, but I couldn't find them that I could go back and see what those studies originally did in terms of their complications and looking at their interactions going on. So, I think the overall scientific basis needs to be looked at much more thoroughly than what you've done to do a real thorough analysis on all of this. I've served 30-some years as journal editors and various editorial roles, if this was a scientific paper, it would be rejected for the lack of having strong conclusions that support your arguments. That's really a very strong point that I think you need to make to understand the integrity of (inaudible).

MR. ELA: Great. Thank you, Jerry.

Questions from the board? Brian has one.

MR. CALDWELL: Thanks, Jerry. I'm wondering when I read through it, the only positive facts that I could see from you know sort of strong ammonia fertilizers would be increased plant growth and sort of an indirect soil benefit by having more organic matter in the crop. Can you point to any direct positive soil benefits from ammonia extracts, the products that we're talking about here?

MR. HATFIELD: Well if you look at the direct effects of ammonia extracts in terms of plant growth because if we want to feed the biology of the soil, one of the things that comes with biology, we increase the biology when we increase plant growth because 50 percent of the root exudates are coming out as sugars that feed that soil biology. So the bigger we make the plant, the bigger we make the root system, the higher the amount of exudates going into feed that biology.

But it's a very complex process. It's that hey, what form of fertilizer because it really depends upon how we've changed the soil biology, how we've

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done our tillage operations, how we've managed the soil is part of that profile. When you start looking at this, it really becomes a series of interactions that are going on. I think everybody wants to relate it to one single factor, but that's really not the only factor that's influencing this, particularly in the soil biological system.

MR. CALDWELL: Yes, as a quick follow up, so if you grow a bigger plant it's going to have a benefit no matter what the source of nitrogen was that helped that plant grow big, right? And so I think the question that we get down to a lot is long term studies showing whether increased soil carbon, increased organic matter because of ammonia type fertilizers. Personally I don't see that, but maybe you do and you can cite some.

MR. HATFIELD: The bigger factor that influences soil carbon is how we till the soil.

I mean if you really look at this, we see a lot of oxidation when we stir that soil up, we begin to disturb that overall system, that's where we see the big flush of soil organic carbon come back.

I can manage soil carbon a lot more effectively

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or negatively by how I manage the tillage system.

If you look at the one meta-analysis I've put together and cited on there in the report is that it wasn't so much the form of nitrogen fertilizer, it was crop rotations, tillage practices, diversity of that cropping systems, the things that we attribute to soil health as influencing the soil biology more than just the form of fertilizer that's going on.

MR. CALDWELL: Thanks, Jerry, appreciate it. I'm going to move onto other people because I bet there's even better questions coming up.

MR. ELA: We've got a question from Amy and then Logan and then Sue.

MS. BRUCH: Thank you, Jerry, for your contributions today. I appreciate your references to the complete soil system. I am going to go a little bit more finite and ask you a question. It's actually in the written comments, there was another professor cited and I just was curious on your opinions of this quote that was given to us. It said there could be some initial

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differences depending on the source, so whether the source is ammonia, your VR digested manure, but once the ammonium is applied to the soil, the microbial nitrification process would be the same and any long term soil effects would be the same.

So they are kind of indicating that no matter how the product was synthesized, the formulation could be slightly different but how the ground and soil processes the ammonia would be the same. What are your thoughts?

MR. HATFIELD: Well, again, you know, it's where you start and again it's how it's managed. How much exudate are you putting in there? I mean you can modify all these different things. I mean it is so complex below the soil's surface, Amy, in terms of looking at this. I mean I could change that whole dynamic by going into a dry period or a wet period or excessively wet period that would change all that dynamic. And again, you just can't draw it in a black and white way and say this is the only factor because you've got so much interaction going on within that soil

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system. Even how we've aggregated that soil in terms of oxygen content, if we put a small crust on that soil surface and we block oxygen, you know, we completely change that dynamic of the soil biology. So you've got all these factors that interact and so you're absolutely right in this report saying that there's more research needed because we understand so little about how soil biology is working in organic systems, in synthetically fertilized systems, what we see in terms of tillage or no tillage. All these other things and even what the role of crop diversity is. I mean it's a complex world and I think that we need to be looking at it and quantifying the interactions that are going on.

You just touched on a few of them that are out there and so I don't disagree with those statements, but I think we really need to figure out what starting point we have and what changes over time. Because we've actually seen changes in the microbial activity within two weeks of changing that overall system. I mean it occurs quite rapidly in a lot of cases.

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MS. BRUCH: Okay, thank you.

MR. ELA: We've got two more questions and, Jerry, I appreciate your thoughtfulness, but if we can keep the answers a little shorter, just because we do have a limited amount of time. I have no intention of cutting you off, but also be fair to our other speakers.

MR. HATFIELD: Sure.

MR. ELA: We've got a question from Logan and Sue.

MS. PETREY: Gotcha, I'll try to be quick. So, Brian asked can you point to the positive effects. My question is can you point to negative effects of having ammonia extracts added to the soil, especially if we were to put on a 20 percent rule to limit to when it might be needed and still use carbon-based products as the main base, but can you point any negative effects that you would think would happen?

MR. HATFIELD: I don't think there would be a negative effect, Logan. I think that what we would see is that we would change that biology very quickly. Again, you're putting into

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the system that has the compost. I think that's really what we're looking at, as saying how do we put this in combination with other things we know that are soil building, soil biological improving practices.

MS. PETREY: Okay, thank you.

MR. ELA: Sue?

MS. BAIRD: I think Logan asked my question, but I do want to say how much I appreciate this comments, Jerry, because I know you've been involved with the organics for quite a while and friends with Dr. Michaels, so absolutely. I really appreciate that your comments were very--they helped me a lot to understand this whole process. So just to put you on the spot, are you advocating maybe we should go back to get some more clarification on this particular issue?

MR. HATFIELD: I think that's what's needed. I think really, Sue, it takes a much stronger analysis. I mean the pieces that were there, I can cherry pick literature and I can substantiate every point pro or negative, so that's when you sort of stand back and say what's the

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aggregate set of literature showing.

MS. BAIRD: Right.

MR. HATFIELD: And what are the pieces and you go back to the points that Amy was making.

What are some of those interactions that are going on and how do we quantify those? So you can say in this case, you're going to see a negative impact.

In this case, you may see a positive impact and it so depends on how this whole system is operating.

MS. BAIRD: Thank you.

MR. ELA: Nate? Quickly before we move on?

MR. POWELL-PALM: So quick.

MR. ELA: You're always in this position, Nate.

MR. POWELL-PALM: (Simultaneous speaking.) I know. Would you be able to speak to is there a difference between ammonia extracts effect on soil and anhydrous ammonias effect on soil?

MR. HATFIELD: I believe there is. I mean ammonia extracts haven't been around long enough, I mean we know a lot about anhydrous ammonia

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and those negative impacts. Ammonia extracts because we're talking about low rates that go in along with organic systems. Short lived as you point out in some of your technical reports. You know, I don't think we're going to see the same level of effects, but I think that's where you need that research before you come to a conclusion. (Simultaneous speaking.)

MR. POWELL-PALM: But we (Simultaneous speaking.) Oh, sorry I was going to say, but we might see that we know a lot about anhydrous and its negative impacts on the soil, so it would be reasonable to say that we should be watching out for similar negative effects from ammonia extracts.

MR. HATFIELD: If you put it on the same rate and everything, but ammonia also goes on with this very heavy intensity tillage and I think there's a lot of degradation that's occurring because of the tillage system that's associated with ammonia that's causing our problems as well.

So, I won't just paint it and say fertilizer absolutely causes all these negative impacts

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because it's a systems effect.

MR. POWELL-PALM: Thank you.

MR. ELA: All right. Thank you, Jerry. We're going to move on. Appreciate it.

We will go next to Mark Kastel and then Waldo Moraga and then Nicole Dehne. So, Mark, state your name and affiliation and you have the floor.

MR. KASTEL: Thank you, Mr. Chair. Hello, everyone. My name is Mark Kastel. I'm the Director of Organic Eye, which is a project of Beyond Pesticides and acts as its investigative arm. We are chartered by the IRS as a tax-exempt public charity working in the public's interest.

I'm going to assume that all of you on the Board here are working in good faith.

Why should organics be any different than any other regulated and corrupted industry?

Do you think that employees and members of the American Petroleum Institute should have more power in terms of promulgating regulations and protecting the environment and climate impacts from gas and oil exploration than the public? Should they be appointed to run the regulatory

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agencies and disproportionately sit on the advisory panels? How about crop life? Should the lobbyists for pesticide manufacturers be calling the shots at the EPA? All these are 501(c)(6) business lobbies, as is the Organic Trade Association. Their job is to represent corporate interests not the public. I would encourage members of the NOSB, the vast majority of whom have current or past professional relationships with the OTA, to seriously balance businesses' legitimate voices against those individuals and organizations representing ethical family-owned businesses that are not OTA members, farmers and consumers.

The OTA represents enterprises that buy from farmers not farmers. They represent manufacturers and retailers that sell to consumers, not consumers. Our interests might not always coincide; often they do not.

Whose definition of organic are you going to accept and respect? The OTA advocated for organic hydroponics, although it seems to be in conflict with the law, foundational beliefs

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underpinning what organics are really all about and virtually every 501(c)(3), public interest charity, that oversees organics disagreed with the OTA. CCOF, the largest USDA accredited certifier, last I checked about 18 billion dollars worth of revenue a year, happens to certify the largest berry producer, Driscoll's. It accepts advertising contributions and sponsorships from (Simultaneous speaking.)

MR. ELA: Mark? (Simultaneous speaking.) I'm sorry, I'm going to cut you off there. We're bordering, we're on the disparagement side there (Simultaneous speaking.)

MR. KASTEL: (Simultaneous speaking.) It's a fact and in the questions, I'd welcome anybody who would, including you, Steve, who would like to have (Simultaneous speaking.)

MR. ELA: You need to rephrase it (Simultaneous speaking.) We're going to cut you off.

MR. POWELL-PALM: We can't call folks out by name.

MR. KASTEL: Okay, the last thing I

want to say, I'm a citizen of the United States, this is a public meeting. You cannot censor information just because you don't like it. (Simultaneous speaking.)

MR. ELA: Okay, Mark. You knew the ground rules. We set them very clearly up front. We're not going to argue it. We're going to move on.

MR. KASTEL: All right.

MR. ELA: (Simultaneous speaking.) Nate, did you have a question? (Simultaneous speaking.)

MR. KASTEL: That's unfair, Steve.

MR. POWELL-PALM: Just a quick one for you, Mark. And that was, could you speak to how we address concerns of consolidation in agriculture? From an organizational point of view. I think you're talking about, you know, what groups like how do we think about addressing consolidation and protecting family farms?

MR. KASTEL: Okay, well it goes into just what I was talking about.

MR. POWELL-PALM: And please refrain

from calling out certain groups.

MR. KASTEL: Okay so I'll use generic groups. When you have certifiers accepting money outside of the certification fee from who they certify, when you have groups representing themselves as public interest groups that are business lobbies that also have PACs and give money to politicians, we now have people from these lobby groups in the secretary's office and other political appointed positions.

MR. POWELL-PALM: I apologize, just for time, more so on the farmer. Like what should farmers be doing to address consolidation in agriculture?

MR. KASTEL: Pleading with you, Nate, to listen to--there are a number of groups and I can go down the list, that are true public interest groups that have been fighting. You know, talk about hydroponics, real soil grown farmers cannot economically compete. We have organic dairies managing as many as 22,000 head of cattle. I have a bridge to sell, Nate, if you and your other colleagues think that you can move cows two or three

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times a day into a milking facility and also appreciably ingest any amount of dry matter from pasture.

MR. POWELL-PALM: I'm sorry, Mark. It's really more the action, but that's okay I don't think you're going to answer the question (Simultaneous speaking.)

MR. ELA: I'm going to interrupt. Time's up. I think (Simultaneous speaking.) it's time to move on. (Simultaneous speaking.)

MR. KASTEL: Can I finish my--

MR. ELA: (Simultaneous speaking.) So, Mark, thank you. Thank you.

MR. KASTEL: Can I finish--

MR. ELA: Thank you for your comments, but it's time to move on. So, next up we have Waldo Moraga and Nicole Dehne and John Foster. Waldo, please state your name and affiliation and make your comments.

MR. MORAGA: Thank you. Good afternoon. My name is Waldo Moraga. I'm one of the founders of Eco2Mix and thank you for letting me participate in this meeting. I'm excited to

see the possibility of a safer, more sustainable and more affordable alternatives to treat water pH in organic agriculture. Next slide, please.

Right now synthetic carbon dioxide is permitted to treat produce, which means that you can grow organic tomatoes and ripen them using carbon dioxide or even use carbon dioxide for disinfection. It's also permitted to carbonate juice and drinks while keeping the organic label. Next slide, please.

In 2016, we started using carbon dioxide in the form of carbonic acid. Next slide, please. A carbon-based acid. Next slide. In combination (inaudible) to adjust water pH and we believe that it's time to let organic operations reap the benefit as well. Next slide, please.

What are the actual options for organic farmers? Sulfur burners? It's hard to even stand near one of those. They smell like rotten eggs and you can see the yellowish smoke coming out from the vent pipes. That's sulfur dioxide going straight into our atmosphere. In the end, a sulfur burner is the same as using sulfuric acid. It's

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the same chemical going to the soil. Next slide, please.

Going back to carbon dioxide, I want to point out the improvement we have seen so far using water treated with carbonic acid. Using synthetic carbon dioxide, we saw an increment of at least one percent in soil organic matter after four to five months of irrigating with water treated with carbonic acid. Next slide, please.

We can assume that carbonated water improves the carbon sequestration process. More organic matter in the soil means more carbon that's coming from the ambient carbon dioxide. It seems that the water treated with carbon dioxide stimulates the natural microbial activity in the soil. Therefore, accelerating the natural carbon process. Next slide, please.

Speaking with farmers that have been using water treated with carbonic acid for a couple of years now, they told us that their plants looked better, healthier than ever before and more resistant to diseases. Another one told us that he has never seen his pistachios look so good, so

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green and so healthy in a region that has been dealing with all trees poor soil quality for more than 15 years. Now carbonic acid is solving all those problems. Better water penetration, no more water runoff, more soil aggregation and increase on (inaudible) just to name a few.

Carbonic acid is the only process that really mimics nature to adjust water pH. Next slide, please. I would like to thank you again for the opportunity to share our experience in this field. Thank you.

MR. ELA: Thank you. Are there questions? (Pause.) I am not seeing any. Thank you so much. Much appreciated.

MR. MORAGA: Oh, thank you very much.

MR. ELA: We are going to move on next to Nicole Dehne then John Foster and Jo Ann Baumgartner. So, Nicole, please state your name and affiliation and you have the floor.

MS. DEHNE: Great, thank you. My name is Nicole Dehne. I'm the Director for Vermont Organic Farmers. We represent 800 organic producers in Vermont. I want to thank the NOSB

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and the NOP for all of your hard work and for the opportunity to give comment today.

I should also thank the NOP for this great mask with the USDA logo on it that I wear off to network.

VOF is part of an informal group who agree that soil is the foundation of organic agriculture and who also strive to achieve consistency in our policies and our certification decisions. In the absence of clear guidance about what container production is allowed, our group has come together to try to establish consistency.

We agree that the following list of crops has historically been allowed to be certified and should continue to be in the future. This list is sprouts, microgreens, fodder, transplants and mushrooms. Based on our reading of OFPA and the NOP, our current consensus is that this list is a complete list of crops that should be allowed to be certified when grown in containers. These items still require NOSB discussion, recommendation and rule making. The 2010 NOSB

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recommendation on terrestrial plants in containers and enclosures should be used as a starting point for that discussion.

We also urge the NOSB to activate the agenda item field and greenhouse container production which was listed on your work agenda from 2017 until Spring 2021 as on hold, but which recently has disappeared. So I plead with the NOSB to tackle this issue with the goals of transparency, consistency and hopefully to bring the NOP standards into greater alignment with the global organic movement including the recent IFOAM position on hydroponics.

My other comments are on biodegradable mulch. For too long, we've been postponing a real solution to address our industry's dependence on polyethylene mulch. The use of this nonrenewable petroleum-based product is problematic for both soil health and plastic pollution. The NOSB's proposal to allow a biodegradable mulch with 20 percent of the non-bio-based material is an important step to providing a solution. So since

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this issue was voted on by the NOSB in 2012, some stakeholders have been saying that BBM is not ready for prime time because more long-term research is needed. Nine years later, that research still has not materialized. We agree that we want to be careful about the effect of these synthetic polymers and their potential to accumulate small particles of plastic in the soil. We think research on this topic should continue but the research should include the effects of PE mulch and other areas of risk for microplastic contamination. The design of the national list allows for reexamination of materials and this issue can, and should be, a consideration that's addressed when this material comes up for re-review.

It should be noted this proposal is still aspirational. No manufacturer has indicated that they can make a product that is 80 percent bio-based, but it is a goal that is achievable with manufacturers.

MR. ELA: Thank you so much. Are there questions? Oh, Nate has one for you, Nicole.

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MR. POWELL-PALM: Yeah and I am on the front end this time. I'm going to be quick. Nicole, one thing that has been rolling around in my head is we get to the 80 percent bio-based, only have 20 percent not and a corn farmer in Vermont decides that, you know, that's cheaper than taking care of weeds with cultivation. I'm going to do, you know, 1,000 acres of bio-based mulch with that 20 percent synthetic. Just tell me your thoughts on that.

MS. DEHNE: Right. It's kind of an easy question because it's one of those theoretical questions. We don't have a lot of corn growers in Vermont.

MR. POWELL-PALM: I've inspected corn growers in Vermont (Simultaneous speaking.)

MS. DEHNE: I'll go there with you, Nate. I'll go there.

MR. POWELL-PALM: I'm just kidding.

MS. DEHNE: I think you raised a valid point like this doesn't necessarily solve all of our problems, but so, yes, theoretically it could be used in that manner. I think we're still going

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to really see it being used in the organic vegetable production department. In there, it really is addressing a problem of this use of PE, which we just continue to see increasing. So it is, you know, you're right, theoretically it's possible that we could create another problem with allowing a material like this in that it would be replacing tillage, but there might be problems with tillage, too. I don't know if we have a perfect solution out there for any of this.

MR. POWELL-PALM: Thank you.

MR. ELA: Then we have, Amy and then Logan.

MS. BRUCH: Yes, just a quick comment there, Nicole. Thank you for your organization putting in your written comments, the article for the bio-based mulch. I thought that was really interesting. There were some indications on China's long-term use of plastic films, so that was a really good article to read and understand how decades of plastic in the soil, not removed, really contributes to longstanding problems and inhibiting plant growth. So, thank you for

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including that.

MS. DEHNE: Great. I'm glad that was useful.

MR. ELA: Logan?

MS. PETREY: Hey, yeah, so kind of a comment on like a corn grower using plastic and in Vermont, I'm not sure, but the weeds can be bad in the summer and so trying to get rid of those would be there. But you said there's not a lot of row crop in that area so you're probably not very familiar with those growing practices. Is that right?

MS. DEHNE: Generally we don't get a lot of our producers growing organic corn. There's more grains here.

MS. BRUCH: Yes and so with that equipment you have specific type plants or do you have specific type equipment that is gauged towards plastic. It's really hard to switch everything to that honestly. As it transplants, I don't even know how we'd put a corn planter in a plastic field.

MS. DEHNE: Yeah, that's a really good point is that it'd be different.

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MS. BRUCH: That's right and (Simultaneous speaking.) Sure and also you're with irrigation and so a lot of, I would think, grain commodity, I mean I'm sure there's a lot of irrigation, there's probably a lot of dry land, too, but if you're putting that plastic barrier over that on a row crop, you're limiting a lot with your soil moisture right when it's young and I just don't think that that's really applicable and so saying that the plastic would go across those type of commodities, I just don't know if that's really a concern. Even though we may think that it could exponential, you know, increase on acreage, I don't know that that's really applicable.

MS. DEHNE: Yeah, I think you answered that much better than I.

MS. BRUCH: Oh, that's okay. That's all right. (Simultaneous speaking.) I do grain and veg and so I kind of understand. I just don't think that I could do that with corn or soy beans.

MR. ELA: Kyla, go ahead.

MS. SMITH: Hey, Nicole. I don't think that VOF put comments in on this so if you

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choose not to comment. But I just wanted to know from your certification perspective on the re-listing of sodium nitrate and challenges with you as inspectors calculating that annotation as it was previously listed, although sort of now, you know, we're sort of looking at this motion for all nitrogen fertilizers, and I just wanted to hear your thoughts about also certifiers in listing that.

MS. DEHNE: Sure. We never had an issue enforcing the 20 percent of the nitrogen needs of the crop. We had the calculations. We had kind of an assumption chart for our inspectors and our producers, you know, to gauge, like, what the nitrogen needs were for certain crops. So we could certainly go back in that direction. I'm not totally excited about doing it, but, you know, it's very doable.

I do think that there is need to resolve this issue. We actually got cited on it in our internal audit this year which is, you know, a private auditor, not an NOP auditor. But it does -- the fact that it does live in limbo is

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problematic and can be problematic when we're describing, when we're trying to talk about it with inspectors and producers and the regulations don't match what we're seeing so.

MS. SMITH: Any further comments about the fair practice standard at (simultaneous speaking)?

MS. DEHNE: Yes. Yes, as far as, you know, using sodium nitrate, our producers have historically used it only in situations when there have -- like in cold wet weather, if there was a cold wet spring, they would use it to, you know, increase growth to sort of like, and oftentimes to compete with, you know, veggie production that was coming from the south, right?

So we have not seen its use abused in Vermont. You know, we're checking to make sure that our producers have soil building practices.

And we would always make sure that if the use of sodium nitrate is happening that it is not in place of those other very important pieces. So we're not against the idea of having that potential tool to use in those kind of more emergency situations.

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MR. ELA: I've got one question myself before we move on, and it's kind of addressing just that. How would you determine what a level of non-compliance would be? You know, how far would be too much of not having enough soil building practices and how would you enforce that?

MS. DEHNE: Yes. I wish I could answer this question, Steve. We are having -- after this training that we are about to do because we are just designing a training with UVM Extension to talk about -- for our inspectors to talk about verifying soil health practices. I think it's a really good question.

As we're putting together this agenda of, like, what are red flags, you know, for inspectors to identify that would maybe -- you know, because you're right, it is difficult right now. Like, do we need, like, under the checklist to make sure, you know, there's crop rotation? Should we be looking at organic matter and if that increases but that depends on soil type?

And so let me get back to you on that after we develop this training because it is a

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question that we kind of grapple with and, you know, we'll hopefully come to more of an answer after I think about it a little more.

MR. ELA: And it's one, honestly, I grapple with. And I kind of wanted to ask every inspection agency the same question because I've heard from inspectors or from agencies, well, you know, we can issue a notice of non-compliance but how do we justify it because there's no, you know, black and white answer there? So I was just curious, you know, for you all, where that comes down.

MS. DEHNE: Sometimes it's easier to see it when it's an infraction, like when it's a clear infraction, you know? So, like, we did have a producer that was using sodium nitrate. And we questioned this because there weren't -- that was all the producer was using.

He was using it on a routine basis. And it really looked like it was being used, like, you're switching from conventional production and using this tool. So, you know, there have been more clear-cut cases where we have issued, you

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know, conditions for continued certification in those cases.

MR. ELA: Yes. The gray areas are the tougher ones, I think.

MS. DEHNE: Gray areas are the tougher ones, yes.

MR. ELA: So thank you. Yes, I'd be curious what you come up with so. Any other questions? Thank you so much. I appreciate your comments.

MS. DEHNE: Yes. Thanks, everyone.

MR. ELA: We're going to move on to John Foster then Jo Ann Baumgartner and then Shelly Connor. So John, state your name and affiliation.

MR. FOSTER: Hello. Greetings all. John Foster. I work with Wolf & Associates and speaking just for us, no particular client in mind here as you will see.

Let's see, I should say I spent about 10 years as a farm, livestock and food processing inspector. I was on NOSB 2010 to 2015. So thank you all for your service and patience. I know better than most how taxing it is. So thank you.

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Let's see. As tempting as it is to wade into specific materials, again, I'm going to avoid that and try and shoot for something a little more aspirational today. I hope it's a welcome relief to you all.

Next slide, please, Michelle. First, a couple little notes. These seem to be common threads over the last few years.

I'd really like to reiterate, I feel like the National List should be more of a toolbox and not a place to make a point about others. It should be about the material and utility of that material for the operation. That really should be the main question in my mind.

I'm going to focus on the second point in a little more detail. I do feel like there needs to be a more programmatic approach to triaging priorities that are key to organic standards. I don't know what the answer is, but I'd be happy to have more conversations to help ferret that out.

Where I'd like to spend most of my time is on the last point so next slide, please, Michelle. Oh, you can move on. I've already said

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my piece on this. Next slide. Thanks.

So I do want to reiterate comments I've made in the past and Wolf has made in the past, too. I feel like there could be a lot of benefit for the NOSB in providing some support, professional support, to help amalgamate and aggregate comments, summarize the commentary and create actionable proposals and recommendations.

Next slide, please. And you can go to the next one, please. One more. Back two, please. I seem to have dropped a slide somewhere.

So I'd like to put in a plug to apply more broadly commercial availability to 605 materials. We're edging toward that already with flavors in yeast and actually collagen gel even on 605(b). I think I'd love to see more incentivizing for operators to search for and create a market for more organic options under 605, which is possible with new technologies coming out.

It's an opportunity for regulation to lead instead of follow. And I'd love to see that happen as soon as we can. Thanks.

MR. ELA: There's a question from Wood.

MR. TURNER: John, thanks a lot. You know, I appreciate the comments. And I'm curious what you think additional support to the Board from USDA would look like. I take a lot of issue, I take an enormous amount of issue, with some of the suggestions that are made to this Board that we are somehow not independent, not operating in good faith. It irritates me to be completely honest with you.

So I want to just -- I don't even know how to say what I want to say about this because it's so frustrating. But I sense in what you're saying that a better connection to the program, a better connection to the USDA would be beneficial to this community and beneficial to this Board.

And I'm just curious how that would work because I think we are trying to operate as independent individuals, as people operating in good faith and I just want to be sensitive to sort of a suggestion otherwise. And so talk more about that if you don't mind.

MR. FOSTER: Sure.

MR. TURNER: (Simultaneous speaking.)

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MR. FOSTER: Sure. Yes. That wasn't my suggestion at all. My suggestion comes from, or my observation comes from, experience for one.

For those of you, you know, in the gallery, you will remember 2010 to 2015 was among the most contentious periods of time in NOSB history certainly.

And part of that was the evolution of a couple of things. One, more data available that was casting new light on materials, particularly around sunset review. And, of course, sunset review there's this big slug. That's always going to be the case.

So there's a lot of demand for a lot of technical attention by people who are not trained technical people. They're just, I think like you said, you're representing certain constituencies and doing the best as you absolutely can. And I know that from personal experience as well as observation since then.

So my thought was that it is almost -- I think it's too much to ask now when the volume of comments is much greater than it was 20 years ago.

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The amount of, what, the amount of angst around the decisions of NOSB. There's a heightened sense of urgency and anger on certain people's parts that I think are driving too much. It's asking too much of the Board frankly.

And I feel like the level of technicality that is being demanded by the community is to a much greater degree than originally intended. And there's more comment to read. And there's more pressure on.

And I think it would be helpful for this FACA Board, like others. You know, this is a unique Board in what it does and what it's asked to do and how it does it. It's not unique in being a FACA Board. But there are some services -- oh, sorry, Steve. I'll roll a little faster. I'll roll it up faster. Thank you.

MR. ELA: Yes. And Kim's got a question for you, too. So if you just want to move it on.

MR. FOSTER: Okay. I think it can be done with very -- to wrap it up, Wood, to help consolidate and amalgamate, aggregate the public

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comment and allow you to do the judgment part and less of the kind of accounting of it.

MR. ELA: Kim and John, make this fairly quick if you can.

MS. HUSEMAN: Yes, thanks, Steve. And this might be more of a rhetorical question about reading through a lot of comments. I'm just curious, when we talk about commercial availability, whose responsibility is that towards -- is it the producer? Is it the consumer?

It just seems that when we start speaking about commercial availability being a bottleneck or a barrier, there's a lot of opinions as to whose responsibility is that to help expose commercial availability?

MR. FOSTER: The operator and the certifier, I mean, by regulation it's that. The operator has the requirement. Whether you're a producer using seed or a manufacturer using flavors, you still have to show, you know, to demonstrate to the certifier to their satisfaction as part of your organic system plan that you've done your best effort to find organic alternatives.

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That claim is made in modifying the OSB, the certifier says yes or no. So (simultaneous speaking) --

MS. HUSEMAN: And maybe --

MR. FOSTER: -- (simultaneous speaking.)

MS. HUSEMAN: Thank you. Thank you.

And I completely agree. I guess, overcoming commercial availability in the organic spectrum.

So, you know, I'm sure -- I think it falls on all of us. But I'd like to -- at some point your comments on commercial availability just brought that to my attention. So thank you.

MR. FOSTER: Sure, sure.

MR. ELA: Thank you, John.

MR. FOSTER: You bet you.

MR. ELA: I appreciate it. I'm just going to make a time note to the Board. I don't want to limit comments, but we're also about a half hour behind. I want to give due respect to the following commenters. So feel free to ask your questions, but let's make sure they're concise, which they have been. I'm not getting on anybody.

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So we've next got Jo Ann Baumgartner, Shelly Connor and Julia Ranney. So, Jo Ann?

MS. BAUMGARTNER: Hello. So, let's see. They were going to put up my slides. Jo Ann Baumgartner with the Wild Farm Alliance. We --

MR. ELA: Jo Ann, could you speak up a little bit. You're a little hard to hear.

MS. BAUMGARTNER: How about this? Is this better?

MR. ELA: Much better.

MS. BAUMGARTNER: Okay. We and many organic farmers, farm and conservation organizations and consumers urge the NOP to immediately implement the 2018 NOSB recommendations to protect native ecosystems thereby ending the current perverse regulation that incentivizes the destruction of native ecosystems and conversion to organic production as a cheaper and faster option than transitioning existing conventional farmland over a three year period.

Next. OFA mandates environmental protection, and it sets the precedent for going

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back in time. It does not attempt or need to address every issue. Rather OFA provides a foundation for organic regulation and gives the NOP broad authority to write them.

The NOP can implement the NOSB recommendation. And the only thing stopping them is if the will of the people doesn't support it, but it does.

Next. We have the power of the organic community behind us as seen with the recent submission of letters and almost 3,000 petition signatures. Previous to the 2018 vote, close to 1,000 supportive comments were received by the NOSB.

Next. The NOP should not delay implementation. Our planet is on fire. USDA is planning to integrate climate adaptation into its mission and all of its programs. And the NOP's continued incentive to destroy native ecosystems goes against these efforts and makes the agency look bad when all they have to do is implement this recommendation. We have the tools and support to conserve these carbon rich ecosystems.

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Next. We have been hosting meetings with organic certifiers, getting their input and preparing them for this much needed regulation.

Next. Using Wild Farm Alliance's toolkit, we go over examples of how to efficiently and effectively determine where land has or has been a native ecosystem.

Next. We also discuss Wild Farm Alliance's draft native ecosystem guidance, the contents of it, which was written for the NOP to use as a starting point for this regulation.

Next. The 2018 NOSB has made its recommendation. Next. And we stand behind it.

We do not support any efforts for the current NOSB to re-analyze their suggestion. It would only slow down or stop the process.

Next. The NOP should act now to implement the proposed rule by capturing the NOSB's intent, if not their exact wording.

Next. Let's get this done. The integrity of the organic program is at stake. The organic community and the warming planet cannot afford to wait.

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MR. ELA: Thank you so much.
Questions? Wood?

MR. TURNER: Thanks, Jo Ann. I appreciate your comments. I fundamentally believe there should be no circumstance under which we should be losing native ecosystems for organic agriculture. It flies in the face, I think, of what we're trying to do here.

Can you give me a sense of how many native ecosystems or some sense of the scale of native ecosystem destruction that's happened, that happens yearly as organic grows and sort of the implications of sort of what's happened in this delay of acting on that previous decision?

MS. BAUMGARTNER: Well, you know, the problem is because this is not a regulation nobody is tracking it. And we have asked the USDA to conduct a survey, which they decided not to do so we don't know.

But from talking to lots of people, including lots of certifiers, we think that it's probably 5 percent of the organic farming parcels that are coming into new certification could be

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native ecosystems.

So most of it, it's going to be a fast turnaround. You know, if it's not a native ecosystem, you can go into the system, and it's not a problem. But when it is -- when there are native ecosystems, we have to protect them. We have to -- because organic consumers think that the organic program is conserving by diversity and because of climate change.

MR. TURNER: Thanks, Jo Ann.

MR. ELA: All right. I do not see any other questions. Thank you so much, Jo Ann. We do appreciate it. We're going to move on to Shelly Connor, Julia Ranney after that and Patty Lovera.

So Shelly, please state your name and affiliation and give us your comments.

MS. CONNOR: Thank you. My name is Shelly Connor. And I'm the assistant director of Wild Farm Alliance. So protecting native ecosystems gives organic farmers many reasons to feel good. And doing so is good for people, good for the planet and good for the farmers themselves.

While most of it is a fairly limited

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mix of plants, worldwide people eat thousands of wild plants, which are typically higher in, like, more nutrients and vitamins and are better adapted to local conditions than cultivated crops.

Next. Western Medicine derives 40 percent of drugs from plants and more are yet to be discovered.

Next. By conserving the wild areas where these species reside and taking care not to overexploit wild species, the world could expand its diet and medicine chests, which is especially important as climate change disrupts crop production.

Next. Native ecosystems store carbon in woody plants in the soil's duff layer and its deeper horizons.

Next. But every day, more native ecosystems are eradicated, putting us deeper in peril. Destruction is happening on an international scale. Critical ecosystems that store carbon and much of our biological heritage are crumbling under the plow. Carbon stored in prairies, forests and many other precious habitats

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is being off-gassed more than converted farmland could ever hope to recover.

Next. Our native ecosystems and the species they support are dwindling at an alarming rate. Insects, which are the basis of our food web, are declining and with them many other species who rely on this food source.

In the last 50 years, we've lost an enormous part of our wild animal populations in the world and 3 billion birds in North America.

Next. Growers see direct benefits when they use native ecosystems for production gains while preserving the integrity and function of the land for the future.

Next. Farms next to natural areas have a greater diversity of native bees, beneficial insects and birds and increased pollination of pest control services.

Next. The NOP should implement the proposed recommendation now. Organic agriculture will then become part of the solution to the climate crises, helping to store carbon and slow down the mass extinction, which will protect organic

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integrity and give everyone reasons to feel good about. Thank you so much for your time.

MR. ELA: Thank you very much. Are there questions for Shelly? I am not seeing any. Thank you for your presentation, Shelly.

We are going to move on to Julia Ranney, Patty Lovera and Jake Evans. So Julia, please state your name and affiliation.

MS. RANNEY: Hi. My name is Julie Ranney, and I'm the Research and Policy Associate at the Center for Food Safety.

Thank you so much for the opportunity to speak with you today. I would like to address the use of kasugamycin.

Antibiotic use is not compatible with organic production nor has it been shown to markedly improve crop disease prevention. Further, should an antibiotic be approved under the organic label, the standard consumer assumption is that they are prohibited.

This would confuse and mislead consumers. Antibiotic resistance is a serious public health threat, and its application in

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agriculture need not be increased.

Given the important role that antibiotics play in world health it is crucial for organic production to eliminate their use for the benefit of human health worldwide.

As noted by Beyond Pesticides in their spring 2021 comments to the NOSB, now that we have learned what a pandemic looks and feels like with the astounding levels of infection, hospitalization and death from COVID-19, we must take serious steps to prevent another pandemic on the horizon, this one tied to bacterial resistance and antibiotics.

An important article in The Lancet points to a living potential pandemic resulting from a rise in a multi-drug resistant bacterial infections that are undetected, underdiagnosed and increasingly untreatable which threatens the health of people in the U.S. and globally.

Kasugamycin is critically important for veterinary and medical purposes. Medically, kasugamycin is an important drug for treating urinary tract infections, COVID-19 and

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tuberculosis. There are various mechanisms for this. But this is meant to acknowledge the need for kasugamycin in addressing common and potentially life-threatening medical concerns.

For animals, kasugamycin is also applied to treat disease. The need for effective antibiotics is an important reason for avoiding agricultural uses that can lead to resistance of potentially valuable antibiotics.

Field application of kasugamycin have shown the development of resistance in several plant pathogens. Given kasugamycin is utilized to address fire blight, it is of great note that every other antibiotic application for fire blight has failed and the disease has only proven to develop stronger resistance.

This suggests the approval of this antibiotic will do nothing more than support the development of resistance in pathogens and make a more resilient disease.

Since the prohibition of the applications of streptomycin and tetracycline, organic apple and pear production has not ceased.

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There already exists other more effective fire blight mitigation tactics. Integrated organic approaches attack fire blight before it can get a foothold by exercising controls throughout fruit development.

Cultural controls can be combined with application of fixed copper sprays in dormant and pre-bloom period, application of lime sulfur for mildew control and thinning of apple blossoms, biological control, such as Blossom Protect during bloom time and biocontrol antagonists later in the blooming period.

While these alternatives are not perfect, they do not exhibit the same level of concern instigated by antibiotic use in the fields.

In conclusion, kasugamycin does not meet any of the OFPA criteria for the National List.

It poses health and environmental dangers. It is not necessary and is incompatible with organic practices. Thank you for your time. MR.

ELA: Thank you for your comments. Brian has a question for you.

MR. CALDWELL: Thanks very much,

Julia. I think we need a general definition of the word antibiotic to help us kind of discern between microbial products. A lot of new microbial products are coming along all the time that have really good efficacy for disease management. Then how do we know -- how do we determine if they are actually an antibiotic or not, like, falling into that class? Because, of course, the word antibiotic really evokes a strong response.

And so I'm just wondering if you have some ideas -- I'm kind of putting you on the spot -- but if you have some ideas that would kind of guide us between kind of telling the difference between an antibiotic and some other bacterially derived fungicides for instance or bactericide.

MS. RANNEY: That's an interesting question. I don't know that I can answer it fully.

But what I will say in terms of guidance is as far as I'm concerned in terms of antibiotic resistance, the concern primarily has to do with whether or not the overuse of a product will end up endangering its use for other purposes,

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particularly in public health settings.

So if the antibiotic has a known application in the public health world and we know what we know about antibiotic resistance, then there is cause for concern, particularly in the case of this antibiotic and from what we know about streptomycin and tetracycline.

MR. CALDWELL: Great. Thank you very much.

MR. ELA: All right. I see no further questions. Thank you very much. We do appreciate your comments.

We're going to move on to Patty Lovera then Jake Evans and then Meredith Stevenson. So Patty, please state your name and affiliation.

MS. LOVERA: Great. Hi, everybody. My name is Patty Lovera. I'm a policy director for the Organic Farmers Association. So I'm going to cover mostly one topic and if there's time one more.

We're happy the Board is discussing how to deter fraud and improve traceability. Dealing with fraud has been a top priority for OFA members

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since OFA was founded.

We provided more detailed comments in writing but wanted to offer up some general thoughts that we had about how to approach this.

One, so we think it's really important to ensure that any new traceability requirements don't create additional burdens on farmers who are already doing a lot of recordkeeping. So we think that means we can't require the use of a specific software, a specific technology or require things beyond certification in order to comply. And we have to always remember that paper-based systems need to be allowed for those who don't have internet access or choose not to use electronic systems.

We really think it's important as this has developed, we're going to need to assess the likelihood that buyers will impose traceability requirements on their suppliers, whether or not it's part of the regulation. If your buyer makes you do it, it may as well be.

And we have seen this in other venues in traceability and from safety metrics and things like that. We just have to think of that in the

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beginning about what that could look like. And we don't want farmers to be left being forced into something they can't afford that they're not necessarily getting paid for.

The NOP also needs to consider if technical assistance is going to be needed for farms or certifiers to comply with new traceability requirements.

And then specifically for Question 6 in your discussion documents, what are additional areas we need to improve on? We would say, yes, absolutely. We wrote quite a few comments about that.

Obviously, we need to strengthen organic enforcement finalized as soon as possible.

We want to see NOP continue to coordinate with other parts of the USDA and Customs and Border Protection.

And we also think that NOP could start to develop investigative procedures that are really triggered by import data. So if we see -- such as automatically starting an investigation if there's a surge in imports for

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a specific product.

And we also really want to emphasize being more creative about our trade partnerships and our relationships. So if there's a way for NOP to collaborate not just on standard setting with our equivalence partners but also on enforcement.

If they are taking an enforcement action, it would be good for NOP to know that to put that into NOP's calculation of risk so we don't become the path of least resistance if a product or a certifier or a company is no longer allowed into another market like the EEO.

And then for the question about requiring registration of land 36 months before certification, we would support that because it would allow better audits to deter and detect fraud. And it also, we hope, could help farmers see what's coming in their marketplace.

And we had some additional comments in our written comments just being mindful and being smart about that data and aggregating it in a way so there's not market manipulation happening

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there. So thank you.

MR. ELA: Nate has a question and then Logan.

MR. POWELL-PALM: Hi, Patty. I don't know if I saw this in your written comments. But part of what I'm really interested in getting out of the discussion document about traceability is ideas. What does work for farmers? I think a lot of folks are saying, don't burn the farmers. Don't make this too hard. But I'm really interested in, like, what are those farmer solutions?

And it would be awesome if OFA could do a survey or ultimately provide us with more of that information because I know, you know, farmers, they have unique recordkeeping systems. They have really innovative ways to keep track of this data.

It would be awesome to, like, pick from that existing infrastructure to try to inform this process.

MS. LOVERA: Yes. I would love to do that. I think it's a good time of year for us to do that. We tend to ask people this kind of stuff in the winter.

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And when I was writing this comment, I was pulling from some comments we did earlier for the year and the FDA is never not having a conversation about traceability on farms. They've been doing it for two years now. So we do have some thoughts that we want to probe further.

But I think what we're going to hear from people is build it into my certification, like, set me up with, you know, the logs I'm already doing, the records I'm already doing to show you my inputs. Like, set me up to do it that way so that the records I'm keeping can do double duty and not have a separate track that I'm doing for this traceability, whatever happens.

MR. POWELL-PALM: Boy do we hear that. Yes, thank you.

MR. ELA: Logan?

MS. PETREY: Yes. For about the 36-month, like, heads-up, you know, we've got an organic piece coming onboard, you know, it kind of aligns with the transitioning part. I'm curious, do most of your growers have the transitioning part or are they going on new pieces

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of land that wouldn't require necessarily the 36-month wait period?

MS. LOVERA: Yes. We need to -- we've had a mix. We were trying to -- we didn't have a ton of time to really ask people about that part. We were mostly talking to folks who are already, who are current organic farmers.

And so they were worried about a sudden arrival of, you know, in two years we can see this coming. They would appreciate that if somebody was, you know, certifying -- you know, we've seen some of these big corporate announcements that, you know, we are going to do 50,000 acres, and we're starting to process now. Like people are tuning into that as they're hearing more and more encouragement for transition. And, you know, they're worried about their existing markets.

So I think at this point folks were reacting positively just to the concept that maybe there's a chance for a heads-up. It wouldn't be complete. You could still have surprises in some years, but it would be something you could keep an eye on.

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MS. PETREY: Okay. Thank you.

MR. ELA: All right. I'm not seeing any other questions. Thank you so much, Patty.

MS. LOVERA: Thanks.

MR. ELA: It was much appreciated. We are going to move on to Jake Evans followed by Meredith Stevenson and Adele Durfey. So Jake, state your name and affiliation, and you've got your three minutes.

MR. EVANS: I'm Jake Evans, owner and CEO of True Organic Products, the petitioner for the prohibition of ammonia extract.

I'd like to thank the Board and the Crop Subcommittee for their work on the petition. We fully support Motions 1 and 2 as well as the ideas of combining them in regulation.

We also strongly support OPWC's exclusion clause to ensure completely clarity when this docket moves to rulemaking.

When I drafted my original comments, I touched on all the points the Board should consider in making this critical decision, but it just didn't feel right. So rather I decided to

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tell you about my 25 years of experience with ammonia in organic farming.

In the late 90s, I started this business, making one of the best fish fertilizers I've ever made derived from sardine waste. As I went to sell the product, we struggled. The product didn't get the instant response like synthetic fertilizer does.

A few organic pioneers figured out how to apply this product properly to get great results. Some were the Indians burying a fish below the roots of the plant. Feed the soil, not the plant.

Unfortunately, many organic farms preferred to use a so-called fertilizer high in ammonia. This ammonia-based fertilizer would give an instant response. No one can debate the response a plant has to ammonia nitrogen. There's no need to focus on organic principles. Just feed the plant.

In the early 2000s, this led to an explosion of so-called ammonia-based fertilizers on the market. And the cheaper the price, the more

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ammonia used except for the best organic farmers from the late 90s to 2010, a majority of organic farming in the West put a little dry carbon-based inputs in and poured on ammonia-based liquid fertilizer. No innovation, just conventional farming practices with an organic sticker on the product.

This led me to start True in 2003. The name of the company stood for what I believed in.

It was a brutal experience to watch consumers get duped day after day and see people turn their head and organic principles essentially just frowned upon. Feed the soil. No synthetic fertilizer to grow our food.

In 2006, I started the journey to stop ammonia use. For years, I went to multiple ACAs, MROs, State Departments of Ag and organic farmers which led nowhere. Finally, after we funded a multiyear private investigation, the FBI put an end to ammonia-based organic fertilizers.

Instantly, the organic farmers who lived off ammonia focused on the principles of organics. This led to incredible innovation in

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organic farming. More carbon-based inputs, more cover cropping, better crop rotation, improved fertilizers and fertilizer application techniques. The soil became the focus and not the plant. And most of all, the consumer was getting what they paid for.

The decision you have in front of you today is a turning point for industry. Do we honestly believe the organic consumer wants their food to be grown with ammonia? I spent nearly 20 years of my work life fighting ammonia in our sector, to maintain our organic principles and uphold the tenor of our seal. That's what this petition is about.

If these motions fail, we fail as stewards of our organic principles. There will be everlasting damage to our industry. And we will lose 30 years of progress in the crop input sector.

With the passage of these motions, the Board will make a clear statement. We will adhere to organic principles. We will foster continued improvement to our industry. And most importantly, we will maintain the integrity of the

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organic seal.

And one last question. Have we heard one farmer say, I will be out of business without ammonia extract? Thank you for your time.

MR. ELA: Thank you, Jake. Are there -- Logan has a question for you.

MS. PETREY: Hi, Jake.

MR. EVANS: Hello.

MS. PETREY: Yes, thank you. Can you differentiate, like, the sodium nitrate used and ammonia extracts at least -- is there a difference to you in how they work in the soil and is one more detrimental than the other?

MR. EVANS: Well, I think they both plant available nitrogen. But sodium nitrate, the farmer still has to pay attention to their soil because they're putting so much sodium out. And the sodium level doubles the amount of nitrate in the product.

You've got to keep it really high on sodium, which everybody is very familiar with. And if you keep putting sodium out, you're going to kill your soil. So soil health still is the

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driver. Where ammonia is no different than ammonia fertilizer.

MS. PETREY: Okay. Yes, so, I mean, where we are tending soils, we don't have any threat to the sodium buildup. However, you know, even if there weren't the 20 percent restriction, we're still not going to use a lot of sodium unless it was absolutely, you know, necessary to maintain the crop when we have that gap of, you know, where nitrogen is not available. Because, I mean, you sell a lot of fertilizers. What is the expected release time of most of your fertilizers, nitrogen fertilizers.

MR. EVANS: Well, all the -- different soils, different temperatures, all the release times they're different. But I think the challenge is with ammonia, as you know in conventional farming, the more you put out, you always get a response. And then you have to put more and more out, right? That's why there's so much leeching of ammonia nitrate in groundwater.

That's why there's so much in streams. So ammonia is different than sodium nitrate because you can

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just keep putting it out.

And especially as you all know, Logan, you can't save a crop with fish, right? The crop gets hammered with rain over there, you can't save it with fish because you can only put so much fish out. It just won't give the response.

MS. PETREY: Right. But I --

MR. EVANS: But ammonia, you can save a crop. You really can put hundreds of gallons out just like you do conventionally if you have to.

MS. PETREY: Right. Unless there's a restriction, I mean, then I can't unless I'm going to break an organic rule. So there's a restriction on how much I can use on the percentage of nitrogen then I can't.

MR. EVANS: Well, there's no restriction on sodium nitrate right now, right? I mean, there's no restriction on sodium nitrate as we speak.

And I think with ammonia, the problem with the restriction is, is it what the plant needs? Is it the total needs? When you put the manure

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out, is it total needs? Is it plant needs? Who figures that restriction out? That's another challenge I'm trying to figure out.

MS. PETREY: Yes, right. So, I mean, trying to feed this into the crop and, you know, trying to be sustainable on that, you know, can be important. And so I think it's allowed and then it's restricted so that we don't come into, you know, that we continue to use those carbon based.

But the use of that ammonia extract or the sodium nitrate, you know, it is not to build soil health. That's not the intent of its use.

The intent of its use is for the immediate supplement that may be needed because there's been a leeching event where fertilizers that are carbon based are going to give me a two week gap, one week gap, you know, without nitrogen that can be detrimental to the crop itself. But (simultaneous speaking).

MR. EVANS: Well, my response to that, Logan is that right now we've seen more crops on the market. And this last summer, the price of berries and produce crops were some of the least

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organic pricing we've seen. And ammonia extract is just hitting the market. It's less than one percent of the market as we speak today --

MS. PETREY: Right.

MR. EVANS: -- even (inaudible) is common. So we've been able to produce great crops with products that feed the soil at a price point that's getting cheaper and cheaper without the use of these ammonia tools.

So we should jeopardize soil health for the 1 percent of the market -- for the 1 percent of the market we should jeopardize soil health.

And maybe we should figure out, because we're not sure, but we do know ammonia. And ammonia, no one can say he doesn't know the difference with recycled ammonia.

So, I mean, we're growing great crops.

We're benefiting the soil. The nutrition and the taste is there. And it's going just fine. So we need these really for money, right? Because the money is going to be good for everybody if the yields go up, right?

MS. PETREY: Right. Yes, and

typically more money is, you know, an investment back to the farm where there's better cover crops and better practices, things like that. Even using beneficials because they're very expensive, you know, so if you make good yield then you can invest back into the crop. But, I mean, it --

MR. ELA: I'm going to jump in. Sorry.

MS. PETREY: Go ahead, yes.

MR. ELA: It's a good debate, but fewer questions. Nate has got a question actually. So, sorry, Logan, I didn't want to cut you off but.

MR. POWELL-PALM: Yes. Just building on Logan's a little bit. I guess with -- you know, in the world of fraud and organics, and all organics farmers and really organics is really concerned with fraud, could you speak a little bit to, if you know, or have any data that's just kind of referencing your written comments, but the presence and potential for exacerbated fraud in fertilizer would be the explicit allowance of ammonium extracts?

MR. EVANS: Yes. Thanks for that, Nate. Yes, I mean, fraud, what's happened with

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fraud in our sectors, it's always been on the fertilizer side, the blending of synthetic with organic. That's been the history of fraud.

And we made a lot of progress. And right now I think OMRI has -- if you take 80 products out of the equation out of 1,000 products, there's 1 or 2 products that have any considerable levels of ammonia.

The minute AE is allowed, the blending of synthetic fertilizer with organic, and especially organic AE and synthetic AE, there's no test. There's no way you can tell.

And when organic AE goes for \$50,000 a truckload and its counterpart goes for \$2,000 a truckload, the multiple and the incentive to commit fraud is out of this world.

We already have challenges. There's already products out there. There's a very easy right now to detect if there's ammonia and if there should be. It should be based on the ingredients.

With this tool, you will not be able to tell the difference in ammonia. And, you know, it really concerns me when we talk about the

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international. In the international marketplace, there's been no commenters from the international fertilizer suppliers.

They're growing millions of acres outside of the U.S., not one comment. That makes me wonder, who is supplying the mainstream nutrients outside the U.S. or is there any suppliers? We've got a long ways to go in our sector. And I'm really scared this will open the door to something you cannot control because there's no test to control the mixing of synthetics ammonia with so-called non-synthetic ammonia.

MR. ELA: Thank you, Jake.

MR. EVANS: Thank you.

MR. ELA: We're going to move on, but I appreciate your comments.

MR. EVANS: Thank you for your time.

MR. ELA: We're going to move on to Meredith Stevenson then Adele Durfey and then Justin Bruch. So Meredith, state your name and affiliation, and you have the floor.

MS. STEVENSON: Good afternoon. My name is Meredith Stevenson. I'm an associate

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attorney at Center for Food Safety.

Center for Food Safety continues to support this Board's 2010 recommendation, that hydroponic production systems cannot be classified as certified organic to their exclusion of the soil plant ecology intrinsic to organic farming systems and required by the plain language of the Organic Foods Production Act in the National Organic Program regulations.

In 2019, the Center for Food Safety submitted a rulemaking petition to USDA requesting that USDA conduct rulemaking to prohibit certification of hydroponic production, revoke hydroponic operations existing certifications and ensure that ecologically integrated production practices are required for all organic certification as defined by OFPA and its regulations.

USDA denied this petition. And after litigation, the Northern District of California ruled that USDA's decision to deny the petition was not arbitrary and capricious under the Administrative Procedure Act.

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This ruling allows for certifications to continue until the National Organic Program initiates a rulemaking to prohibit certification of hydroponics in alignment with this Board's past recommendations and the plain language of OFPA or until a decision is made on the ongoing appeal.

Ongoing certifications of hydroponic production fails to take into account the essential functions of complex soil ecosystems in production.

Additionally, existing inconsistencies among certifiers with respect to certifying hydroponic systems diminishes the value of the organic label and reflects poorly on the organic industry as a whole.

Without a clear definition and guidelines from the National Organic Program, certifiers must not be allowed to move forward with certifications of hydroponics.

The Center for Food Safety continues to urge the National Organic Program to initiate a rulemaking with clear criteria for certifiers that follows the National Organic Standards

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Board's 2010 recommendation, adheres to the definition of organic production presented in the organic regulations and requires producers to foster soil fertility as is mandated by the plain language of OFPA.

MR. ELA: Great. Thank you. Are there questions? Thank you so much, Meredith. I don't see any. We appreciate your comments.

MS. STEVENSON: Thank you.

MR. ELA: Okay. Next we are going to go to Adele Durfey then Justin Bruch and then Jennie Landry. So, Adele, please state your name and affiliation and give us your comments.

MS. DURFEY Hi, there. My name is Adele Durfey. And I am the director of sustainability here at Clear Frontier. Thank you for your time today.

I just wanted to first commend you on your work that has been done to bring forth a proposal for a fully traceable food system utilizing the electronic organic link system. Aligning a system of infrastructure to better able fraud tracking and provide transparency on today's

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standards and available technology is really a great first up.

But I also did want to bring to attention, as my colleague did earlier in the day, that there's very large quantities imports that adhere to potentially suspect standards and also lack of regimented proof of organic tracking system.

And there are several points why I think this is important. And the first is the economic repercussions. If economic repercussions are strong enough, this affect can be felt twofold. One on the current organic producers bottom lines as well as a potential deterrent for those that are looking to make the transition.

So that brings me to my second point, which organic agriculture has been shown to be highly beneficial to the environment climate and society in general and any unnecessary potential deterrents should be mitigated.

So my last point is I feel like this is also unfair to U.S. growers considering the stringency in certification and the penalties and

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potential revocation that American buyers face.

It's unfair to bring in products that are issued the same label where production methods may or may not have the same standards.

On a last note, it has recently been brought to my attention that countries which are importing organic products often are considered -- the default production is considered organic because they might not, you know, be as evolved. But having spent eight years working in Eastern Europe, helping to manage 150,000 acres, I can absolutely say this is not the case. Their enthusiasm to adopt Western practices, equipment, technology and cutting age fungicides, herbicides and insecticides is quite widespread. And their access to these products is not limited.

So I do think the issue of supply chain traceability on imports is an issue that needs to be addressed as well. But it's my hope that the organic link system is just the beginning, and this will allow us to put kind of a foot in the door to address these issues as well.

So those are my comments. Thank you

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for your time.

MR. ELA: Thank you, Adele. Nate has a question for you.

MR. POWELL-PALM: Thank you for your comments, Adele. Could you speak a little bit more to -- I think this is a common maybe misunderstanding based on your comments that certain production areas of the world somewhat may be considered poorer production areas of the world just don't have access to synthetic fertilizers, pesticide programs, crop protection packages and so they're organic by default.

Could you speak a little bit more to that, of what we should be looking for and thinking about when we consider, you know, the greater global organic marketplace?

MS. DURFEY: Sure. So, as I said, it was only just recently brought to my attention that -- my experience was in Eastern Europe. It was brought to my attention that, you know, a lot of people think that this is kind of still in a Soviet cultivation era. And so the access to these chemicals and fertilizers, seeds, technology and

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equipment is limited. So, like I said, by default, their products are most likely organic.

But having worked there, it is absolutely not the case. It was my job to be purchasing for 150,000 acres all of our input supplies. And we would have, you know, multiple fungicides, multiple herbicides. And it's a very widespread use.

In addition to this, it would be -- the motivation to move to organic in these countries is very limited just by the structure in the company, in the country in general. I think the people would require it. But because of the stratification of the working class and the poorer class, I don't see organic markets particularly in Ukraine developing at the rate that they are here in the U.S. because they don't really have that consumer support in terms of, like, a pricing mechanism.

So when we see large volumes of organic product coming from these countries, it just is a little bit suspect because internally, they aren't really set up to have those regulations and

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those rules. They don't have a market that supplies it.

But yet, when it comes across the border, you see paperwork that says organic from the Ukraine, for example, or Romania or Serbia, wherever. Whereas, if you talk to many of the growers that we're still in connection with over there, there's very few farms that we actually are aware of. So if that helps to answer the question.

MR. POWELL-PALM: That's very informative. Thank you.

MS. DURFEY: Yes.

MR. ELA: All right. Thank you very much. We are going to move on to Justin Bruch followed by Jennie Landry and Bryce Irlbeck. Justin, please state your name and affiliation. You have the floor.

MR. BRUCH: Hi. Thank you. My name is Justin Bruch. My company is Clear Frontier Ag Management. I'm a colleague of Adele's. She just stole some of my thunder for the record. I'm also an organic operator in Northwest Iowa where -- I'm looking at this both from an investment

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standpoint in organic as well as from a farm operator standpoint.

My focus for a topic for this conversation is really just around the fraud issue that is happening in the U.S. and partially to what Ms. Adele just spoke about on that piece.

I spent seven years actively farming in the Ukraine. And I can tell you that in seven years, and as an American, I traveled the country very well. I never saw one single organic farm in seven years in the Ukraine. And yet today, you have 100,000 acre or 250,000 acre farm pop up that's certified organic in the Ukraine.

The manure source is not there. There's very little bit of manure really, hog manure in the west and a little bit of chicken in the east. It's not there nor is the technology there. And there is -- in much of Central Eastern European there's a lot of things that are done illegally in process.

So I want to bring that as a calling point because I think it's a key issue as we look at commodity pricing coming to the U.S. farmer or

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the North American farmer that's following the regulations, following the rules and doing it the way that it should be done and the way that the consumer expects it to be done while knowing from firsthand experience of hands on the ground for multiple years that's not what's happening in a lot of our Eastern European areas.

So I look at that piece. I think it comes back to transparency. And I like the idea of documentation around acres going through transition as well as really bidirectional verification so that it goes both ways from the farmer side as well as through the inspector side and all the way through.

Because I really think there's too many cases where the links get broken, and it's easy for someone to cheat the system. I don't believe it happens often in the U.S. from my experience from a farming standpoint. But I do know from the way agriculture is done in other parts of the world that it does happen there.

And probably my last piece is, kind of following along with what Adele said, there is in

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my experience, and I've spent years working in Africa as well, there is no organic by default in these countries. They actually have more things available to them that are not legally registered here than we do on a large scale basis because of their regulations.

So it is by choice, and they have the tools, the technology and equipment today to be able to operate organically if they wanted to. It's not a path in my opinion that they've actively taken with an honest approach.

So those are my comments. Thank you for everything you guys do. I appreciate it.

MR. ELA: Thank you for your comments. Nate has a question for you.

MR. POWELL-PALM: You mentioned that idea of a farm, a 100,000 acre farm, popping up overnight. Do you think the idea of registering acres during the transition would influence that ability to pop-up as you mentioned?

MR. BRUCH: Yes. I think it would drastically help if you had to register those through transition and so they were on the radar.

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Yes, I think that would make a big difference in trying to curb some of those issues that you're going to see from the Ukraine and Russia specifically.

MR. POWELL-PALM: Thank you.

MR. ELA: Thank you very much. We do appreciate your comments and you taking the time.

We're going to move on to Jennie Landry and then Bryce Irlbeck and Steve Sinkula. So, Jennie, please state your name and affiliation and start your comments. You are still on mute.

MS. ARSENAULT: Jennie, we can't hear you.

MR. ELA: Not yet.

MS. ARSENAULT: I don't see a red mark for your microphone. Possibly the volume on your laptop could be -- do you want to skip over, Steve? You can come back to Jennie. We'll figure out your mic problem.

MR. ELA: Yes. Jennie, we won't lose you. We'll take the pressure off of you here for a second. We'll jump down to Bryce Irlbeck and then we'll come back to you, Jennie, so.

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After Bryce and Jennie, we'll have Steve Sinkula. So let's go to Bryce Irlbeck. Please state your name and affiliation.

MR. IRLBECK: Yes. So thank you for allowing me to speak today. My name is Bryce Irlbeck. I'm an organic row crop producer in West Central Iowa as well as a co-founder of AgriSecure that worked with about 70,000 organic acres in the Midwest. And I'm here today because I'm against ammonia extract being used the way it is.

It will be -- first and foremost, I trialed it this year so I have had a little bit of experience with it, just wondering what the product was and getting to know it. And I trialed it as a starter.

As I'll talk through a little bit later in what I'm trying to discuss here is we trialed it as a starter because of viability as a product to replace any nitrogen as a broad-based program with the current price point seems nearly impossible. So it's not going to be effective for a Midwest crop producer.

And the only merit I could see was a

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starter and that's why we used it. And just to make a point that we realized while, you know, handling the product, and this isn't all ammonia products. It's one that we handled. It is nearly impossible to use it due to the ammonia and the ammonia is real. Our eyes were watering, and we got nausea. It won't be on our crops no matter if it works or if it's legal or not. It's just it's impossible to stay in the tractor after utilizing the product. So not hugely important, but just a point that I wanted to make that we noticed.

And so one of the things that I thought about this fall as I was purchasing manure for my organic row crops is there's not an abundant supply. There's not enough of the supply for the organic row crop producers in the Midwest as there needs to be. So it's one of those resources that is a limiting factor.

And so after using the products and thinking to myself, we spent countless hours, traveling, listening, learning, doing all that stuff, to building long-term rotations that

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provide for soil health and good yields. And we've been able to do it without that using manure and that's how I feel organic has been intended to do.

And so it brought me to the conclusion, which I'll get directly to the point here, essentially we are taking one of the most vital resources for the Midwest organic row crop farmer and putting it in control of a few hands and exporting it out of the region.

And that is devastating for us as our input prices go up and we are trying to do soil health. And we're left with the byproduct of this ammonium nitrogen really going to have an effect on an already limited resource in the Midwest.

And so the three points that I thought of is ammonia extracts are going to be, as we talked about, too expensive for the row crop producers and really meant for the high value crops. And we're going to extract this ammonia from the manure that is being created by chickens, cattle, whatever you want to say in the area where it's needed and exporting it to higher value crops and essentially leaving the Midwest Farmer through control price

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availability with little to no options in that space.

So finally the concept of ammonia extract varies from the spirit of the organic movement. As we talked earlier, I took about five years learning the organic industry and putting this all together to make my farm work without it using manures.

And so I come out against it today as I think it will hurt the farmers in the area that I'm in.

MR. ELA: Okay. Thank you very much, Bryce. Nate has got a question for you.

MR. POWELL-PALM: Hi, Bryce. Could you speak a little bit to if there was any human health effects of the product you used as your starter? Did it seem benign? Kind of like what was your experience?

MR. IRLBECK: Yes, I mean, I don't think there was long-term health effects. But it definitely is unbearable to handle and to sit in a tractor with that ammonia. As anybody would know that has filled tanks or anything in agriculture,

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you always have spillage.

And it's just something that we couldn't even do it. We had to get out of the tractor. Let it sit. And then be able to come back in a few hours. And if we got it on our hands or washed it off before we got in the tractor, it isn't always an option where we're at. So that was our final straw on it before anything else.

MR. POWELL-PALM: And just as a follow-up, Steve, to that, when you are looking at your rotation, could you describe your rotation a little bit? But I think when I hear you say it's priced out of being reasonable for you, it sounds like you don't need even if it was widely available?

MR. IRLBECK: Yes, I mean, in our rotation, it's three years of alfalfa a year of corn and maybe a year of soybeans. And so we produce a lot of our nitrogen with alfalfa in that rotation and weed control.

Honestly, I mean, we wouldn't really need a lot of it if we still had manure available.

MR. POWELL-PALM: Thank you.

MR. ELA: I have a question for you.

In our written comments, there were a number of references to Nebraska farmers growing corn and things. I guess, you know, from the Midwest, I'd like to hear from somebody who is actually doing it, you know, what -- you're growing corn. Do you feel like you're not getting the yields you should because you don't have the nitrogen?

MR. IRLBECK: So when I don't get the yields I should, it's because of my rotation. And I've learned that the hard way. If we have the right rotation, the right balance, the right amount of chicken manure, our yields this year will be within 5, 10 percent of conventional in a really, really good year. So it has more to do with the rotation.

And honestly, in my opinion, ammonia is not going to solve any of the issues of why we weren't getting yields. It might help it a little bit, but it's not going to solve that issue in my opinion.

MR. ELA: Asa also has a question for you.

MR. BRADMAN: It's kind of a question

I've asked before. But I'm just really interested in nitrogen cycling. If you look at the planetary boundary maps for exceeding the capacity of the earth in terms of nitrogen cycling, and one role that organic plays I think is recycling conventional nitrogen, you know, into organic agriculture, which I think, is a good thing. It's a healthier soil system.

But I just wonder. You're saying manure is a limitation. And, you know, maybe this is a discussion for somewhere else, but are you able to use nitrogen fixing rotations and, you know, can you minimize manure and other conventional sources of nitrogen, at least originated nitrogen, in your production?

MR. IRLBECK: Yes. That's a very good question. So what we do in our rotation is the three years of alfalfa. Alfalfa is a nitrogen producing plant and the longer you leave it in, the number one thing the more nitrogen it produces and the more weed suppression it adds.

And so we already replaced 50 to 65 percent of our nitrogen with alfalfa. And so we

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are using less manure. But it's still a vital product for us, N, P & K being one of those, with our alfalfa rotations.

MR. BRADMAN: It sounds like great progress.

MR. ELA: Great. Well, thank you very much, Bryce. We appreciate your thoughts and comments.

MR. IRLBECK: Thank you. And thank you for all that you guys do. I appreciate it.

MR. ELA: We are going to come back to Jennie Landry. Did we get that figured out?

MS. LANDRY: Hello. Can you hear me now?

MR. ELA: We can.

MS. LANDRY: Yes. Great.

MR. ELA: Thank you for being patient.

MS. LANDRY: No problem.

MR. ELA: Go ahead.

MS. LANDRY: My name is Jennie Landry.

I represent DSM Nutritional Products, who manufactures omega-3 EPA and DHA based products from refined fish oil.

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DSM strives to support a renewable and sustainable environment. And we welcome the opportunity to provide comments to the NOSB regarding a fish oil annotation to address environmental concerns and ensure that fish oil is compatible with organic practices.

The handling subcommittee's most recent annotation proposal sourced from fishing industry byproduct only and certified as sustainable against a third-party certification that is ISEAL code compliant or GSSI recognized is fully supported by DSM.

As previously stated, sourced from fishing industry byproduct only will clarify and solidify the fact that fish oil production represents an efficient use of fish caught for other purposes. Also requiring third-party sustainability certification directly impacts and improves the sustainable sourcing of fish oil for human consumption.

Certifiers will ensure practices are in place for both the fishery and fish oil manufacturers to ensure sustainability throughout

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their specific supply chain.

The condition of ISEAL code compliant or GSSI recognized third-party certification is an additional measure to ensure a certifier's legitimacy and compatibility with NOP's organic expectations.

DSM would like to emphasize that both ISEAL and GSSI organizations are maintained in the annotation to ensure as much flexibility as possible for fish oil manufacturers who have to manage a diversified and complex supply chain.

In summary, the proposed annotation is supported because it's clear, enforceable and effective. DSM understands protecting our marine environment is an important issue that requires global attention, and we are committed to producing fish oil products to be among the most sustainable on the market.

I would like to thank the NOSB for your time and opportunity to provide comments in this webinar.

MR. ELA: Thank you very much, Jennie.

Are there questions?

MR. BRADMAN: I feel like I should ask a question, but I don't have one.

MR. ELA: I was waiting for you, Asa.

MR. BRADMAN: I had to say something.

MR. ELA: Thanks, Jennie. We sure appreciate your comments.

MS. LANDRY: Thank you.

MR. ELA: Just as a note, we're running overtime. We've got three more speakers. So I think we're going to do our next three speakers because they're on our official list and then we're probably going to call it a day. It's been a long day for everybody.

So people on the waitlist, we will do our best to get to you on Thursday. I apologize that we didn't get to you today. We do our best to get to the waitlist. But we'll do the next three people and then take a break, and we'll start tomorrow again and see how far we can get through the list.

So the next person we have up is Steve Sinkula and then Kris, oh, man, I'm sorry, Kris, Klokkenga and then Aaron Zimmerman. So Steve,

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please state your name and affiliation and you have the floor.

MR. SINKULA: Thank you. My name is Steve Sinkula, and I'm a co-founder and CEO of AgriSecure and also a colleague of Bryce Irlbeck, who just spoke a few moments ago.

AgriSecure was founded with the singular purpose of helping farmers in the Midwest transition into and succeed at organic row crop production.

I want to thank everyone here for the opportunity to comment on the modernization of the organic supply chain, traceability discussion document. And I really want to share four thoughts for the group.

First, I believe that the SOE proposed rule is an important first step but only a first step in the U.S. organic industry maintaining the NOP standards and more importantly maintaining the trust of consumers and the integrity of the organic seal. And it's only that in my perspective a first step.

I also think that right now is the right

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time to begin discussions and start efforts on implementing electronic systems to improve traceability of crops and products in general but specifically with U.S. organic supply chain being the right place to start. And that's because technology that didn't exist five years ago is readily available and has the ability to make it minimally invasive for the supply chain participants and in particular for farmers.

And the organic industry also has the right building blocks in place in terms of what is required for recordkeeping already and is of a manageable size to take on this effort. I used to work for Cargill and trying to take on the effort for the conventional supply would be a beast, but the organic supply chain while being big is still manageable.

The third point I want to make is that the organic link system along with requiring equivalent organic standards across countries that import into the United States would help level the playing field for all farmers participating in the U.S. organic supply chain.

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Currently, U.S. farmers are at a disadvantage and no amount of transition support in the form of training materials, expert support or financial support can deliver the type of desired growth we want to see in the U.S. organic sector.

The market prices are set based upon the least common denominator. And as others have talked about in those four markets they truly are the least common denominator in terms of what is an organic standard or if there is an organic standard.

And finally I'd like to encourage NOSB as we move forward on this effort hopefully to not only think about it as a point of traceability but also think about the value that this sort of system can have for the supply chain.

In our experience at AgriSecure, we have developed a tool to track all of the records for certification, but we also use that to help our farmers with execution and analysis. And I'm sure a tool like this could deliver a lot of value to the supply chain beyond traceability.

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So with that, thank you for your time and consideration.

MR. ELA: Thank you, Steve. Are there questions from the Board? I don't see any, but we appreciate you taking the time to comment to us. Thank you so much.

MR. SINKULA: Thank you.

MR. ELA: We are going to move on next to Kris Klokkenga and then finish up with Aaron Zimmerman. Kris, state your name and affiliation and give us your comments, please.

MR. KLOKKENGA: Hi. My name is Kris Klokkenga. I am the president of Klokkenga Corporation. I am an organic row crop farmer here in Central Illinois. And I just wanted to thank you for your time to let me speak. And just to let you know that I oppose the use of ammonia extracts.

I currently work in an area that is not readily available for chicken litter. So I'm trying to -- I have an established relationship with my chicken litter supplier. And I'm experiencing just a lack of raw chicken litter

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that's available at this time.

The last few years I've not had any problems sourcing this litter. But this year, my supplier did put a quota on me. And my concern he's only supplying organic farmers now whereas he had done this with conventional farmers before.

I'm concerned that if ammonia extracts are approved, this would drive the price up for the chicken litter. On my farm, I implement crop rotations by using cover crops, alfalfa, corn and soybeans. I try to do my best to be a steward of the land. I feed the soil and not the plant. I believe that by building healthy soils we can raise good crops. Ammonia extracts would allow farmers to feed the plant and not the soil and take away from the principles of organic farming.

I also believe that by applying manure to my land that I have the opportunity to build up my organic matter through the application of raw manure.

And so just in general, I believe that the ammonia extracts are too expensive to use in my row crop operation here in the Midwest. I chose

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to -- I worked in Africa in Ghana, West Africa.

I farmed there for four years and worked for ADM.

I ran a plant there for them.

I chose to come back and be a part of -- transition my farm over to organic because I felt that it gave myself and my wife and my family an opportunity to come back to the United States to live here and to have the life that we wanted.

And I just believe that by having the ammonia extracts, it takes away from that -- it just makes it more expensive to try to make a livelihood from organic farming. Thank you.

MR. ELA: Thank you, Kris. Nate's got a question for you.

MR. POWELL-PALM: I really appreciate your testimony, Kris. One thing that just caught me right at the end there was this idea of expensive fertilizers.

I think -- I wish I had it with me. But there's this graph that shows, you know, over the last 30 years gross farm income has steadily inclined while net farm income has plummeted. That's not the case with organics.

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And so I would love for you to speak about sort of how organics is different when the value of the commodities are placed with the farmer. The farmer gets a lot more value for the commodities because they don't have a big expensive fertilizer bill. And that's partly the mitigation of inputting and bringing on nitrogen through crop rotation. Could you speak to that at all?

MR. KLOKKENGA: Well, I mean, yes. Of course, we're paid more for our products. But just for me, if you go with the expensive -- when I say it's expensive, I mean, I just am saying, it just costs me more to bring in the product. And I would like to be able to -- and, of course, if I have to go out and use ammonia extracts, I'm against that but that also raises my price. I want to do what's best for the land and, of course, I can do my crop rotations and that. Maybe I -- I probably didn't answer your question.

MR. POWELL-PALM: No, you're doing a good job. I think my question is a little confusing. So you're relying on crop rotation a lot it sounds like with alfalfa --

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MR. KLOKKENGA: Yes.

MR. POWELL-PALM: -- a lot of legumes. You're not really using a ton of manure. And you're feeding the soil it sounds like. And that's ultimately seeming like because of that crop rotation you don't have a big fertilizer bill at this point. You supplement with the poultry litter, but you're not left with a giant fertilizer bill at the end of the day.

MR. KLOKKENGA: Well, comparatively to a conventional farmer, no, I'm not. I'm not. But, I mean, I also farm conventionally, and I mean, I have that and that's a big bill, too. But, yes, you're right. But everything is relative, correct?

MR. POWELL-PALM: Thank you. I appreciate that.

MR. ELA: Logan has got a question for you as well.

MS. PETREY: So I pulled over for this one to make sure we had good service. Okay. So when you say it's expensive or it's going to be expensive, does that mean that the use -- or the

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oncoming of ammonia extract should make manure limited kind of like the other corn grower, I think he was a corn grower, stated? Or are you saying that ammonia extract itself is expensive and so it would make your fertilizer bill expensive? Which?

MR. KLOKKENGA: Okay. You know, maybe expensive wasn't the right use because the problem that I'm facing here is just the availability of a chicken litter source in general. And so my apologies to the Board for maybe saying that it was expensive.

My issue right now that I'm facing is that there's a limited supply of chicken litter in my area. And if we go and approve ammonia extracts, what's to say that that litter doesn't go and is used --

MS. PETREY: I see.

MR. KLOKKENGA: -- to extract that ammonia away and then I'm stuck using the leftovers, and it takes more of that product. They can extract the good, give me what's left over, and it takes more time and energy for me to make

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it work.

MS. PETREY: Okay. Thank you. I was going to say we wouldn't make you use it if it was the ammonia extract being expensive. So, okay. I was just clarifying that.

MR. KLOKKENGA: Sorry about that.

MS. PETREY: No. That's okay.

MR. ELA: Any other questions for Kris? I don't see any. Thank you so much for taking the time --

MR. KLOKKENGA: Thank you.

MR. ELA: -- to tell us about what you do. That's greatly appreciated. We are going to finish up with Aaron Zimmerman. So, Aaron, state your name and affiliation and let us know what you're thinking about.

MR. ZIMMERMAN: Yes, hi there. My name is Aaron Zimmerman. I farm in Northeast Nebraska. My brother and I are somewhat new to the organic world, and we just completed our transition of all of our acres, and we're sure excited about it.

I want to talk about the ammonia

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extract. This is something that was just presented to me, you know, a day ago so forgive me. I haven't had a ton of time to prepare. But I want to come out and say that I do not support this ammonia extract concept largely because of, you know, kind of echoing what Kris and Bryce before me had talked about, just supply availability.

That is our limiting factor is access to a nitrogen source. And from what I understand that ammonia is going to be too expensive for row crop farmers to cash flow. So, I mean, we'd be out.

And I think, you know, as far as from a growth standpoint of this industry, this sector, I mean, it's exciting. But in order to maintain that growth and the success of the organic, you know, I don't even want to call it niche, but growth is paramount to that. In order to grow, we need to have access to nitrogen sources.

So that's why I just can't support it.

I think you should do things, you know, the old-fashioned way and use crop rotations obviously. But it's kind of cheating a little bit.

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And when you're extracting just one component of a naturally occurring manure, it kind of turns it into a piecemeal concept just like, you know, when you go to, you know, in conventional ag you go to your co-op, and you buy your N, P and K separately. And I just don't think that really fits with the whole mantra of what we're trying to do in organic. So that's all I have to say.

MR. ELA: Thank you very much. Wood has got a question for you.

MR. TURNER: Thanks, Aaron. I should have asked this of Bryce. I thought about asking when Bryce said it, and now you're the third person that said it. So I'm going to ask you. Is this manure shortage issue unique to the Midwest?

I mean, I must admit I wasn't aware there was a manure shortage issue. And so I'm curious about whether you could speak to that. Is that something other folks are experiencing? Is it something that you guys experience?

This is a new one for me. To be honest with you, I'm asking the question both in the context of AE, of ammonia extract, but also in the

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context of utilizing manure for measure.

MR. ZIMMERMAN: Sure.

MR. TURNER: The notion that we're losing manure in certain parts of the country to maybe that's necessary for growers and it's getting exported to other places for whatever the use may be is concerning to me. So I was just wondering if you could speak to that in more detail.

MR. ZIMMERMAN: It is concerning. And I wish I could give you a definitive answer. But I can only attest to what I deal with in my area.

And what we're dealing with now since conventional crops have run up their prices and their input prices have shot through the roof because that's just the way that world works. Your input supply will gobble up any hope of profitability you could possibly have. And so they're looking for alternative sources.

And so we've got conventional guys are now coming after chicken litter, which is basically our only nitrogen source. So it has created somewhat of a scarcity for us. So, you know, that just compounds what we're dealing with and talking

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about with this ammonia extraction concept because, I mean, gosh, it sure sounds to me like we would have one or two large companies that are going to end up controlling nearly all the chicken litter in the area and that sounds a whole lot like the world that I just tried to escape. So that's why I do not support it.

MR. ELA: Nate, you have a question.

MR. POWELL-PALM: Just one point of clarification. I think, is it that chicken litter is the only source of off farm nitrogen? I think you said that you grow nitrogen fixing crops like alfalfa as well?

MR. ZIMMERMAN: Sure, yes. And forgive me, I should have clarified, yes. I mean, you can only grow so much nitrogen. So, yes, we use legumes and whatnot to supply a big majority of it. But bottom line it takes chicken litter to take the rest away, you know, to get to your yield goal.

So, yes, we do. We piece everything together with growing it on the farm as well as bringing it in on the truck.

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MR. POWELL-PALM: Thank you.

MR. ELA: And it looks like Logan has a question as well. Logan, are you there?

MS. PETREY: Okay. I'll be quick. What percentage of the pre-plant over crop -- how much do you think that you actually can get out of a legume?

MR. ZIMMERMAN: We do two years of alfalfa so I estimate -- that's really tough. You know, I want to say conservatively about half, a little over half of what my nitrogen need would be for my yield goal.

MS. PETREY: Okay.

MR. ELA: All right. Any other questions? It doesn't look like it. Thank you very much, Aaron. I appreciate you taking the time --

MR. ZIMMERMAN: Thank you, everybody.

MR. ELA: -- to give us your thoughts. That was great. Well, with that, we have had a nice six hours of public comments. I'm sure everybody is spritely and fresh and ready for another day tomorrow. But we're going to call it

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good for today.

I just want to say thanks for everybody that called in. Amazingly, we didn't have very many glitches today, and I don't think we had very many speakers that weren't here when we called on them. So that's a little different than sometimes.

So thanks to the NOP staff for all the background work. It takes a lot to get people ready and get them on at the same time and keep all of us in line as well and get slides up. So thank you to all the background people and thank you to the Board.

We all know this is a great way -- you know, it's one of the ways to get a pulse of the feeling of our stakeholders in addition to written comments.

So we will adjourn for now. And we're going to reconvene tomorrow, Thursday, October 14, at noon Eastern. You will use the same link you used today to sign in. And we'll look forward to hearing more and talking to you all tomorrow. So thank you much.

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(Whereupon, the above-entitled matter
went off the record at 5:58 p.m.)

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NATIONAL ORGANIC STANDARDS BOARD

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PUBLIC COMMENT WEBINAR

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THURSDAY
OCTOBER 14, 2021

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The Board met telephonically at 12:00
p.m., Steve Ela, Chair, presiding.

PRESENT

STEVE ELA, Chair
NATE POWELL-PALM, Vice Chair
MINDEE JEFFERY, Secretary
SUE BAIRD
ASA BRADMAN
AMY BRUCH
BRIAN CALDWELL
JERRY D=AMORE
CAROLYN DIMITRI
RICK GREENWOOD
KIM HUSEMAN
LOGAN PETREY
KYLA SMITH
WOOD TURNER

STAFF PRESENT

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Specialist, Standards Division
JARED CLARK, National List Manager, Standards
Division
DAVID GLASGOW, Associate Deputy Administrator,
National Organic Program
ERIN HEALY, Director, Standards Division
ANDREA HOLM, Materials Specialist
DEVON PATTILLO, Agricultural Marketing
Specialist, Standards Division
DR. JENNIFER TUCKER, Deputy
Administrator, National Organic Program;
Designated Federal Official

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P-R-O-C-E-E-D-I-N-G-S

12:04 p.m.

DR. TUCKER: All right. Good afternoon and good morning and good evening wherever you are.

Thank you very much, Michelle. Michelle got some nice praise at the top of the meeting for her masterful logistics here so I want to echo that, and the entire NOP staff that keeps us running so smoothly.

My name is Jennifer Tucker. I'm the Deputy Administrator of the National Organic Program. Welcome first to all our National Organic Standards Board members. As I mentioned yesterday, we are very practiced now in this online mode of engagement, but we do genuinely miss the in-person connections and hope we'll be able to return to that in the spring.

We want to, again, particularly acknowledge our three board members who have now started the last meeting of their terms; our chair for the last two years, Steve Ela, Sue Baird, and Asa Bradman. Let's give them all a round of

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applause.

In Zoom we applaud by waving two hands into the camera. Thank you Steve, Sue, and Asa, and the rest of the Board. I do wish I could give you all a big hug of thanks. Thank you for your hard work and service over the last five years.

To our public commenters, thank you for, again, engaging in this process, and thank you for signing up to have your voices heard. I also thank the audience, as always. You are, and continue to be, important witnesses to this process. We are happy that you're here.

This webinar continues a series of virtual webinars that will occur over multiple days. This is the second day this week, and there will be three days next week. Meeting access information for all meeting segments is posted on the NOSB meeting page on the USDA website.

Transcripts for all segments will be posted once completed. This meeting, like other meetings of the National Organic Standards Board, will be run based on the Federal Advisory Committee Act and the Board's Policy and Procedures Manual.

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I will act as the designated federal officer for all meeting segments.

Steve will take the helm for this session, and I would like to again preview and strongly uphold something he is going to review with you. In an open transparent process mutual respect and professional is critical. I will say what I said yesterday. I was disturbed by some of the disparaging comments made in written comments.

If oral comments cross the line into disparagement and personal attacks, the Chair, or another Board members, are allowed to speak up and stop it. These comments are for them and they do have the ability to intervene. Yesterday the Board did intervene. My advice to you is if you do not want to get cut off, then avoid approaching that line.

To close, again, I want to thank the National Organic Program Team. It's an amazing team and I am honored to work with each day. Michelle is our fearless leader in running all of these program logistics. Jared Clark, our

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National List manager; Andrea Holm, Devon Pattillo, Dave Glasgow, and our fearless Standards Director Erin Healy. Thank you to all of you.

I want to, again, thank Steve Ela, Chair of the Board, who is about to continue to lead his fourth virtual meeting and the final meeting of his term. A big round of applause for Steve, please. Thank you very, very, very much.

I am now going to hand the mic over to Erin Healy, Standards Division Director, who is going to do a roll call of NOSB members.

Take it away, Erin.

MS. HEALY: Thank you. Good morning or afternoon everybody. I'm going to start the roll call. The first is Steve Ela, NOSB Chair.

MR. ELA: I am here again.

MS. HEALY: Nate Powell-Palm, Vice Chair.

MR. POWELL-PALM: Present.

MS. HEALY: Mindy Jeffery.

MS. JEFFERY: Good morning. Thank you.

MS. HEALY: Sue Baird.

MS. BAIRD: I'm here.

MS. HEALY: And I do see Asa Bradman.

MR. BRADMAN: Yes.

MS. HEALY: Amy Bruch.

MS. BRUCH: Good morning from
Nebraska. Thank you.

MS. HEALY: Good morning.

Brian Caldwell.

MR. CALDWELL: Yes, I'm here.

MS. HEALY: Jerry D'Amore.

MR. D'AMORE: Good morning. Here.

MS. HEALY: Carolyn Dimitri.

MS. DIMITRI: Good afternoon.

MS. HEALY: Rick Greenwood.

MR. GREENWOOD: Here.

MS. HEALY: Kim Huseman.

MS. HUSEMAN: Present.

MS. HEALY: Logan Petrey.

MS. PETREY: Present.

MS. HEALY: Kyla Smith.

MS. SMITH: Hi everybody. Ready for
day 2.

MS. HEALY: And Wood Turner.

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MR. TURNER: Good morning. Here.

MS. HEALY: I also just wanted to quickly announce that I think most all of the Standards Division is probably listening in today.

In addition to our national manager Jared Clark, I want to introduce the rest of our Standards Division staff who will be listening into the meeting.

So Andrea Holm, Megha Even, and Sam Schaefer-Joel are material specialists. Cameron Small is our policy analyst. Devon Pattillo, Vallerie Francis, and Kenny Wilburn are agricultural marketing specialists. Martin Hensley, Adam Diamond, and Jason Edmondson are ag. marketing specialists -- sorry, agricultural economists.

I believe I got everybody. Of course, Michelle, already mentioned, our NOSB liaison. She has been just instrumental in making sure that we are able to quickly switch to a virtual meeting this year so I just want to say thank you to all of our team as well.

I'm going to hand it over to Steve Ela.

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You have the virtual mic.

MR. ELA: Virtual mic. Wow, I like that. Yeah, thank you. I just want to say thank you again to the program. We've already said that these public -- oral public comments, as well as the written public comments, are really a big deal for NOSB to get a sense and share our stakeholder thoughts and things.

It makes a huge difference in how we deliberate and possibly the votes that we take.

Thank you to all for taking the time. I know it's a huge lift to try and do everything in 30 days but we do appreciate it.

I'm going to quickly go through our policies and procedures again. We did this yesterday but we probably have new people on the call. Again, we are only calling on speaker who did sign up during the registration period. We do have a wait list.

We were not able to get to that wait list yesterday due to the time we went through.

We did go overtime a half hour for a full six hours.

Again today if we are able to get to some of the

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people on the wait list, we will do our very best to do that. We try to hear as many comments as we can.

I'll just, you know, to the Board in respect to that, I thought the questions were great and don't want to cut anybody off in any way in terms of questions. The Board did great yesterday but make sure we don't give comments and do ask questions of the speakers.

Since we want to get through as many people as we can, ask the questions that are pertinent to you. I think people did that yesterday but also be aware of the time. If anything starts to go too long, I will interject and try to limit and move on so all speakers do have equal time.

For all the people that are speaking, please give your name and affiliation for the record at the beginning of your comment. If you are consulting for somebody, it really is helpful for us to have you identify that as well.

We do not allow proxy speakers. If you signed up, you are the one that has to give the

comment. We ask you to clearly define and succinctly state the issues so we have a comprehensible understanding of your concern.

It's already been mentioned but in our policies and procedures manual, which we do follow, part of that is that individuals providing public comment shall refrain from making any personal attacks that might impugn the character of any individual.

Jenny mentioned that. We did have to do that a couple times yesterday. That is part of our policies and we will monitor that. Please keep things professional and refer to the actual issues that you have problems with, not the actual people or companies.

Finally, Michelle will set three minutes. You'll have the timer to see it. After your three minutes are up, please finish your comment and give the Board a chance to ask questions. The Board members will raised their hands or, if I don't see your hand, please interject and let me know that you want to ask a question.

With that, are there any questions from

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the Board before we jump into the oral comments?

MS. ARSENAULT: Steve, can we test the timer before we start so everybody knows what it sounds like?

MR. ELA: Yes. Everybody knows what the end of time beep is.

MS. ARSENAULT: It should be on your screen counting down.

MR. ELA: With that and, as you said, as the speaker you should be able to see the timer. When that occurs, finish your comments.

Okay. With that we are going to start with public comments. The first speaker we have is Eugenio Giraldo. And then following we will have Gina Colfer, and Barbara Wingler.

Eugenio, please start us off with your public comment. State your name and affiliation and proceed with your comments.

DR. GIRALDO: Thank you everyone. My name is Dr. Eugenio Giraldo. I'm speaking today from Webster City, Iowa. I'll try to be brief on the unintended consequences of the stripped ammonia motion that is proposed right now.

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Next slide, please. Next one, Michelle, please.

So I'm going to read -- no, the previous one, Michelle.

MS. ARSENAULT: Sorry, there is a little bit of a delay.

DR. GIRALDO: I'm going to read directly from the definition for stripped ammonia which is created by separating, isolating, or capturing ammonia or ammonium from an agricultural feedstock or other natural source, and I have those two highlighted by me, using methods such as, but not limited to, steam stripping, pressurized air, heat, condensation, and/or distillation.

If you look at this, there are three basic questions you ask. If you answer yes to those questions, you will fall into a prohibited substance.

Basically you ask if it's an agricultural feedstock or natural source material, if you are separating ammonia or ammonium from said starting material. Then you have ammonia in the final product and you capture that ammonia, then

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you will be prohibited as stripped ammonia.

The next one, please. So I have that table here where in each of the columns I have a final product that is currently used in agriculture as an amendment or fertilizer. In this first column you have final product and you have compost tea, soybean hydrolysate, fish hydrolysate compost, concentrated digestate, food hydrolysate and feather meal.

You have starting material which is agriculture feedstock or natural source in this column. In the second column, the third one is whether you have ammonia or not in that product.

Finally, if you separated ammonia from the starting material.

For example, in compost tea, the starting material is compost and you have a final product that contains ammonia, yes. It separates ammonia from the starting material, yes, and it's stripped ammonia extract, yes. You go through each one of them and all of them would qualify.

The next 10 slides in there, and also in the public record of the written comments for

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anybody to see, has the production methods for each one of them to support the table that I have in here. I won't in 12 seconds go through the next 10 slides so I would like request the Board to consider the impact of this motion on the organic market if it becomes a rule. Thank you.

MR. ELA: Thank you very much. Are there questions? Logan has a question for you.

MS. PETREY: Yeah, sorry. Couldn't find it. This is actually -- I was looking at the public comments -- the written comments. Excuse me. I was going to ask a question on that submission if that's okay.

MR. ELA: Yep.

MS. PETREY: Okay. Right at the end it states, "Making these products unavailable for organic production" meaning AE. "Making these products unavailable for organic production could unnecessarily eliminate an effective tool to help overcome barriers to the expansion of organic agriculture." How do you think this could if we had AE expand organic agriculture?

DR. GIRALDO: Well, in the majority of

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the products that we would be -- with ammonia extracts making available to organic growers would be local products from manures that are widely spread throughout the United States and they would be substituting products like the ones I have on that table.

In particular, the fish hydrolysate and the soybean hydrolysate and the concentrated digestates. Those would be in competition in the market. A lot of what I think we are seeing here is an economic discussion around the competition in the market.

Ammonia extracts would make this widely available throughout the nation in watersheds that are currently impacted by excess ammonia in manures and other products that would benefit the environment and make it widely available and more affordable to organic growers.

MS. PETREY: And all of those are the liquid products, correct, that you're saying would substitute?

DR. GIRALDO: Right. And we'll see in some of the next presentations that in the majority

of cases when you have an ammonia extract from a manure, you also have a dry product along with that manure that captures the carbon, the phosphorus, and micro nutrients that are so valuable. The ammonia would allow you to split those two and apply them in a precise manner and timely manner and improve in general the application of manure.

MS. PETREY: Right. On that part two, we had a grower yesterday concerned with using all the manure available if there's a shortage. There seems to be possibly some in some areas that would limit the amount of manure they have. But if you are stripping the ammonia, what is the final analysis of the --

DR. GIRALDO: So the --

MS. PETREY: Does it have nitrogen in it?

DR. GIRALDO: So the majority of that ammonia is ammonia that is being wasted right now and goes into the environment as a waste product.

MS. PETREY: Okay.

DR. GIRALDO: Seventy percent is our calculation of ammonia that otherwise would be in

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the air impacting public health and the environment.

MS. PETREY: So there is an analysis of nitrogen in the by product, I guess you could say, or in the solid that's left. Okay. Thank you.

DR. GIRALDO: The solid is the classic 4-4-3 that you see in our case.

MS. PETREY: Okay.

DR. GIRALDO: It's very similar for dairy manures. I would like to comment that the USDA has a very extensive analysis of watershed throughout the United States when there is excess of manures or deficiency of manures in the watersheds. There is an ongoing program for this called manure sheds to optimize the use of manures in general in agriculture in the United States. This program would fit very well with that.

MS. PETREY: Thank you.

MR. ELA: I want to move on to Amy.

MS. BRUCH: Okay. Thank you, Steve.

Thank you for your written and public comments. Appreciate it. I have a question. In

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the written comments as well you had mentioned that your suggestion would be to allow this and have it approved for 30 percent of crop needs, but it sounds like based on what your answers were to Logan, this is a direct replacement of maybe products that are being currently used and not necessarily an additive. Can you just expand on that? I just gathered that from your answer to Logan's previous question.

DR. GIRALDO: So as some of the speakers from yesterday mentioned, a lot of these products that I have on the table that the ammonia extracts are substituting do not have a real limit in terms of application. You can add as much fish hydrolysate as you want.

By putting a limit on ammonia extracts, you would in that case minimize any impact of ammonia in soils. It would be used only as needed precisely and in a way that will be compatible with soil health and other benefits, carbon-capturing soils. There is plenty of information to support that.

Unfortunately, the review was very

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limited in the analysis of that existing information on how to use ammonia properly and other soluble substrates to optimize the use within the frame of the FDA.

MS. BRUCH: Just to confirm, this is the use of the replacement, in your words, to additional products that are on the market?

DR. GIRALDO: Right. It is, I think, like the way Vermont Association mentioned yesterday, we would be -- for example, a substitute for sodium nitrate or for other liquid products.

Somebody else mentioned in their experience these products would be substituting other liquid products.

MR. ELA: Sue, very quickly. We need to move on so we give time to other speakers. You're on mute, Sue.

MS. BAIRD: Would I want to do anything different on my last one? I said I was listening to what you were saying now, and perhaps you've answered it, but I was also listening -- did you hear Dr. Jerry Hatfield's testimony or comments yesterday?

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That's basically what he said. This should not be used as a full fertility product.

It should be used in coordination with all the things that we in organic would demand, crop rotation and those kinds of things. Do you agree with that?

DR. GIRALDO: Absolutely. Absolutely. It has to be used only when needed to overcome some of the limitations that we see in some areas of the country, not all. Somebody else mentioned yesterday that due to the diversity of climates and crops you need -- in some crops and areas you might not need these at all, while in other ones you do.

MR. ELA: Thank you so much, Eugenio. We do appreciate your comments.

We're going to move on to Gina Colfer, followed by Barbara Wingler, and then Nicolas Giraldo-Wingler.

Gina, please go ahead and state your name and affiliation and start your comments.

MS. COLFER: Thank you so much for allowing me to speak today. I'm humbled by your

selfless service to the NOSB Board so really, thank you.

I work with Wilbur Ellis on the central coast of California concentrating on organics as a pest control adviser and certified crop adviser with specialties in sustainability and nitrogen management. I have worked in this space for over 30 years. With this history, it has brought me to where I am today with a deep passion for organic agriculture, soil science, and sustainability. These comments are my opinion backed by science.

I'm here to speak to the ammonia extract issue, but first I'll focus on what synthetic ammonia is. Hydros ammonia is derived from atmospheric nitrogen mixed with hydrogen from natural gas using a catalyst with pressure and heat that produces an 82 percent ammonia nitrogen. It is the granddaddy of all synthetic nitrogen products as other synthetic commercial fertilizers are derived from this.

Ammonia extract is a concentrated ammonia that has been captured and concentrated from animal manure or animal protein through a

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variety of methods. It is a recycled material that captures ammonia from manures and concentrates it into a liquid at percentage levels a fraction of anhydrous.

It is not meant to be the main source of nitrogen. It is meant to be a whole system's approach for building soil health. There are many methods to building soil health but the most effective method is reduced tillage and, better yet, no till. But one of the main limiting factors in that practice is nitrogen.

Cover cropping, planting into cover crop residue is no till and other methods to reduce tillage by utilizing these soil conservation techniques are approaches that have garnered a lot of interest by large food companies.

The best cover crops to sequester carbon are the grasses. The grasses are also very big users of nitrogen so within that system the limiting factor is getting enough nitrogen to the crop when it needs it.

We now have new technology that can produce a stable liquid, non-synthetic, animal

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manure derived ammonia that is not meant to be the sole source of nitrogen, especially in a whole system's approach. Ammonia extract can aid the grower in utilizing the appropriate amount of nitrogen at the time where vegetative growth is rapid feeding the plant and soil what it needs, when it needs it, with the sustainable material that has not been proven to cause harm to the soil.

Too much of any one type of fertilizer can be detrimental to the soil and microbes, but when growers use these types of fertilizers thoughtfully, they can be beneficial to the whole system. Give the organic grower the tools to grow profitable crops to feed the world.

If we want organics to expand and be sustainable and accessible to everyone, like I think we all want, then we need to give our growers the choice to use the products that work in their systems. Do not limit the tools in the toolbox but trust the grower to do what is best for their crop. Thank you.

MR. ELA: Thank you so much.

Do we have questions? I am not seeing any questions. Thank you for your comments. We do appreciate it.

MS. COLFER: Great. Thank you.

MR. ELA: We are going to move on to Barbara Wingler and then followed by Nicholas Giraldo-Wingler, and then Alan Lewis.

Barbara, please state your name and affiliation and proceed with your comments.

MS. WINGLER: Hi, everyone. My name is Barbara Wingler with NuOrganics. I'm a civil engineer with a masters degree in environmental engineering from the University of Massachusetts in Amherst.

As an environmental engineer I've dedicated my career to the improvement of the environment in the water and waste water treatment industry. I've recently become involved in the agricultural sector and my work in organics.

Environmental engineers have traditionally worked in the municipal and industrial manufacturing power sectors since these sectors are regulated in terms of permissible

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discharges and pollutants. We consider agriculture to be the next big challenge in terms of environmental impact.

It's even more difficult to address since the agricultural sector is not yet regulated.

That being said, there's a lot of opportunity for the agricultural community to be proactive in terms of environmental improvements.

Next slide, please. I will started by acknowledging that the USDA definition of organic production is environmental friendly. According to the definition, organic agriculture needs to foster cycling of resources, promote ecological balance, and conserve biodiversity.

Next slide, please. But is it important to the consumer that organic is environmentally friendly? As an organic consumer I agree with the others that the answer is yes.

The consumer expects organic product to be environmentally friendly. There have been many surveys done to define what the consumer expects from the organic label.

This one shown here was performed by

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Earthbound Farm. It shows that the new organic normal consumer is more mainstream and more diverse than one would imagine. Of interest here is that 40 to 50 percent of consumers purchase organic products because they believe that they are better for the environment.

Next slide, please. You can see a few advertisements here on the slide that show that producers and organic advocates market their organic products as environmentally friendly.

Next slide, please. However, there have been several studies presented by high credibility institutions such as MIT, Columbia University, Princeton University, that question the environmental friendliness of organic farming.

Numerous studies conclude that decreases in crop yield in organic farming versus conventional result in higher environmental impact from organic farming.

The purpose of my talk is not to discuss the results of these studies but just to bring to people's attention there are doubts related to the environmental friendliness and impact of organic

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farming. Several speakers during yesterday's session also confirmed that.

Next slide, please. I'll conclude just by saying that as an environmental engineer and as an organic consumer, I fully believe that everyone in the agricultural community needs to work together to make healthy organic food available to everyone, improve soil, mitigate climate change, foster recycling of nutrients, and decrease production of synthetic fertilizers, and reduce the environmental impact of farming practices. Thank you for your attention.

MR. ELA: Thank you, Barbara.

Are there questions for Barbara? I am not seeing any. Thank you so much, Barbara. We do appreciate your comments.

MS. WINGLER: Thank you.

MR. ELA: We are going to move on to Nicholas Giraldo-Wingler, and then Alan Lewis, and then Sarah Pinkham.

Nicholas, please state your name and affiliation and proceed.

MR. GIRALDO-WINGLER: Hi. I'm

Nicholas Giraldo-Wingler and I'm a chemical engineer and I'm the technical services manager at the Farm Nutrients Clarion nutrient recovery facility.

Next slide, please. This is the Clarion nutrient recovery process. Poultry layer manure is received and passed through a manure dryer and the ammonia-rich steam is captured and processed. This results in three products; dried solid fertilizer 4-4-3, that also contains carbon and micronutrients; clean water; and, finally, a nitrogen-rich liquid fertilizer which contains humified carbon and micronutrients. All three products are pathogen free.

This process enables us to capture ammonia that would otherwise end up in the environment minimizing environmental impacts and enhancing the cycling of local resources. It also allows us to create pathogen-free products that can get applied in a timely and precise manner which minimizes phosphorus and nitrogen leaching.

Next slide, please. Here we have a diagram that shows the fate of nitrogen in typical

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layer manure. For every hundred pounds of nitrogen in fresh manure, only 25 pounds actually makes it to the plant. Twenty-five percent flashes off while awaiting collection in the barns. Another 25 percent is lost during storage.

Finally, another 25 percent is lost following field application in the form of ammonia nitrate and nitrous oxide. By collecting the fresh manure directly from the barns and drying it to halt degradation, and finally collecting the nitrogen and the gas stream, we estimate that 60 to 70 percent of these losses can be avoided.

Next slide, please. Ammonia recovery allows us to avoid a cascade of public health and environment impacts like air aerosols which can cause acute respiratory disease. This is the most socially costly impact. Ammonia deposition that creates ecological imbalance.

Nitrous oxide emissions that impact climate change. Ammonia and nitrate in water which induces eutrophication and creates massive losses and ecological diversity. Finally, nitrate in water which impacts drinking water

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sources and requires expensive treatment.

Next slide, please. The NOP final rule for organic production states that organic production must foster cycling of resources, promote ecological balance, and conserve biodiversity. We believe that Clarion nutrient recovery fulfills all three of these objectives.

Thank you.

MR. ELA: Thank you, Nicholas. Are there questions from the Board? Wood has one, and then we'll go to Rick.

MR. TURNER: Thanks Nicholas. You make some very strong statements about the environmental impact of not recovering ammonia. And then just, I'm interested in that.

And I'm curious if you have any sense of the scope that this kind of ammonia recovery while not occurring, what is the real impact on the district that you just described?

I mean, it's easy to extrapolate to large global issues related to one, you know, one application or one product. I'm just curious if you can sort of speak to what kind of impact not

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having this kind of ammonia recovery could have on some of those issues?

Do you have a sense of that scope?

MR. GIRALDO-WINGLER: Yeah. I think that in terms of organic agriculture you know, this -- that the scope isn't as large.

But, I think in general, manure presents large potential -- I'm sorry, yeah, I believe that in terms of scope, we can avoid a lot of potential emissions of ammonia -- sorry, I'm blanking out here.

Can you -- can you rephrase your question?

MR. TURNER: I'm just trying to make -- I'm trying to get some understanding about the potential impact of not having this kind of ammonia recovery on some of those global challenges that you asserted in your presentation.

I just want to understand that better.

Because I'm here on the Board because I'm concerned about -- I'm here to protect the environment, here to protect the --

MR. GIRALDO-WINGLER: Yes, sir.

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MR. TURNER: Our natural resources. That's my job. So, I'm trying to understand how we can make that extrapolation between a product and those global challenges.

And I'm trying to understand the scope. That's simply what I'm asking. Is, I can --

MR. GIRALDO-WINGLER: Yeah, yeah. So, --

MR. TURNER: Hear it from anybody, but I just wanted to hear it from you.

MR. GIRALDO-WINGLER: Yeah. I'm sorry. So, obviously, you know, manure is used wildy as a source of nutrients, you know, in all sorts of agriculture, not just organic agriculture.

And generally, it is over applied to meet certain nitrogen demands of crops. Usually it has a lot more phosphorus than nitrogen.

Having this product, and not only that, but there's a lot of losses involved before the product even makes it to the field itself. Not even factoring in the over application of manure just to meet the nutrient, or demands.

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So, in terms of global impact, I think one product can't make a huge difference. But, I think it's a step in the right direction.

And banning all products that are derived from manure and use ammonia that would otherwise end up in the environment and cause a cascade of environmental impacts, you know, --

MR. ELA: Yeah, let's say --

MR. TURNER: I didn't mean to ask an impossible question. I just was as -- I just wanted to -- I think it's interesting to sort of think about this in the context of two ways of looking at environmental issues.

And I'm -- I found your comments interesting. And I wanted to ask that question.

MR. ELA: Yeah. Well, let's -- let's --

MR. TURNER: I didn't mean to make it impossible.

MR. ELA: Let's move onto some other questions. Rick, go ahead.

MR. GREENWOOD: Yeah. Nicholas, on your first slide, you showed one of your end

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products. And the process was something you called clean water.

MR. GIRALDO-WINGLER: That's correct.

MR. GREENWOOD: So, I have a couple of questions. What's your definition of clean water? And what do you do with it?

MR. GIRALDO-WINGLER: So, all of our clean water is used onsite. Our clean water is water that comes from -- so, we use a reverse osmosis process to concentrate our product.

It starts at .3 percent nitrogen. And then we concentrate it all the way up to 4 to 6 percent through a reverse osmosis.

It's a five stage process. And the clean water is the water that comes from the first stage of the RO process.

MR. GREENWOOD: Okay. But, it doesn't go back into the environment. So, it's not really a product of your process. It's just part of your recycling program.

MR. GIRALDO-WINGLER: That's correct. No, it's not released into the environment anyway. It's all used internally. In our storage, our

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cooling towers, and it's also sent back to our nitrifier tank as well.

MR. GREENWOOD: Okay. But, you still use water. I mean, you're hooked up to municipal water for the process and then recycle some of it.

MR. GIRALDO-WINGLER: Um --

MR. GREENWOOD: You're not self-sufficient, I guess, is what I'm trying to say.

MR. GIRALDO-WINGLER: No. We are not 100 percent self-sufficient in terms of water. But, a lot of our water does come from the manure itself.

MR. GREENWOOD: Um-hum.

MR. GIRALDO-WINGLER: But, we do supplement it with well water that is also passed through a separate reverse osmosis process to strip out a lot of the minerals.

MR. GREENWOOD: Okay. So, RO is pretty energy intensive though, correct?

MR. GIRALDO-WINGLER: That's correct. It is energy intensive. But, in terms of concentrating on the product, it's a lot less

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energy intensive then evaporation.

MR. GREENWOOD: Okay. No, that was my question. Because it looked like you had a product with clean water. And that was --

MR. GIRALDO-WINGLER: Yeah.

MR. GREENWOOD: Or so it benefits part of your process. That's a different issue. Thanks.

MR. GIRALDO-WINGLER: Yep, no problem.

MR. ELA: Nate and then Amy.

MR. POWELL-PALM: Would it be possible to advance the slides, I think one, Michelle? Or the slide-master. Only one more.

So, when we're talking about these very acute and really real environmental costs as you had mentioned, in looking at these, these are sort of all the results of conventional ammonia usage.

And so, it's a -- I find it a little bit -- I would be interested in your take on it.

It sounds like organics is supposed to clean up for conventional pollution.

But, it's not manure that's doing these problems, it's ammonia. And so why would organic

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want to use a product that's so, you know, destroying the Des Moines watershed and ultimately leaving, you know, Iowa with a real risk of blue baby syndrome?

What would be the reason to switch from manure to a more toxic, more environmentally problematic fertilizer that costs more for farmers?

MR. GIRALDO-WINGLER: Yeah. That's -- so, I think this is related to my response to Wood's question.

I think when manure is used to provide the entirety of the nutrient requirements for agriculture, it tends to be over applied. Just to --

MR. POWELL-PALM: And if I may stop you right there real quick.

MR. GIRALDO-WINGLER: Sure.

MR. POWELL-PALM: So, in the over application, that seems like it's going to be a problem no matter where we are. If we're actually engaging in proper crop rotation, usually we don't run into over application when we're relying on

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input spaced.

So, what's to stop a producer from over applying a much more acute, much more soluble, really, you know, I'm really interested in sort of the water effect of ammonia.

So, when we over apply ammonia extracts, isn't that a little more scary than over applying manure as far as an environmental point of view?

MR. GIRALDO-WINGLER: I think yes, if it is over applied. But, I think part of the organic program almost requires proper management and application.

If you're -- in the spirit of organic agriculture, that's something that you are trying to avoid when you're --

MR. POWELL-PALM: Right. If you're going to over apply manure though, would you not over apply ammonia?

If you're not -- if you're not in the spirit, because I think over application of manure would land in not being in the spirit of organics.

MR. GIRALDO-WINGLER: Yeah.

MR. POWELL-PALM: So, why would those folks be any better having ammonia at their fingertips rather than just using manure, which is a little more stable in the soil?

MR. GIRALDO-WINGLER: So, manure contains pathogens. So, it's a lot harder to plan in terms of your application. It can only be applied up to 120 days in advance due to that pathogen content.

This product can be applied when you need it, as you need it. So, it's a lot less susceptible to over application.

I think also the intent of this product is not to supply the entire nitrogen demand for a crop.

It's only to -- it would actually be used in conjunction with manure, just to kind of fill that extra gap in the nitrogen demand.

MR. POWELL-PALM: Thank you. I won't take up any more of your time. I appreciate your answers.

MR. GIRALDO-WINGLER: Yes.

MR. ELA: Amy? And then we'll

probably -- we need to move on a little bit. So, go ahead, Amy.

MS. BRUCH: Sure. I'll try to make it brief. Thank you, Steve. Thank you Nicholas. I appreciate your time today.

I believe you're located in Iowa. And I just have a question --

MR. GIRALDO-WINGLER: Sure.

MS. BRUCH: For you, okay, on this, fellow Midwesterner.

We did hear some concerns yesterday just on the byproduct. And it was mentioned before that byproduct needed to, I think it's two slides back, at 443.

Our current litter, or my current litter that I have accessibility to, it's at 334. So they're, you know, similar -- similar analysis.

MR. GIRALDO-WINGLER: Yes.

MS. BRUCH: But, my 334, in terms of costing, because I have -- I believe this 443 is called a crumble maybe?

I be -- and I did some past analysis for my own farm with this, and it was four times

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higher than me just using the normal litter.

And the normal litter that I have is actually very low percentage of the ammonia and very high percentage of organic stabilized nitrogen.

So, I know that's a big concern from Midwest producers that we're taking, you know, not necessarily changing too much the product, the initial product.

But the cost is unattainable for a normal producer. To even afford the base product, your byproduct, not even the ammonia extract.

Can you just talk to that real quick?

MR. GIRALDO-WINGLER: Yeah. I think as I mentioned before, I think having the product be pathogen free, really goes a long way to aid all those environmental impacts.

I think it gives you an extra amount of flexibility that, I think, really makes the cost worthwhile. I think -- yeah.

MR. ELA: So, and I have one very quick question myself.

MR. GIRALDO-WINGLER: Yeah.

MR. ELA: And need to do it in 20 seconds. Aren't the barn losses of ammonia going to be the same either way?

MR. GIRALDO-WINGLER: In this case, we have contracts with the egg layers themselves. So, we receive very fresh litter that's only days old.

Usually it will be sitting in a barn for months at a time. So, a lot of these losses would be minimized.

MR. ELA: Thank you. We're going to move on. Thank you, Nicholas for your comments.

Next up, we have Alan Lewis, Sarah Pinkham, and then Doug Crabtree. So, Alan, please state your name and affiliation, and take it away.

MR. LEWIS: Yeah. Alan Lewis, Natural Grocers. Sound, is that good?

MR. ELA: You're good.

MR. LEWIS: Good day. And thank you for your service. Natural Grocers now operates over 160 health food stores across 20 states west of Mississippi.

We only sell organic. And our stores

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are all certified as organic handlers. We focus on the niche of nutrition deserts where people in need of special dietary supporting counseling have few other options besides the Dollar Store, Walmart, and other conventional supermarkets.

Today I want everyone to check in with Natural Grocer shoppers, who are core buyers of organic products. How do shoppers currently understand organic practices and the organic seal?

Here are just three reminders. First, organic production systems are a personal health, public health imperative. The soil biome and the gut biome are one in the same.

We can't conceive, have healthy babies, or ensure thriving generations, unless we remove toxic contaminants, including pharmaceutical residues, synthetic materials and pesticides from our air, water, soil, and food.

Second, what we now refer to as organic production systems are most valued by shoppers when they are just equitable and exclusive.

Our price premium depends on upholding and communicating through social cost accounting.

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Lowering costs by avoiding social standards may kill the sale.

Third, what we call organic cropping is an ancient and indigenous practice. We can't forget that. It's not owned by anyone and never depended on government sanction and oversight. Into a larger scale, trading worsens codification.

It has always been inseparable from community culture. And thus, mutual beneficial exchange of efforts and resources.

And yet, here we are. We have boxed ourselves into an organic standard that circumvents the discussion of public health. It stumbles and fumbles through frameworks of inclusivity and justice.

And to this day often acts as if it has been ordained to impose organic practices on the communities who have most fervently developed it and protected it long before the OFPA was passed.

Consider many of the debates over materials and practices underway at this meeting.

I can assure you that for our customers they sound parochial and self-serving to the average shopper

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who must decide what food or fiber or other products to buy, and how much to pay for them.

So, let's not forget this consumer context. It's changing faster than we're keeping up with it. We need to be better and broader if we want to stay relevant and valued.

Thank you. And I yield my last time.

Thanks.

MR. ELA: Thanks for 22 seconds, Alan.

Are there questions for Alan? It looks like Nate has one for you.

MR. POWELL-PALM: I'm going to steal those 22 seconds. We can't get too far ahead now.

So, Alan, I was wondering, and this isn't necessarily germane to any of our talks at hand. But, the idea of growing the organic marketplace in an equitable way.

I really appreciate, like you said, the location of Natural Grocers, I often find them in places where I'm doing organic work. I'm either inspecting, or I'm, you know, just living.

And it's really awesome. And I was wondering what it's -- like what you see as this

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means of growing?

It's only 6 percent of the food market right now. I think we should be, you know, eyes on the prize for figuring out how do we get it to be 50 percent of the food market.

But, I think if we only grow, you know, -- in a certain way we miss a lot of opportunity to get organic foods in everyone's bellies, rather than just those who can afford a premium.

So, I was just wondering, and I don't mean to take up too much time with this. But, if you could just give a little, if you have any insights on that?

MR. LEWIS: Well, let me try to bundle it this way. COVID in particular has driven home the problem of public health.

And the people who do worse with infection or a pathogen like COVID, are the ones who have bodies that are already in distress.

And it's not about a price premium. We do not have affluent customers. We don't have new cars in our parking lot.

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We have people that clearly understand that they are -- they can't poison themselves and stay healthy. And they can't afford the healthcare system such as it is. So, that's kind of a moot point.

But, the core problem we're having is that they're demanding far more than clean food. And we are struggling to meet that demand.

And yeah, I'm dodging all these other complicated bureaucratic technical issues that are under discussion or equally important.

But, I think we're -- we've lost sight of what this new generation of consumers is really looking for and where we'll really see the growth. Or we'll miss the boat in the next decade.

Does that help answer your question?

MR. POWELL-PALM: And I apologize. It does, yes. I wasn't meaning to call you out for not being germane. But, my question wasn't germane.

So no, I really appreciate your comments and your response. So, thank you.

MR. LEWIS: Thank you.

MR. ELA: Are there other questions for Alan?

(No response)

MR. ELA: Thank you, Alan. We sure appreciate it. We are going to move onto, and get my list here. And I looked out my window and it just started to snow. So, how about that.

We're going to move onto Sarah Pinkham, Doug Crabtree, and then Jen Berkebile. So, Sarah, state your name and affiliation and take the floor.

MS. PINKHAM: All right. Hello, I'm Sarah Pinkham, the OEFFA Certification Program Assistant Manager at the Ohio Ecological Food and Farm Association. Sorry, I'm a little nervous if I stumble over my words.

Thank you for the opportunity to speak today and for all of the good work that you do to continuously improve organic standards and practices.

OEFFA supports all three motions of the crop subcommittee on ammonia extracts, which are neither necessary for, nor compatible with systems of organic agriculture.

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Together with the brilliant addition of 205.203(f), prohibiting ammonia extract and reinstating the defunct sodium nitrate annotation, will ensure that farmers feed the soil not the crop.

OEFFA previously developed a resource for nitrogen needs of common crops to verify compliance with the 20 percent restriction for sodium nitrate. And we can use that as a starting point for all high nitrogen fertilizers.

Some producers need assistance in determining crop needs. And we request that prior to implementation, the NOSC make publically available an educational tool to determine the nitrogen needs of individual crops based on region, climate, soil type, and other growing conditions.

We are confident that such a tool will enable farmers, inspectors, certifiers, to share a consistent approach in calculating crop needs and verifying compliance with this rule.

Two other proposals before the crop subcommittee are equally important to organic principals. Kasugamycin and cow manure-derived biochar must remain prohibited.

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The farmer would introduce a dangerous new class of materials to the national list. And the later would simply provide CAFOs a lucrative way to offload their environmental harms onto organic farmers. These materials are incompatible with organic agriculture.

We're grateful to the NOSC for creatively seeking solutions to organic fraud. And we're intrigued by the proposal to develop a software tool hosted by USDA to provide greater supply chain oversight and traceability.

We're weary however, of adding any burden to farmers' record keeping requirements.

And we also see them as a crucial first link in the supply chain, whose data is needed to anchor the whole enterprise and production facts.

Moving this burden to certifiers would be even less feasible, as we would need to enter and verify data for every single sale.

So, we provide additional responses to NOSC in our written comments. But, fundamentally, we think that there are other solutions more likely to affect and prevent fraud, including storage and

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pest management requirements, developing better regional yield data, tracking food and feed grade sales distinctions and that influence.

Additional boots on the ground at ports and more in-depth onsite inspections for high risk entities are the strongest tools we have.

Finally, please consider the creative ideas being suggested to improve participation in the NOSC process by all members of the organic community, and especially farmers.

Thank you for your time.

MR. ELA: You did great Sarah. Always remember, we're just like you. Even though we seem scary, we're just the same.

Just the same people as if you were talking to your compatriots at the office. So, great job.

Nate has a question.

MR. POWELL-PALM: Similar to my question to OFA yesterday, I would be really excited for OEFFA to bring forth really, you know, very specific suggestions for this idea of traceability because of your portfolio with plane

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community clients. I think that would be an important piece that we haven't addressed yet. And we want to get that right.

So thank you for the comments. And more specificity would always be appreciated for ideas to how to do this right.

MS. PINKHAM: Well, thank you for your suggestion. And we'll try to incorporate that into our next written comments.

MR. POWELL-PALM: Thank you.

MR. ELA: Other Board members? Sarah, I've got a question for you.

You said OEFFA supports all three motions under the ammonia extracts. And you referred to the crop use, you know, that those charts could be made up or -- well, I'm not going to say guidance, but certifiers could agree on that.

We've certainly had comments where the certification of those motions could be tough in terms of certifiers. But you're saying, and I just want to make sure, you're saying that you don't see those as insurmountable.

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MS. PINKHAM: Yeah, it's not easy. Obviously, there are a lot of different growing conditions and hundreds of different crops that could be grown with slightly different needs.

But we had some more nervousness when the Pasture Rule came out that, oh no, there's all of this verification we do, we need to do for dry matter intake. And the NOP published some guidance for that that's been incredibly useful and has basically resolved all of that.

Back when we were verifying compliance with the sodium nitrate requirements, MOSA had a tool and we had one that listed just a dozen or so common crops and the nitrate requirements of those. And we sort of went off that for other similar things.

Obviously, something that contains the nitrate, nitrogen requirements of every single crop is probably unfeasible. But you could get a ballpark for your brassica plants. You could get a ballpark for potatoes. You can get a ballpark for corn.

And if you know the maximum nitrogen

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needs of a crop in a given region, it's not that difficult to calculate a fifth of that.

MR. ELA: Great. Thank you very much.

Any other questions? Thank you so much, Sarah, for your comments. We do appreciate it.

MS. PINKHAM: Thank you.

MR. ELA: We are going to move on to Doug Crabtree. It looks like Jen Berkebile has cancelled, so we won't go to her. So after Doug, Hamsa Shadaksharappa, and then Erika Rohr Luke after that.

I do want to just note for the record Asa has had to drop off for some academic purposes.

He won't be back in for a couple hours. But I just want to let everyone know that. We'll note when he comes back in.

So, Doug, please go ahead with your comments, and name and affiliation.

MR. CRABTREE: Good morning. And thank you for the opportunity to comment.

My name is Doug Crabtree. My wife and I own and operate Vilicus Farms, a dry land organic crop operation in north central Montana. Our farm

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currently encompasses approximately 12,000 acres.

Before starting the farm, I managed the organic certification program for the Montana Department of Agriculture for 11 years. This background informs my knowledge of OFPA and the NOP standards.

On the farm, we grow a mix of 20-plus annual, grain, pulse, broadleaf, and oilseed crops in a 7-year rotation. Our soil building system includes integrated cattle grazing, green manure crops in the rotation, and application of compost and manure once per rotation cycle where the soil tests indicate lower declining phosphorous availability.

We strive to develop a self-sustaining system. Our diverse crop rotation is the basis of that soil building system.

Nitrogen is not a limiting factor, as it is easily supplied by pulse and legume crops in their symbiotic relationship with soil bacteria.

The only off-farm inputs in our system are legume inoculants, seed, and the

aforementioned beef manure. We aspire to reduce and eventually replace all of these.

I want to specifically comment on the motions prepared by the Crops Subcommittee to prohibit stripped ammonia, prohibit concentrated ammonia, and limit by annotation the use of all nitrogen fertilizer substances with specific parameters.

My understanding of crop production and certification standards are that the basis of an organic system is to feed the soil, that all aspects of a correction system must maintain or improve that soil, including its organic matter content and the surrounding natural resources, and that off-farm inputs, particularly fertility substances, may only be tertiary to supplement when necessary the primary components, rotation, cover crops, and plant and animal materials.

I believe that those stripped and concentrated ammonia products, AEs as I'll refer to them, are incompatible with these standards.

Are we good?

MS. ARSENAULT: We're good. Sorry.

Let me buy back you a couple seconds there while we --

MR. ELA: Yep. We'll give you a little extra time, Doug. Sorry about that.

MR. CRABTREE: No, no problem.

MS. ARSENAULT: All right. Go ahead.

MR. CRABTREE: I said I believe both stripped and concentrated ammonia products, AEs, are incompatible with the standards.

AEs cannot maintain or improve natural resources, as they are a direct and likely contaminant to water quality. They are by definition highly soluble and thus likely to move into and with water.

AEs cannot maintain or improve natural resources, as they are a direct and likely contaminant. They cannot maintain or improve soil organic matter.

Indeed, the only justification for their use, the use of any highly soluble fertilizer, is when the crop rotation and green manures, which build organic matter, are inadequate to replenish soil nitrogen.

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And AEs present a clear threat to organic (audio interference) enforcement (audio interference) they are practically indistinguishable from synthetic ammonias, which are prohibited. And there's no way that certifiers or inspectors could tell the difference.

In short, they're likely to do more harm than good. They're absolutely unneeded. And they are a clear threat to organic integrity. Thank you.

MR. ELA: Thank you, Doug. And I do apologize again. It's hard to keep your train of thought when you're interrupted. And I will remind everybody to please stay on mute so we can get the full presentation from our speakers.

Nate, please go ahead.

MR. POWELL-PALM: Thank you for your comments, Doug. Could you speak a little bit more to this, the fact that you sound like you're able to come up with most of your nitrogen needs through a really robust crop rotation? And if I understood, you have 16 different crops that you

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incorporate in there.

MR. CRABTREE: We generally grow 20-plus individual crops and --

MR. POWELL-PALM: Okay. So I was underselling you a little bit.

MR. CRABTREE: Yeah, I find that, you know, adding fertility for nitrogen is absolutely unnecessary because nature provides for that with the natural fixation that if you just grow the right kind of crops and have a rotation that's easy to provide.

You know, I can only speak to our ecosystem. But it seems that's a pretty universal truth.

MR. POWELL-PALM: Thank you.

MR. ELA: Sue has a question, and then Logan.

MS. BAIRD: Hi, it's good to see you after all these years, Doug.

I don't think, and I may be wrong, but I don't think you're growing corn in some of the very high nitrogen crops. Is that correct or not?

MR. CRABTREE: No, we're too far north

for much corn.

MS. BAIRD: Yeah, I thought. I know that you use Austrian winter peas and wheat probably and some of those crops.

MR. CRABTREE: Yeah --

MS. BAIRD: And those are not --

MR. CRABTREE: -- small grains.

MS. BAIRD: Yeah, right. Those are not nearly as needful for nitrogen. And I applaud you for using crops that are eco-friendly for your particular area.

But, you know, a lot of people do grow corn, and they do need high nitrogen. So how would you address that?

MR. CRABTREE: Well, my experience, you know, in other areas is that places that are able to grow corn also are able to grow more voluminous and productive legume crops. And they can be added to the rotation either in sequence or through intercropping or through green manuring and provide much more nitrogen than we can from the productivity of our legumes.

MS. BAIRD: Yeah.

MR. CRABTREE: So nature generally provides what one needs if you design an adequately diverse system.

MS. BAIRD: Yeah, a lot of people rotate into soybeans, corn, and then into a red clover or something like that. But it's still not, they say it's not sufficient to add enough nitrogen as needed.

MR. CRABTREE: I hesitate to criticize anyone else's system. But --

MS. BAIRD: Thank you.

MR. CRABTREE: -- my belief and our philosophy is that diversity is the answer. And if you provide an adequately diverse rotation, you can definitely and fairly easily provide the nitrogen needs.

MS. BAIRD: Okay. Thank you.

MR. ELA: Logan's got a question for you, Doug.

MS. PETREY: Hey, Doug, a question. When you said that you take -- you're only applying when needed. You take a soil analysis and you find, you know, you'll be applying the manure where

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phosphorous may be low, right? Is that correct?

MR. CRABTREE: Yes.

MS. PETREY: Yeah.

MR. CRABTREE: We use the soil tests once per rotation to determine where we need to apply manure and at what rate.

MS. PETREY: Okay. And that's, and you don't want to apply it where phosphorous may be higher because you don't want to overapply phosphorous.

MR. CRABTREE: Well, we want to limit the use of all off-farm inputs --

MS. PETREY: Okay.

MR. CRABTREE: -- for various reasons.

MS. PETREY: And, okay. And so, with rotation, you know, I know crop rotation is extremely important. I mean, we have to use it where we are for disease and pest management.

And so, and we, you know, our farm has six-plus crop families. Not only are we growing a lot of different crops, but we are, I mean, extensively being diversified among that.

But legumes are the only crop family

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that will provide, will fix nitrogen. There's no other crop that fixes nitrogen except legumes, which there is no rotation in that. But that's the only crop family. Even though you may have ten different types of peas or whatever, it is one family.

But do you see any problems with using legumes, because you're probably mostly pro-ac of the legume family, do you see any issues with just having the two families rotation, or do you have more rotational crops in there?

MR. CRABTREE: We've designed our system to separate sequentially legumes, because as you suggest they are subject to some of the same diseases. We don't put a legume crop any less than three years apart in our rotation system.

MS. BAIRD: And that carries you all the way through. Just doing one legume crop for three years will provide --

MR. CRABTREE: Well --

MS. BAIRD: -- your nitrogen?

MR. CRABTREE: -- it's a rather complex system that's difficult to explain.

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MS. BAIRD: Sure.

MR. CRABTREE: But if you add the crop rotation, the green manures in between, the livestock integration --

MS. BAIRD: Okay.

MR. CRABTREE: -- and deleted the compost, but --

MS. BAIRD: Sure.

MR. CRABTREE: -- for nitrogen needs, the legumes are adequate in our ecosystem.

MS. BAIRD: Okay. Thank you.

MR. ELA: Okay. Thank you, Doug. We do appreciate it.

MR. CRABTREE: Thank you --

MR. ELA: We're going to move to Hamsa Shadaksharappa, then Erika Rohr Luke, and then Stephen Walker. So, Hamsa, please state your name and affiliation and proceed.

MR. SHADAKSHARAPPA: Okay. Thank you, Steve.

Hamsa Shadaksharappa from ReNewTrient. We're in the business of producing organic fertilizers and have been for the last five years.

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Ammonia extract is a complex issue to resolve. We totally understand that. However, the rushed definition of AE as currently drafted is unclear, impractical, and a bit unfair. I will focus my comments on the definition.

If NOSB rushes forward with this definition, it will create confusion in the market.

And, therefore, it will be contested for the reasons I will describe. Please consider fixing the definition collaboratively and with the technical focus it deserves.

First, the definition is unclear. Prohibiting ammonia captured from natural sources will affect many superior products that are not intended to be eliminated. Prior speakers, including I think Dr. Giraldo, have described which type of OMRI and CDFA listed products would get affected and probably eliminated.

Also, it is confusing to simply lump in processes like heat and concentration as part of stripping. Stripping is considered an industrial process.

For example, where do you draw the line

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between heating, drying, and composting? This definition leaves no choice to producers and consumers but to contest it in order just to get clarity.

Second, defining the production method is an impractical solution. There are high nitrogen products in the markets that have exactly the same product characteristics in the soil as other products that are produced in a different way.

By ambiguously defining and then prohibiting certain processes and manufacturing but allowing others, NOSB is arbitrarily picking winners and losers. But in many cases, the winners and the losers have the same end product with similar characteristics. Trained soil scientists have confirmed this.

For exactly this reason, we have continuously proposed and supported prudent application limits, like 25 percent of the nitrogen needs. This is the most objective, quantifiable, and practical solution for this issue.

Third, this definition has been rushed

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in our opinion and a bit unfair. It is absolutely untrue when the Petitioner states that NOSB should rush to ban these products right away so that there will be minimal impact in the market.

We know of eight to ten producers and dozens of customers that have invested in significant assets and logistics that will be severely and unfairly treated by the proposal as currently drafted.

In closing, please understand this is a flawed definition. And it's the exact opposite of a quick resolution. It could get muddled and contested indefinitely.

Please make some effort to work with us to get the definition right. We want to support you. And we will if we get a definition that works.

Thank you.

MR. ELA: Are there questions from the Board? I have a question, a quick one.

MR. SHADAKSHARAPPA: Sure.

MR. ELA: So we're getting to me opposing feedback. One, you know, some commenters as yourself said we shouldn't give an exact

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definition because that limits one thing and not another. Other people have said we should give those definitions because a more process-oriented definition doesn't meet the, isn't appropriate as well. How do we balance those?

MR. SHADAKSHARAPPA: It's a tough balance. And I think it's going to be very difficult to get a definition that is process or manufacturing related.

I think the issue is -- I think there's a consensus that there should be limits. There should be application limits. And this should not be a substitute or fulfill your total nitrogen needs. I think everybody agrees with that.

The question is how do you regulate it then. And so we have been a strong proponent of whatever the standard is, 20, 25, 30 percent. We have proposed 25 percent.

When you try and go into a specific definition of the manufacturing process, people are going to get around that. People are going to find a different way to manufacture the same product.

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There are multiple products, as I mentioned, in the market that have the same characteristics in terms of the end product.

When you try and focus on the definition, it excludes certain processes of plants that have already built, which requires people to then just rebuild in a slightly different process. But you're going to end up with the same product.

So our strong suggestion to get something objective and quantifiable is to stick with the application limits.

MR. ELA: Great. One other question, I mean, you just said that people are going to be innovative to work around whatever definition we come up with, which, you know, was one of the points. And, you know, I fully believe in innovation. And I don't mean, you know, to say we should be sticks in the mud.

So, in terms of the limits, you've mentioned, you know, 25 percent of crop needs. We've heard that crop needs are very hard to, for certifiers to define. How would you say that crop

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needs? Do you think those can be defined or not?

MR. SHADAKSHARAPPA: Yeah, I am not an expert in that field. So I would hesitate to comment.

I do think that -- I will say we are a believer that this should not be used as the sole resource. But there is a definite need for it.

We have many, many customers that have asked for the product. In fact, the Petitioner tried to get an exclusive rights to our product. We won't go there.

But this is widely wanted in the market.

And I don't think anybody wants to use it as a full substitute for what they're doing, just a complementary.

And I think it's going to be some judgment. It's going to be somewhere between 20 and 30 percent. And, you know, we would be happy for the Board to decide that in its own discretion.

MR. ELA: Okay. Thank you very much.

Any other questions? All right. We appreciate your presentation.

MR. SHADAKSHARAPPA: Thank you.

MR. ELA: We are -- and I apologize for butchering your name.

MR. SHADAKSHARAPPA: It was very close. I appreciate the try.

MR. ELA: Thank you. We are going to move next to Erika Rohr Luke. We have Stephen Walker, and then Emily Musgrave.

So, Erika, please state your name and affiliation and proceed.

MS. ROHR LUKE: Hello. Is everyone able to hear me?

MR. ELA: We have you. Go ahead.

MS. ROHR LUKE: Awesome. Thank you for the opportunity to comment to the National Organic Standards Board at this Fall Meeting.

My name is Erika Rohr Luke. And I am speaking today on behalf of Marrone Bio Innovations. Marrone develops and manufactures effective and environmentally responsible microbial and plant extract products for integrated pest management, most of which are compatible with organic farming practices.

I would like to speak to you today about

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the sunset of the EPA List 3 inerts.

Marrone requests that this Board, one, does not recommend sunseting List 3 or List 4.

Instead, we recommend taking actions which encourage EPA to reengage on maintenance of lists of allowed inerts.

Two, does not recommend sunseting List 3 or List 4 without replacements in place.

Three, we recommend that USDA and NOP and EPA work together with the biological products, registrants, and manufacturers, growers, and certifiers to update the current lists of NOP compliant inerts.

We make these requests because it is clear that an entity needs to maintain an encompassing listing of the substances allowed for use in organic inputs.

As all List 3 and List 4 substances are already reviewed on an established scheduled by EPA for use as inerts in products, EPA seems the most equipped for this review. They already have data on all the substances.

Ideally, EPA could add classifications

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to their inert tracking database and reestablish a system for maintaining a list of allowable inerts for use in organic compliant inputs.

Marrone is also working together with OTA, the Organic Trade Association, to generate options to consider for replacements of the List 3 and List 4 references. And we're also working with BPIA, the Biological Products Industry Alliance, to work towards evaluating options to support and contribute to a successful replacement of the List 3 and List 4 references.

In summary, Marrone does not support sunseting List 3. MBI advises it is necessary to renew List 3 allowance to support products used by growers.

We strongly urge NOSB to require any updated references be in place ahead of sunseting List 3 and List 4 references in order to limit the negative impact to product manufacturers and users.

Thank you for your time and consideration of our comments. And I yield the rest of my time for any questions.

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MR. ELA: Thank you so much. It looks like Amy has a question for you.

MS. BRUCH: Hi, Erika. Thank you for your time today with your comments in regards to the inerts.

I apologize in advance. I want to take a right turn here and ask you about another subject.

And if you need to get back to the Board or, with more information, that's completely fine. You can email it to Michelle.

But I know, I'm familiar with Marrone Bio and the innovations that you have for biological and botanical solutions to crop stresses and integrated pest management.

Something that's happening in California, and we have various comments on this, is copper sulfate use in rice production and the mitigation of algae and also tadpole shrimp control.

And I didn't know, again I apologize for the right turn on this, if Marrone Bio has had any advances on solutions to substitute out copper sulfate for other potential products.

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MS. ROHR LUKE: Are you asking if we're, if we have plans to develop or introduce any algaecides for rice production?

MS. BRUCH: Um-hmm, um-hmm.

MS. ROHR LUKE: I cannot speak to that at this time. I will definitely get in touch our R&D department. And I will certainly email Michelle to follow up on your question.

MS. BRUCH: Okay. Thank you so much. And I apologize again for going off topic.

MS. ROHR LUKE: Yeah, no worries. Thank you for your question.

MS. BRUCH: Thank you.

MS. ROHR LUKE: I appreciate it. And I'm glad you're familiar with our company and our mission.

MR. ELA: Other questions? Erika, I have a question myself. Given that an advanced notice of rulemaking is coming out, as Dr. Jenny Tucker has mentioned, are you going to submit a concrete plan for, that will help the NOP figure out how to navigate this difficult process?

MS. ROHR LUKE: Yes, we would like to

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communicate with them and provide any, you know, answer any questions that they may have, provide any insight that they ask for. And we definitely are available to provide any support that we're able to.

MR. ELA: Great. Yeah, I would strongly encourage you just because this is, as noted in our previous sunset process, a very difficult process to navigate of how to replace these listings even though we're invalid.

So I would suggest the more concrete you can be in how they should do this the more help it will be. And that will make your comments much, taken much more, you know, as advice. So thank you very much.

MS. ROHR LUKE: Thank you.

MR. ELA: We do appreciate your comments.

MS. ROHR LUKE: Thank you.

MR. ELA: Next we have up -- oh boy, I got to find it here. Sorry. We have Stephen Walker, Emily Musgrave, and then Keith Jones.

So, Stephen, please state your name and

affiliation and proceed.

MR. WALKER: I'm Steve Walker from MOSA. Our certification agency was founded on balancing sound enforcement with practicality. We appreciate the ongoing discussion --

MS. ARSENAULT: Steve?

MR. WALKER: -- of modernizing enforcement systems.

MS. ARSENAULT: Steve, can I interrupt just for a second?

MR. WALKER: Yes.

MS. ARSENAULT: The audio connection is not great. To note, it was all broken up there.

MR. WALKER: Okay.

MR. TURNER: Also, the clock is not moving, Michelle.

MR. WALKER: Is that any better?

MR. ELA: Yeah, actually, I was hearing him fine, Michelle. Go ahead, Steve.

MR. WALKER: Okay.

MR. ELA: We'll try it like this.

MR. WALKER: Okay. Our certification agency was founded on balancing sound enforcement

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with practicality. And we appreciate the ongoing discussion on modernizing enforcement systems.

But we have concerns about questions of balance, ever increasing regulatory burdens versus keeping certification accessible. We cannot pass more enforcement costs to farmers. Certification cost share helps our movement maintain its heart.

The potential value of an organic link system is intriguing, but we're wary of its scope.

We suggest comparing data upload requirements to risk and considering reasonable exemptions from reporting mandates.

We will need a mechanism like an OLS system for certifiers to easily access traceability cross-check information, otherwise unpredictable info requests will hurt our capacity.

We appreciate your affirmation that technology must play an essential role in supply chain traceability. The international organic community also supports the use of technology and innovations as organic moves forward.

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But technology can also be a barrier to accessibility. It seems difficult to design a single system that's practical for global use and the diversity in our movement. The system must be adaptable and useful while protecting confidential business information.

We suggest leveraging data and tracking systems already in use. If multiple systems are used, they must be able to interface with each other.

We also stress the value of process driven certification decisions. Data cannot by itself be the basis for certification.

Looking at processes allows for situational adaptability, critical thinking, and a socially conscious human element in enforcement.

Organic production is art and science in a living system of changing variables.

We also suggest considering public messaging regarding fraud and stressing the positives of our current enforcement system. Successful enforcement should be seen as a positive. But instead, too often the press

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portrays the existence of fraud as a systemic failure.

In our experience, there are far more success stories of robust enforcement and commitment to integrity.

We must also consider our transparency regarding the soundness of organic enforcement.

If we overstate organic's attributes or overpromise our capabilities, that's not being transparent. Good public relations and integrity with organic values needs self-assessment and honesty.

Thank you for your forward thinking as we continuously improve our enforcement work and aim toward a thriving organic world with balance.

MR. ELA: Thank you so much, Steve. I know just for everybody that Michelle just dropped off, which is why you couldn't see the timer. But I will keep time going forward until she gets back on.

It looks like we have a question from Brian for you.

MR. CALDWELL: Yeah, thanks, Stephen.

I'm wondering, are there ways that enforcement recordkeeping could be targeted at the places where we've seen the most issues with fraud?

Like, for instance, I may be naive but it doesn't seem to me that produce would be a big source of fraud. Whereas, it seems like imports of grains are. So is it possible to target reporting requirements in a way like that?

MR. WALKER: I think that targeting is embedded within the standards, the recordkeeping section of the standards where it talks about records being adapted to the particular operation.

Certification, the standards are scale neutral. But indeed, enforcement can be scale critical and can and I think should be adapted to the risk level of the operation.

However, what we often see when regulations are developed is kind of an umbrella approach to deal, that applies to everybody in regulatory language, yet it's really trying to target a few where more enforcement is needed. So that's a long answer, a short answer, yes.

MR. ELA: Amy has a question as well.

MS. BRUCH: Yeah, thank you, Stephen, for your comments. This is a discussion document.

So I appreciate, you know, just the ideas that you were able to exchange.

My question is, is there enough information established to do risk assessments in the most equitable way, or do we need data first in order to establish risk assessments?

MR. WALKER: It's a work in progress. There was an -- I don't want to misstate. But I believe there was an ACA working group on risk assessment.

And it kind of looks at different factors and assigns a little bit arbitrary number to those factors. And then you maybe get a numerical rating at the bottom. And based on that you can say, well, this one's really risky, this one isn't so risky.

MS. BRUCH: Okay.

MR. WALKER: That's a method. But it is in progress.

MS. BRUCH: Okay. Thank you.

MR. WALKER: Yeah.

MR. ELA: Are there any other questions for Steve? Thank you so much, Steve. We appreciate it --

MR. WALKER: Yeah.

MR. ELA: -- and appreciate you being flexible on the audio.

MR. WALKER: Thank you. Not a problem.

MR. ELA: We're going to move on to Emily Musgrave, and then Keith Jones. And then we have Harpal Singh Grewal on our list. Harpal, if you're out there, please let us know. We don't see you.

After Keith Jones, if Harpal isn't there, we were going to take a short break. And then we'll move on to David Epstein after the break.

So, Emily, please go ahead and state your name and affiliation.

MS. MUSGRAVE: Can you hear me all okay?

MR. ELA: You're good. Go ahead.

MS. MUSGRAVE: Great. Good day. My name is Emily Musgrave. I'm the organic

regulatory manager at Driscoll's.

As always, I would like to thank the NOSB for their commitment to protect the integrity of the organic program and uphold the vital regulatory processes of the NOP.

My comments focus on the ammonia extract proposal, the sodium nitrate proposal, and the continued allowance of the following sunset materials, peracetic acid and the four chlorine materials up for sunset review.

First, Driscoll's has concerns with two of the three motions set forth in the petition to ban non-synthetic forms of ammonia extracts. This is a complex subject. And we do not believe there has been enough time for the Board to do a thorough literature review on this subject.

During this public comment period, you have heard from scientists, experts in this field, who are plant physiologists and soil acrotomists, saying this proposal has not done a thorough review of the scientific literature.

Regulations that growers of the organic community must follow should be verified by

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research and based on sound science.

In our written comments, we stated we support motion one, prohibiting stripped ammonia extracts, because they are not in line with organic principles.

We do not support motion two to prohibit concentrated ammonia. And we do not support motion three to prohibit nitrogen products with a C:N ratio of 3:1 or less.

We support further research on this subject to understand the many nuances of these motions. The intricacies of the science within these motions are key to drafting meaningful regulations and accomplishing the goals the NOSB set out to meet with this proposal.

As it is currently written, we do not believe the NOP would act on this proposal if passed by the NOSB. We are urging the Board to take motions two and three back to the Subcommittee.

Driscoll's supports the Crop Subcommittee's proposal to bring parity to the status of sodium nitrate on the National List. The current listing is ambiguous. And the NOSB's

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proposal should alleviate this confusion.

Driscoll's supports the continued listing of peracetic acid on the National List to disinfect equipment. It is an extremely important tool for our organic berry growers and for organic producers across the industry.

Driscoll's supports the continued listing of the four chlorine materials on the National List that are up for sunset review. Chlorine materials are essential for complying with national food safety regulations and are an important tool to ensure the organic food growers are selling to consumers is safe.

I thank the National Organic Standards Board for your service and for consideration of my comments.

MR. ELA: Are there questions for Emily? Amy has one for you, Emily.

MS. BRUCH: Emily, hi. Thank you for your comments, both written and oral. And I apologize again. I was going to take this one in a right-hand turn. I appreciate the comments that you did provide. But I was going to ask you on

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biodegradable biobased mulch.

In the written comments, I love that you put that you pave the way for innovation in organic berry markets. And I was just wondering, has there been any work at Driscoll or any other companies that you know of that are researching true alternatives to plastic, such as the, oh, just maybe through a cropping form or things like that?

MS. MUSGRAVE: Yeah, that's a great question. Thank you, Amy. Are you asking, referring to instead of plastic, like not a biodegradable biobased mulch, but something else for dumping the beds?

MS. BRUCH: Yes.

MS. MUSGRAVE: You know, that is a really good question. We are really looking for alternatives to plastic across the board within Driscoll's.

It's actually one of our initiatives, I mean, whether it be reducing plastic clamshells, reducing plastic in the field. You know, you've got plastic tunnels. You know, agriculture, in general, uses a lot of plastics. But we know that

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berries are fully guilty of using a lot of plastics.

So I know we have many initiatives that we're looking at. And I'd be happy to connect you with either folks on our R&D team or others. I am not certain to that exact extent, you know, as far as alternatives to plastic mulch. But I bet we may be doing something.

So I'll connect you with the right folks to give you a right answer on that. And I'll let you know, Michelle, for you.

MS. BRUCH: Okay. Perfect, Emily. Thank you so much. I appreciate that.

MS. MUSGRAVE: You're welcome. Thanks for the question.

MR. ELA: Okay. Any other questions? Thank you so much, Emily. We appreciate your comments.

We are going to next move to Keith Jones, Harpal Singh Grewal, if they are there, and then we're going to take a break. And after break, we're going to do David Epstein and Patrick Kerrigan.

So, Keith, please state your name and

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affiliation and proceed.

MR. JONES: Can you hear me?

MR. ELA: We can hear you.

MR. JONES: Fantastic. Good afternoon. This is Keith Jones. I'm the executive director of the Biological Products Industry Alliance.

BPIA is a non-profit association dedicated to promoting the responsible development of safe and effective biological products, including biopesticides, biostimulants, and biofertilizers.

Our members include large and small producers of biological products used extensively by organic growers in the United States.

We greatly appreciate this opportunity to provide public comment today. We previously submitted written comments. And I just want to briefly augment those comments.

We respectfully request that you continue listing EPA List 3 inerts until an alternative has been established. We make this request not only for our members but also on behalf

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of their customers who rely on their products in their organic operations.

Previously, BPIA submitted written comments regarding List 4. In those comments, we outlined the history of List 3 and List 4 references and made recommendations for going forward.

BPIA is in favor of updating or even replacing the List 3 and List 4 references with listing references which can be updated as time goes by.

We strongly encourage you to first put in place updated or new references before sunseting List 3 and List 4 references to limit the negative impact on product manufacturers and more importantly the organic growers who depend on their products.

BPIA recognizes the critical role of these references and wants to provide the perspective of manufacturers for possible replacement references. So BPIA has been actively working with the Organic Trade Association to evaluate possible options.

Early in our discussions with OTA, it

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became clear that asking the NOSB or USDA to evaluate every inert individually may not be feasible. However, it is clear that some entity must maintain a listing of the majority of inert substances allowed for use in organic inputs.

As all List 3 and List 4 substances are already reviewed on an established schedule by the United States Environmental Protection Agency for use in inerts, as inerts in products, EPA seems the best equipped for this review since they already have data regarding all these substances.

Ideally, EPA could add a new classification to its inerts tracking database and reestablish a system for maintaining a list of allowable inerts for use in organic compliant inputs.

If it's not feasible for EPA to add such a classification, BPIA and OTA have discussed if some other already established or published listing of inert classifications by EPA could be referenced.

Since EPA no longer maintains List 3 and List 4, perhaps 40 CFR Part 180 listings, which

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designate various tolerances and exemptions, could be used as a replacement reference.

However, we do have a concern that if 40 CFR 180 listings were used as a replacement reference, it would not include a significant number of non-food use inerts that are currently included in products under List 3 and List 4 references.

BPIA is committed to working with OTA and any other interested stakeholders to find a workable alternative to List 3 and List 4. But we, again, ask that you continue listing List 3 until such alternative is established. Thank you very much.

MR. ELA: Well done. You even had nine seconds left. So are there questions from the Board? Brian has one for you.

MR. CALDWELL: Yeah, thanks, Keith. I have two questions. The first one, is it correct that there are only four EPA List 3 materials that are, that we're talking about here?

MR. JONES: I don't believe so. At least one of my members said that I believe that

company alone has five.

MR. CALDWELL: I see. I'm just thinking it might be possible to just, for the List 3 ones, to just identify them and just, you know, review them --

MR. JONES: It might be -- certainly for those three, it's much shorter than List 4. So it might actually be possible for List 3.

MR. CALDWELL: Right. Good. Okay. The other question is more general. I'm sure you're working with a lot of companies that produce a lot of new microbial products for pest management, in particular for disease management.

And what I'm wondering is if you have any ideas of how we could make sure that any materials that we consider to be antibiotics that we don't capture other materials that could be used for microbial pest control and they kind of fall under the blanket of an antibiotic definition.

Is there some way of differentiating sort of antibiotics from the rest of microbial pest management tools?

MR. JONES: I'm sorry. You were

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cutting out a little bit there. So I'm --

MR. CALDWELL: Sorry. I think I can rephrase that. Can you hear me now?

MR. JONES: Yeah, yeah, yeah.

MR. CALDWELL: Yeah. Is there a way of sort of defining antibiotics in such a way that it doesn't include other types of microbial pest management products?

MR. JONES: Well, I have to say, I mean, that's certainly out of the scope of what we were here to comment on today.

The best I can tell you is I can go back to my members and follow up, because I'd be, I'm reluctant to speculate. And that's all I could give you would be speculation right now. But I'm more than happy to take that back to my members and follow up, if that would be acceptable.

MR. CALDWELL: Yeah. Okay. Great. Thank you very much.

MR. ELA: Keith, I'm going to ask the same question I did before.

MR. CALDWELL: Oh, please, I want that question.

MR. ELA: Are you going to submit detailed comments with a process for dealing with this issue when the ANPR comes out from USDA?

MR. CALDWELL: You better believe it. And hopefully it won't be just BPIA. Like I said, we're working with OTA and other stakeholders.

And that is absolutely our goal. We want to be ready for that. And we want to come forward, you know, with at least the start or the outline of a plan. But that is something we are actively working on.

MR. ELA: Great. That's awesome, because this is one of those things. As I said before, we know the problem. We need to find the solution. So --

MR. JONES: I agree 100 percent.

MR. ELA: Great. Well, thank you so much for your comments. I don't see any further questions.

MR. JONES: Thank you.

MR. ELA: With that, we are going to move to a break. We are on time. But after yesterday's experience where we were doing so well

early on and then went off the rails later in the day, I'm going to limit it to a 15-minute break instead of 20.

So let's come back at five minutes to the hour. Stretch your legs. Thank you.

(Whereupon, the above-entitled matter went off the record at 1:40 p.m. and resumed at 1:55 p.m.)

MR. ELA: All right, it is five 'til. We're going to move on down the list. I hope everybody stretched their legs. We're going to start with Dave Epstein, go to Patrick Kerrigan, and then Amber Pool. So, David, if you're ready, state your name and affiliation and go ahead with your comments.

MR. EPSTEIN: Hi, Steve. Yeah, Dave Epstein with the Northwest Horticultural Council. Good afternoon. Thank you for allowing me this opportunity to represent the organic tree fruit growers of the Pacific Northwest.

I call your attention to the written comments the NHC submitted regarding the materials and proposals currently under consideration by the

board in which we detail how these materials are used by our growers pastures.

For my allotted time today, I would like to focus on the List 3 inerts of unknown toxicity.

The importance of the List 3 inerts cannot be overstated. They are essential to the proper performance of pheromone products, used in mating disruption, and in monitoring products for (inaudible) pests.

The leading pheromone manufacturers are all on record stating that there are no natural alternative ultraviolet stabilizers available today that could be used to replace the List 3 inerts.

Without them, pheromone dispensers and lures will not remain viable, at least by organic growers. The growers I represent produce 95 percent of all of the organic apples grown in the United States, and there are more than 7,500 acres of organic pears and cherries also grown in the Pacific Northwest.

I understand that the EPA no longer maintains its overview of List 3 inerts and that

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this presents a concern to the NOSB in evaluating these substances. Quite simply though, a decision to delist the List 3 inerts --

(Telephonic interference.)

MR. EPSTEIN: This decision will upend pest management in tree fruits where use of mating disruption is near universal in organic apple and pear production.

Before mating disruption, growers relied on 20 to 30 applications a year of botanical insecticides in codling moth injury to fruit, typically arranged up to 50 percent. Today's organic palm fruit producers target managing codling moth injury at below one percent to remain economically viable.

There are no current effective alternatives to List 3 inerts, and the decision to delist will lead to a dramatic decrease in organic palm fruit production and an increase in food waste as fruit are left unharvested due to insect injury that makes them unmarketable.

We strongly encourage the NOSB to follow this statute which allows for the

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continuation of the synthetic products on the National Lists when there is no wholly natural alternative, and retain the List 3 inerts.

A vote to delist is not just a shot across the bow of the NOP. This decision will have direct negative impacts on organic growers. Thank you.

MR. ELA: Thanks, Dave. Are there questions from the board? I have a question, and I will just note that I was sufficiently beat up on List 4s, so. I don't know whether to ask you or Harold when he comes up later, so I'm curious about your position on chitosan.

MR. EPSTEIN: On chitosan, I do have written comments on it. We support adding it to the list. We have concerns with some of the claims that the manufacturer is making that it's going to replace, you know, sulfur and other products.

They don't need to lift themselves up by tearing down other products. It's not proven in many ways yet.

So, we do agree that it should gain on

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the National List, but we also -- you know, it's a new product. It's not really clear how it's going to be used yet.

It's got a history. I've looked up some of the research papers in certain crops where it was found to be used. Those are not yet known in tree fruit. We would like to find out how it works, so we support it getting on the list.

MR. ELA: Great, and one other question that I will admit that I have not made my way through all of the written comments and I'm slowly working through them, so I'm sure it's redundant, but with kasugamycin --

Obviously as the tree fruit grower in fire blight, I know the issue very, very well, more than I ever would like to, and I've known it my whole life, but yet the (inaudible) is also on record starting with streptomycin and tetracycline as not approving antibiotics. You know, there's a very strong tension there. How do you reconcile that?

MR. EPSTEIN: Well, we reconcile it by acknowledging reality. We've read the tea leaves.

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We see it has zero support on the board, and so we put our efforts elsewhere. For us, it's very important to keep these List 3 inerts or our growers are going to suffer big time.

With the addition of kasugamycin, it would give an additional tool, but it's a -- there's a philosophical battle of another order. Folks don't see a place for it in organic, and we're not looking to fight that battle today because we don't see that it has the necessary support to even begin that conversation, so we acknowledge reality and move on, Steve.

MR. ELA: Thanks, Dave, a very pragmatic approach. So, any other questions for Dave? I don't see any. Thank you so much for your comments. We do appreciate it.

MR. EPSTEIN: You're welcome. Thanks for the opportunity.

MR. ELA: We are going to move on to Patrick Kerrigan, Amber Pool, and then Harold Austin. Let's go ahead with Patrick. Patrick, state your name and affiliation, and you may proceed.

MR. KERRIGAN: Yes, greetings, fellow organic stakeholders. My name is Pat Kerrigan with Organic Consumers Association.

We have been pleading with the NOP for years to push through a final origin of livestock rule that protects family farmers and organic consumers, and it is now more important than ever to get this across the goal line.

With the announcement of the Danone Horizon Organic Dairies terminating the contracts of 87 northeast organic dairy farmers, this has been now a -- the dairy crisis has now moved into a full-blown dairy emergency.

The loss of thousands of family farm organic dairies in the century, and the loss of consumers being able to access the products from these regional family farms that are so healthy, has come in large part from the NOP allowing a small handful of CAFO-lite mega dairies such as Horizon located with not that many dairies being located throughout the Midwest and southwest, to annual game the system and enjoy an unlevel playing field that really has to end.

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The continuing loss of small organic dairy farmers is not only a huge loss for those families obviously, and the heartbreak of losing their family dairies, but also for the communities and the rural economic health of those communities.

It's also the loss of the purchasing options for organic consumers. Now, this is really important in that the number of farms is already shrinking and consumers are having less and less purchasing options.

The NOP needs to enact the NOSB's recommendation. I'm switching gears. The NOP needs to enact the NOSB's recommendation for protecting native ecosystems for their own value and also for the carbon sequestration services they provide. Great job, Jo Ann, of Wild Farm Alliance.

And then finally, the NOSB, as it digs into its work agenda in determining which inputs should be banned and which should be prohibited, you know, shouldn't the impact on small family farms' soils and the health of the ecosystems around them be at the top of the list for considerations?

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And finally, please, I know NOSB members take immediate action, sending a letter to the NOP urging swift action in origin of livestock as you did with the climate crisis letter, which was fantastic. Thank you.

MR. ELA: Thank you, Patrick. Questions? I am not seeing any. Thank you so much for your comments. We do appreciate it.

MR. KERRIGAN: You're welcome, Steve. Thanks, all, for your work, NOSB folks. I know this is an enormous job, so I just wanted to show my appreciation.

MR. ELA: We very much appreciate that. Thank you. We're going to move to Amber Pool, then Harold Austin, and then Caleb Goossen. Amber, please state your name and affiliation and take the floor.

MS. POOL: Hi, my name is Amber Pool. I work for CCOF in our farm certification departments. I wanted to thank the board for continuing to offer this public commenting via this online Zoom platform.

I talk to a variety of farmers every

day, and from time to time, the NOSB agendas come up, and I encourage them not to only submit written comments, but to sign up for these online public comments. I think it's so important for the entire organic community for the board, the NOSB board to hear from these farmers.

Today, I'm going to comment on the NOSB's question of whether the industry should require other registration of land 36 months before organic certification.

Currently, CCOF does require existing farmers in our certification program to disclose any land to us that they're managing organically with the intention of transitioning the land to certified organic status.

I am concerned that new farms who are not yet working with a certifier wouldn't know about the registration requirement of transitioning land, and a new requirement like this could increase the three-year transition to a six-year transition if the farmer didn't register in time.

Recently, the organic community has

been having many conversations about diversity, equity, and inclusion. Beginning in historically underserved farmers may most be impacted by a 36-month land registration requirement.

These farms tend to be smaller organic farms who seek to expand their operations through leasing land. So, organic farmers and ranchers who don't own land would be disadvantaged by a 36-month registration requirement because that requirement presumes that a farmer would know the land is going to be available, coming up available to be leased three years in advance.

I work with a lot of vegetable farmers in California who get super short-term leases, one to two years, before the land owner decides to lease to a different farmer.

So, I just encourage the board to think about the unintended consequences of a 36-month land registration, and with that, I'm complete.

Thank you.

MR. ELA: Thank you so much, Amber. Nate has a question for you.

MR. POWELL-PALM: Thanks for those

comments, Amber. And like Amy said before, this is an info gathering opportunity, this discussion document.

So, the question I want to pose to you about transition is right now, on the whole, we basically allow immediate certification via affidavit, and I do appreciate CCOF's work trying to keep, you know, a better eye on current farmers and their transition ground.

How can we do better than just an affidavit so that we don't have, you know, the opportunity just to, you know, pop in, there's not very much oversight with the affidavits, but maybe not experience those unintended consequences?

And you don't necessarily have to answer that, but it's sort of a question I'd like the community to think about. What's something better than just an affidavit saying that we've been prohibited substances free for 36 months, but maybe less cumbersome than needing to register for 36 months?

MS. POOL: Are you concerned that people are lying on the affidavits? Because lying

to their organic certifier is the same as lying to the government, so that's kind of like on our affidavit, like, you know, if you do this, you could be in a lot of trouble, and we've caught people lying on the affidavit, but it's not common at all.

MR. POWELL-PALM: Yeah, so just sort of thinking about that, is the current system sufficient and is there a way to make it to ultimately improve it?

MS. POOL: I mean, it's really helped CCOF a lot to require our existing members to disclose land to us right away, and it's helped with like scheduling inspections and impending harvests. Because in the past, the farmers would just add it, try to add it like right before harvest and it became --

MR. POWELL-PALM: During inspection?

MS. POOL: Yeah, it became a logistical nightmare for us, so we were like, no. As soon as you start managing land organically, you disclose that to us, like you're required to disclose that in your OSP.

I'm just concerned about farmers who

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aren't working with a certifier not knowing about this requirement or farmers who don't own land.

If you own land, you can know you're going to transition it, but if you're -- I've seen like really late, last-minute leases approved, and --

MR. POWELL-PALM: I've gotten some of those, yeah, yeah.

So, just one more question for you on that front then, what do you think is the best way to get, you know, awareness about the certification process in front of folks, getting them talking to certifiers?

Not necessarily picking a certifier, but ultimately, you know, trying to get how the system works in front of more people so they are more aware of the process and everything?

Not that anything needs to change now, but it seems like that interaction is somewhat a stumbling block for getting folks to transition, that they're just not really familiar enough or close enough to the process.

Like, I guess, outreach and communication to potential organic farmers, what

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do you think about how we can improve there?

MS. POOL: It's hard because I attended the National Organic Coalition's pre-meeting last week and the farmers, they had a farmer panel on transitioning, and a lot of those farmers were hesitant to transition because they thought of the paperwork burden, and it is a burden initially, but it's not an impossible burden.

So, but I see that there's a lot of people that would qualify for organic certification and they're just scared to jump into the paperwork, so, and I've been hearing that the last 20 years, so I don't know how to get over that, but I don't know.

MR. POWELL-PALM: Thank you.

MS. POOL: A social media campaign?

MR. POWELL-PALM: Yeah, I think it's going to take all heads to figure it out, so thank you.

MR. ELA: Sue has a question for you. Sue, guess what? We're not hearing you.

MS. BAIRD: Of course. Are you the correct person to ask about livestock material?

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MS. POOL: No, I just work with our crop growers, but --

MS. BAIRD: Yeah, I've been --

MS. POOL: -- if you have a livestock question, I can put you in touch with somebody who can help you.

MS. BAIRD: No, I wanted to just hear, and I suppose this could be anything, but CCOF made a real impassioned plea, or at least, to me, I read it that way, to really consider taking sunset materials off the list.

They've stated that many times, these materials were site-specific, and what might be used in one area of the nation could be really important on the other side of the nation, and I just wondered if you would elaborate on that.

Because I hear that all the time, well, this is redundant. We have another one just like that. We should just take this one off, and I thought that was --

MS. POOL: Yeah.

MS. BAIRD: -- really important.

MS. POOL: We certify a variety of

farmers would be for and against removing things,
so we don't typically comment like specifically,
like keep this product --

MS. BAIRD: Right.

MS. POOL: -- don't keep this product,
but we will report the numbers of --

MS. BAIRD: Right.

(Simultaneous speaking.)

MS. POOL: -- the products that are in
use. You know, we started in California, so most
of our producers are California based, but we are
now operating across the U.S.

So, yeah, I think it's important to
consider site-specific and, you know, just for you
guys to hear from as many farmers as possible.

So, I appreciate the conversation about
how to get more farmers to participate in these
meetings. I think it's important to hear directly
from them.

MS. BAIRD: Thank you. I appreciate
that. I just found that very compelling to me,
that statement that you made or that somebody from
CCOF made.

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MR. ELA: Rick has a question.

MR. GREENWOOD: More of a comment. I'm a CCOF certified grower and I'm transitioning one of my grows that was organic then went conventional. I'm transitioning it back to organic and adding it to my OSP.

I have to say it's a good process because you get things in order, and it's not really that onerous. Now, maybe it's because I've done organic for a long time, but it really isn't that bad, but it sets a really nice baseline for going forward.

And with the discussions with the inspector, you get things in order so that when the three years are up, you're going to be in good shape to do the organic.

So, and you pick your date when you're going to be able to harvest, which is also something you have to certify for California organic, but I guess it's more of letting people know rather than the process itself, at least from my experience.

MS. POOL: Yeah, I think it's a good

requirement for farmers who are in an existing certification program. I'm just worried about people who are transitioning and not yet working with a certifier, like how would they get this information to register their land 36 months in advance.

MR. ELA: Quick question from me and then we'll move on. I'm very curious. You said you have found fraudulent affidavits. How did you find those?

MS. POOL: In California, we have the -- in the state of California, and I think other states too, farmers have to disclose all of their pesticide use application records to the county, and so if we see like a very vague affidavit or we're questioning it, then we would contact the county and pull those records.

Also, we've found out like during a complaint and investigation. It's not common, but, you know, I've been -- I just celebrated my 15-year anniversary at CCOF last week, so I've seen a lot of things. I would say 99 percent of people are not lying on their affidavit, but I have seen

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a couple.

But I think it's the best we got, and, you know, if somebody is willing to lie to, you know, somebody who is accredited by the government to do this work, then what can you do?

MR. ELA: No, I was just curious the process and, I mean, in Colorado, we don't have that reporting, so, and I think that's -- I mean, there are some places, as you say, but not in all. So, Nate, very quick, if you still have your question?

MR. POWELL-PALM: I was going to say I'm jealous of that backstop with the pesticide reporting, because I think in most other states, we don't have that, unfortunately.

And so thinking, just creatively thinking about what are those kind of backstops we can utilize for double-checking affidavits would be a great, I think, a great thing for us to all put our heads together on.

MS. POOL: Unannounced inspections are helpful too, and, you know, inspecting people's materials, storage, and, you know, affidavits from

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neighbors who might have knowledge of the land.

And, you know, there was conversation earlier about risk assessment, and so we might require extra information from farms that we deem to be higher risk, and we use the ACA guidance document to assess risk assessment of our clients.

MR. POWELL-PALM: Thank you so much, appreciate it.

MR. ELA: Well, thank you so much, Amber. We appreciate your comments.

MS. POOL: Thank you.

MR. ELA: We are going to move onto Harold Austin, Caleb Goossen, and then Otto Kramm. So, Harold, name and affiliation and take the floor.

MR. AUSTIN: Thanks, Steve. Good morning. My name is Harold Austin. I'm a former member of the NOSB from the Pacific Northwest, and I am the chair of the NHC's Organic Subcommittee.

I'll start with two general comments.

First, please see my written comments in support of a relisting of the four chlorines currently

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under sunset review for crops, handling, and livestock use.

Second, I do not support changes to the current status between the NOSB and the NOP, well, except maybe for just a little bit more transparency. Other than that, I think we're fine.

Crops, peracetic acid, I support both listings under the sunset review for use in organic crop production. This is a key material listing for organic tree fruit producers in controlling the fire blight pathogen in apples and pears, and for the control of Western X-Disease in organic cherry production.

This is probably the most benign of all the sanitizers that we have for use in organic crop production as well as handling.

EPA lists three inerts for use only in passive pheromone dispensers. I support the relisting of this material. Until the NOP, NOSB, and EPA have come together with a rational solution on how to replace this listing, this material category truly needs to stay on the National List.

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The pheromone dispensers are one of an organic tree fruit grower's primary means of detection as well as defense of those insect pests that plague them in their specific geographic areas.

These are used to monitor the insect population levels, helping the grower to identify what thresholds that have been met and organic spray must be applied, as well as helping to assist in the mating disruption process, thus helping to reduce the overall number of targeted pest insects.

Calcium chloride, the annotation of this prohibited material that allows for its use in organic crop production as a foliar spray is important to organic tree fruit growers, and I support its continued relisting.

This is an even more important material now than when it was first listed. It's used to prevent bitter pit and other calcium disorders in organic apples, cracking, splitting, and other disorders in organic cherries, as well as cork spot in d'Anjou pears.

New varieties, new root stocks, and

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more pedestrian types of orchards all have had an impact on the severity and prevalence of these disorders.

Consumers expect the organic crop producer to be able to provide them with the same type, quality, and variety of fruit that is available to them conventionally.

Thus, when somebody comments that we would simply change or just not farm these varieties, they simply are not in tune with the organic consumer of today and their expectations.

This is one of our most effective and also most economical sources of calcium, and used by organic tree fruit producers across this country.

For handling, I support the relisting of organic --

(Telephonic interference.)

MR. AUSTIN: -- agar-agar, carrageenan, cellulose, potassium, and sodium lactate. These materials are still in use by organic handlers today. Thank you.

MR. ELA: Thanks, Harold. Logan has

a question for you.

MR. AUSTIN: Hi, Logan.

MS. PETREY: Hi, thank you. Calcium chloride is one of my materials and actually it was interesting when you said it was going to be more important than before and that's due to consumer demands of having almost perfect produce, just, you know, like you can attain more easily with conventional.

And actually, since you're a board member, I know you're used to tackling a lot of different products, so we're going to go to the AE part if you don't mind.

All right, so with AE being listed, and it is a nitrogen, almost kind of a use -- I kind of visualize it as a use like calcium chloride, to be very limited and only when you're deficient and you need it, but the calcium that you need is to provide you a fruit that has great quality.

I'm a leafy green farmer. I need green leaves, right? I need it to have good quality.

I would love to do things the old-timey way. However, the old-timey way does not exist in the

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consumer expectation.

Unfortunately, it wants perfection, or we get crop loss and we get rejections. I mean, those things are real for us organic farmers on the leafy side as well. So, what's your opinion on that from that standpoint?

MR. AUSTIN: Yeah, and I would say that, you know, on the calcium, just for that one, it really can get tied up easily in the soil, so the reliance on a foliar application, especially with the newer varieties that we have, it's imperative that we have some source of calcium, so I'll lay that one to the side.

Now, on AE and nitrogen source, we need healthy green leaves on our crops too, to support them. Our problem is that we're a crop that's planted in the ground and it's going to stay put for 25, maybe 35 years. We don't have the luxury of putting in alternative crops.

We use composts. We use manures. We use the fish materials, you know, but it takes a long time to get those types of materials to take and breakdown, get into the soil profile to where

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the soil microbials are going to begin the breakdown process and make that available for our trees.

So, having materials that we can use during the growing season to take and feed our plants on a very select, very specific process.

I think there's a need.

I think with the AE discussion document that's before you, I think I'm more concerned about the unintentional consequences with the materials that we're currently using, utilizing, if we're not careful on the verbiage and the wording that you guys are using.

That would be my biggest cautionary statement is be careful on the language so that you don't unintentionally have a negative impact on something else.

MS. PETREY: Thank you, Harold, appreciate it.

MR. AUSTIN: You're welcome.

MR. ELA: We have Rick, Amy, and then Jerry, and just, yeah, keep questions succinct where we can.

MR. GREENWOOD: Okay, my question, Harold, is very succinct. How about a quick comment on kasugamycin because you're in the area that grows apples and pears? I thought you might mention that in your oral comments.

MR. AUSTIN: So, I left it out of my oral comments strictly because of time constraints on what we can achieve with three minutes, and you're talking to -- my first year on the board back in 2012, I had the antibiotics, oxy, tet, and strep, so I fought the antibiotic fights in-depth.

Fire blight is a big concern for us in the northwest, as well as it is in your geographic location. For the types of new varieties of apples that we farm, they're highly susceptible.

A lot of the pears are highly susceptible to fire blight, and it will destroy a tree. It will destroy a field in just very little time once it gets started under the right conditions.

Kasugamycin, I think, you know, looking at how the proposal came out of the subcommittee, I really felt that the writing was on the wall,

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especially reading written comments. I think it would be a material that we could benefit from its usage in tree fruit production.

It does not have crossover with human health uses and concerns, so that, unlike streptomycin that we dealt with in 2012, I think there's merit for taking a serious look at allowing kasugamycin onto the National List.

I know there's a lot of people that just, they say carte blanche antibiotics, don't list them. I think this one has relatively minimal human health concerns associated with it, so I really honestly think it's one that we could merit from having it on the list.

But with the politics that are in play, I don't give it a snowball's chance that it's going to make it onto the National List just to be realistic about it.

MR. GREENWOOD: Okay, yeah, and the one thing you didn't mention, which I think is a concern for the subcommittee, was its effect on changing soil microorganisms, which appears to be pretty well documented in the literature, but, no, thanks

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for your comments. I appreciate it.

MR. AUSTIN: Well, Rick, and just to answer that one real quickly, I think because of the level of rate of application and how we would be targeting it into the tree canopy with our new, you know, electrostatic sprayers and stuff, honestly, I think the amount of it getting into the soil conditions and stuff, I really think would be very minimal at best. I don't think that would be a concern.

MR. GREENWOOD: Okay, yeah, the literature seems to say there's a lot of runoff, and maybe not in your area, but in other areas that don't have the modern equipment.

MR. AUSTIN: Yeah, we're applying 50 gallons to the applied acre, maybe 75 gallons.

MR. ELA: Let's go to Amy and then Jerry.

MS. BRUCH: Okay.

MR. AUSTIN: Hey, Amy.

MS. BRUCH: Hi, Harold. Thank you for your prior service to the board and thanks for your comments today. I just had a question on calcium

chloride for you.

I know you were mentioning about the need to foliar feed, and as I read through some of the comments, they say even on well-managed soils, soils that have had lime applied and this and that, there's still a need to foliar feed.

And I was just wondering are the soils being managed to a PH-type basis or a base saturation when they're evaluating calcium?

MR. AUSTIN: So, we're pulling samples and we're going to take samples and look at our crops and the needs from a standard soil test.

We're also going to take and use the test, the water bioassay test, so that we're using the irrigation water plus the soil so that we see true what's available for the crop to utilize.

We also pull fruit analysis. So, we're pulling an apple sample when the fruit's about the size of a golf ball, and then we'll pulling it again two weeks prior to harvest.

So, we're tracking what we're doing fertility wise in the ground, as well as foliar, plus what the tree and the fruit are utilizing and

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what they're needing to make sure that we're meeting what we need.

Calcium, in our soil profiles here in the Northwest, calcium is extremely hard to get it to translocate through the root system up into the tree canopy to where the apples can utilize it.

If we don't have the proper calcium ratio to potassium ratio established by the time that apple is about two inches in diameter, we couldn't physically apply enough calcium to displace the potassium, not in a tree fruit.

MS. BRUCH: Are you looking at also magnesium --

MR. AUSTIN: Yes.

MS. BRUCH: -- when you're looking at the calcium ratio as well? Okay.

MR. AUSTIN: Correct.

MS. BRUCH: Okay.

MR. AUSTIN: We're doing a full analysis and the correlation to make sure that -- we're trying to keep everything in balance that we can.

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MS. BRUCH: Okay, that sounds good.
Thank you.

MR. AUSTIN: Okay, thanks.

MR. ELA: All right, Jerry, and then
we'll move on.

MR. D'AMORE: Harold, I'll echo Amy's
thoughts in thanking you for your comments. I'd
like to start with a comment of my own which is
I appreciate what I understood to be your thoughts
on the interplay between the NOSB and the NOP, and
I agree with what I heard.

As you were running out of time, you
actually got the word carrageenan out of your
mouth, so I'd like to hear your short version on
that if you would, please?

MR. AUSTIN: Okay, well, that was my
first handling material back in 2012. So,
carrageenan is a material that's still widely used.

It's a material that is recognized by
certifying bodies around the globe, and I've seen
the testimonies from the people out of Indonesia
and elsewhere that crop it, that farm it.

They actually farm it. They're not just out openly harvesting. They actually have farms where they get the seaweeds that they utilize for the carrageenan production.

This is a material that has been proven that they can be safe. There's science that can prove -- anybody can take and pull the science data out and they can say that it's this or they can say that it's that.

The scientific data that we've had before us -- and the board, when I was on it, we had carrageenan in front of us twice, and the data substantiated the need for it and debunked a lot of the negative.

There was a lot of misinformation that was being applied, you know, trying to associate carrageenan with poligeenan or the other materials that were possibly linked as a carcinogen, but carrageenan is not, and you can see that, the comfort in it, as its listed globally everywhere.

This is a safe compound. This is a material I'm glad that the NOP chose to not adhere to because the NOP -- the NOSB is an advisory board

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to the NOP or to the Secretary and to his duly appointed representative, which in this case would be Jenny Tucker.

And so, simply, the recommendations that you guys put forward are just that. Your motions are recommendations. I'm glad that the NOP chose not to follow that recommendation when it was last voted to delist because it's still used widely in organic handling and it's used widely abroad, and it impacts not only --

They looked at the global allowance.

They also, I'm sure, looked at the economic impact that that would have on the handler, as well as the manufacturer using the ingredient as well as the people that are harvesting it. So, myself, I support the continued relisting of that material.

MR. D'AMORE: Thank you.

MR. AUSTIN: That's my opinion.

MR. D'AMORE: No, no, that's why you're there. Thank you very much.

MR. AUSTIN: Thank you, guys.

MR. ELA: Thank you, Harold. We're going to move on, and appreciate your thoughts.

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And I will just remind the board that we're starting to drift behind a little bit. It's your choice what questions to ask, but just to be aware of where we are as a time check.

We're going to move on to Caleb Goossen, Otto Kramm, and then Bryce Lundberg. Caleb, name and affiliation, and take the floor.

MR. GOOSSEN: Hi, I'm Caleb Goossen, crop specialist for MOFGA, the Maine Organic Farmers and Gardeners Association, which is one of the country's oldest organic associations.

I'm grateful to be speaking after Doug Crabtree, who spoke to the mismatch of ammonia extracts with the founding principles of organic agriculture more elegantly than I believe that I could.

It's suffice to say that myself and MOFGA view these materials as incompatible with organic farming and must be highly restricted, if not prohibited outright.

These materials appear to be a byproduct of a broken livestock system, and organic agriculture is not obligated to subsidize their

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self-imposed waste stream issues.

It is heartening to see so many speakers, including many supports of ammonia extracts, in agreement that highly available sources of nitrogen, with carbon to nitrogen ratios of three to one or less, should be greatly limited to ensure that organic fertility management remains true to the principle of feeding and building soil.

Carbon to nitrogen ratios are the best method that I'm aware of to ensure a natural fertility's material, sorry, a natural fertility material's rate of mineralization and properties as a food source to soil life, and subsequently, it's plant availability.

The current proposal would do an excellent job of providing much needed guardrails while still allowing organic growers flexibility in different growing conditions.

Many thanks to the board for your service. I focused on nitrogen fertility here, but many of my other comments are reflected in the written comments of the National Organic

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I'm happy to take questions on this topic or any other, and I'll be quick to say where I am out of my depth.

MR. ELA: Thank you, Caleb, appreciate it. Questions from the board? I am going to ask a question seeing no others.

But there's certainly been a lot of discussion in the comments about sending the three to one ratio back to the subcommittee to work on further. If it gets sent back, what would you change in it to improve on it?

MR. GOOSSEN: I have to be honest. I missed a lot of the commenting yesterday, so I'm not sure where everything went, but I wouldn't -- I can't think of what I would change immediately.

It seems pretty close to me to what I would want to come up with.

MR. ELA: Sounds great. Wood's got a question for you.

MR. TURNER: Caleb, do you have any concerns that the proposal has -- some people have said that the impact, that it's going to impact

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compost teas, and composting, and issues like that.

What's your read on it?

MR. GOOSSEN: Well, in terms of the definition of stripped ammonia extracts, I saw some comments there. I think that's interesting and maybe that definition needs to be clarified, and I'm sure that could be done.

In terms of a compost tea, I think you could look at -- I mean, they're almost already described pretty well in the standards. It could get a carve out if you really needed to, but I also don't see it as a major obstacle.

Compost in general, you're going to have some ammonia that's produced naturally, but most of the nitrogen fertility is going to be in an organic form.

When you're making a tea, you're going to be taking out nitrates and ammonia, the soluble parts. Whether that's going to be an ammonia extract, you know, that's -- some clarity maybe could be useful there.

MR. ELA: Any other questions? Thank you so much, Caleb. We appreciate it. We are

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going to move on to Otto Kramm, Bryce Lundberg, and then Gwendolyn Wyard.

Otto, please state your name and affiliation and take the floor. And Otto, you, unfortunately, are on mute.

MR. KRAMM: All right, here we go. Hello, my name is Otto Kramm. I'm speaking as a member of the general public concerning organic and conventional farming. Thank you for the opportunity to address this board on the ammonia extract issue.

I have been farming for 35 years, 22 of those years as managing partner of Mission Organics, the farming arm of Earthbound Farms. I'm currently directing a large convention farming operation.

Sodium nitrate 1600, Biolizer 521, Vitamin 800, Agrilizer 725, all high nitrogen products, which only sodium nitrate remains.

We have seen two major Department of Justice cases of fraud come out of the organic fertility industry in the past 10 to 15 years.

So, my point is how will the integrity

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of these products be verified on a continual basis?

I mean, good hard inspections throughout the manufacturing process, not sure. You know, a bad apple can easily cheat the system without being detected? I don't know.

The end user, historically, the end user has been the best resource for questioning authenticity. These new products are way above what we can verify from the field level.

Organic farming is about building healthy soils with the use of natural organic products. Readily available N will detract from this fundamental law of organic farming.

For 2022, here in my current position, we will be operating a 250-acre farm under a hybrid program. All of the soil and fertility inputs will be organic. Pest control will be a soft program.

You know, we're a conventional farming company which sees the benefits of good organic soil building practices. Thank you.

MR. ELA: Thank you very much, Otto.

It looks like Nate has a question for you.

MR. POWELL-PALM: Otto, could you tell

us just a little bit about your crop rotation and what you rely on for fertility?

MR. KRAMM: Well, here in the conventional system or back when I was farming organically?

MR. POWELL-PALM: Ideally when you were farming organically.

MR. KRAMM: Well, yes, I mean, when we farmed organically, you know, we relied on -- we got a cover cropping program. We were -- highly used -- I guess I'll say we used quite a bit of pelleted material, chicken pellets mostly, chicken manure, chicken pellets.

MR. POWELL-PALM: I'm sorry, in that cover crop, was that legumes, grasses? What would have been incorporated in that cover crop?

MR. KRAMM: You know, it depended on the field. I mean, if we're going after soil building, if the field needed, you know, help, yeah, you'd go after a good soil building mix.

If we're going after disease, we'd be looking more for a mustard, mustard blend, trying to get something in there to be a little hot kind

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of feel in the ground somewhat. You know, in the desert, we solarized, you know, for pathogen and weed control.

But, you know, cover cropping, you know, pelleted material, you know, a good solid, I guess I'll say dry program with pellets, and liquids were very scarce in our program.

I mean, we farmed thousands of acres of spring mix, you know, broccoli, cauliflower, you know, the whole program with Earthbound. We were successful and, you know, liquid was here and far between, and it was typically a fish-based product.

MR. POWELL-PALM: And with those leafy greens, were you able to meet consumers' expectations? Did you feel like you were doing well on that front?

MR. KRAMM: We were one of the best. I mean, day in and day out, we were one of the best.

MR. POWELL-PALM: I think I've seen that product a time or two in the store, so I don't mean to be totally rhetorical here, but --

MR. KRAMM: You know, I'm not there now. I'm not leading that program now. So, when my team and I, we led that, I mean, we were the best. We did it. We had millions of pounds of solid leafy greens coming off our ranches with a good solid organic program.

You know, did we -- like I say, we, because we were the new guys on the block back in 1996, we knew everybody was looking at us, so we fully investigated these products that were on the table to use and vetted them ourselves.

And, you know, guys would try to sell us easy N. If they couldn't prove it to us, we didn't use it. Guys used them because they were on the OMRI list. Well, until it comes off the OMRI list, I'm going to use it. I mean, they had no soul.

MR. POWELL-PALM: I appreciate that.

MR. KRAMM: There was an emotional part to farming organically. It's for real. I mean, you're trying to change something, trying to make the earth better, that piece of ground. So, readily available N defeats that purpose in my

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mind.

MR. POWELL-PALM: Thank you, Otto.
Thank you.

MR. ELA: Thank you, Otto, and we appreciate your passion. I don't see any further questions, so we are going to move on to Bryce Lundberg, and then Gwendolyn Wyard, and then Johanna Mirenda.

Bryce, name and affiliation, and take the floor.

MR. LUNDBERG: Thank you. I am Bryce Lundberg with Lundberg Family Farms, a multi-generation farm in northern California.

Our family started growing organic rice in 1969. We've worked hard to improve organic rice farming practices. We seek alternatives to copper sulfate, but at this time, we still need it.

Copper sulfate use is consistent with organic standards in the U.S. and internationally.

When our farm was certified organic by OMIC in Japan, OMIC allowed the use of Bordeaux mix in our rice fields.

The EU and other countries allow copper

sulfate as Bordeaux mix and do not prohibit it for rice. With this in mind, we request renewal of copper sulfate to control algae and invertebrate pests.

We prefer not to use copper sulfate, using only as needed to save a newly planted rice crop. If newly seeded rice needs protection from algae or shrimp, copper sulfate is an essential input.

Our experience leads us to believe copper sulfate is safe. I have never seen an impact to birds, fish, frogs, or snakes. If required, it is applied in small amounts and is only active for a short period of time.

We have tried drill seeding and transplanting. Neither system worked as an alternative to planting rice in water.

When we drill seeded, weed pressure was insurmountable. We spent years trying to control the weeds, but the remaining weeds intermingled in the rice were so thick, the rice could not compete.

We tried mechanized transplanting.

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The rice plants did not establish before weeds overtook the rice. Most rice growing regions that transplant do so in shallow water and rely on hand weeding or herbicides.

Weeds are our biggest challenge. We manage grass weeds by drowning grass during the first three weeks. Rice can survive underwater about 48 hours longer than grass.

If rice seed develops chlorophyll before shrimp hatch, the rice is safe. However, if shrimp appear before seedlings turn green, the crop can be destroyed.

Algae does not form in windy or cool weather. If algae grows across the top of the water, young rice plants cannot push through, causing the rice to die.

When copper is used properly, algae and shrimp can be controlled without adverse environmental impact. Copper sulfate is allowed in organic around the world.

The EU and other countries list it as allowed as Bordeaux mix and do not prohibit it for rice. The NOP allows copper use in row crops and

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orchards for disease.

Every organic farm and region face different conditions and need tools that enable them to carefully respond to challenges. Therefore, we request the NOSB approve copper sulfate as an algaecide and to control invertebrate pests.

MR. ELA: Thank you, Bryce. It looks like Nate has a question for you.

MR. POWELL-PALM: Bryce, would you be able -- and this is a theme of my questions recently. Just tell us a little bit about your crop rotation. What all is involved and how do you utilize crop rotation?

MR. LUNDBERG: Thanks, Nate. You know, we grow rice on our soil or on our farm and we've done so since the '30s, and in our region back around 1910, rice started growing.

We have heavy clay. Underneath the heavy clay is hardpan, and in our area, you know, rice is the predominant cash crop.

We grow rotational crops, oats, vetch, fava beans. Most of the time, it's as green, a

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green shop, right, and we grow them in the winter, and then put them in as fertility for the rice crop.

We generally try to grow two to three rice crops and then lay a field out a third or fourth year depending on how the field is handling the production, but kind of reminding that the rice crop is the cash crop.

The rotational crops are soil building crops. We also try to harvest the cover crop on those fields that are out to hold seed to seed the rest of the crop.

The other thing that we do in our fields is, you know, we're part of the Pacific Flyway, and we do have fields then that go into flooding after harvest as habitat for birds.

The bird rotation is very positive for the fields as well. It has its own form of adding fertility that depends on how many birds and how concentrated they are in the winter time.

MR. POWELL-PALM: Thank you.

MR. ELA: Brian has a question.

MR. CALDWELL: Thanks, Bryce. I was

just wondering, you mentioned that the activity of copper sulfate is pretty short, and I'm wondering what causes it to -- what sort of terminates it and what is the fate of the copper sulfate that's applied?

MR. LUNDBERG: Well, it gets diluted into the water, and I think it settles out and adheres to the soil. The California Rice Commission has done significant testing with CalEPA on testing, you know, water that might be released, and don't find very much of it in the water.

We test our soil for copper and we don't see it building up in the soil, but it is a requirement of use of copper and it's just good practice to be testing our soils for, you know, a whole host of nutrients and elements.

But I think over time, it can -- I don't think it builds up in the soil. When we test soil, it can come up and go down. Usually, you know, it ranges from three to seven parts per million and it can come up from three, to four, to five, and then come back down to four.

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It isn't something we see building. There is, you know, discussion about it being toxic. I don't know that anybody knows what a toxic level is.

Certainly, I search for that online and look for that, and I think with all of the testing going on by organic farmers in our country, we would have some more benchmarks for what copper levels in soil look like, but anyway, I hope that gets to your answer.

MR. CALDWELL: Yeah, thanks very much.

MR. ELA: One last question from Jerry.

MR. D'AMORE: Hey, Bryce. Good afternoon. You were kind enough earlier in this process to provide the history of your farm over nine to 11 years, depending on where, you know, which field it was in, and it certainly bore out that over that period of time, the accumulation was somewhat up and down, but always within a certain parameter.

The one question that I have, Bryce, that I have not had a lot of success in determining, you mentioned between three and seven percent PPM.

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Is there a number that constitutes a red flag for you or your certifiers in that PPM ratio?

MR. LUNDBERG: Good question, Jerry.

You know, I think if we -- I think the answer is no. You know, I look for what, you know, what would be on the upper level or too high.

I have heard that, you know, the grape growers in Europe who have used copper for, you know, I think, close to 100 years or maybe more, you know, have levels that are much more elevated than ours.

But I talked to Cooperative Extension about what sort of level would become problematic in the soil and I think that the Cooperative Extension would talk about levels of maybe 50 parts per million, but I don't have one, Jerry. That's a good question.

I've talked to our inspectors when they come and look at our soil work, and they generally say it's not elevated. It looks just fine. Of course, we're not the only ones that use copper, right? Orchardists grow crops, you know, tomatoes, apples.

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Different crops use copper for disease, and I imagine, you know, you'd ask well, where does that copper end up, and it probably ends up, you know, in the soil, the same place copper that we use, and so I think it would good to look at that.

It's a good question, Jerry.

MR. D'AMORE: Well, thank you for that.

Good question or not, it's an unanswered one, and I've tried, and I guess I would say to the community it might be nice -- and I'm talking the certifying community as well.

It might be nice as we look at this to have something that says it's worthy of further investigation, and I have failed to do that, to find that number, so thank you.

MR. ELA: All right, thank you, Bryce.

We appreciate your comments.

MR. LUNDBERG: Thank you.

MR. ELA: We are going to move on to Gwendolyn Wyard, Johanna Mirenda, and Wanda Jurlina. So, Gwendolyn, name and affiliation, and make your comments.

MS. WYARD: Okay, sound check, coming

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through?

MR. ELA: You're good.

MS. WYARD: Okay, fantastic. All right, well, good afternoon, NOSB members. My name is Gwendolyn Wyard. I'm vice president of regulatory for the Organic Trade Association.

Today, I'd like to take a couple of minutes to share some thoughts on ammonia extract.

My colleague, Jo Mirenda, is up next, and she will be presenting our full position as detailed in our comments.

First, to correct the record, I'd like to state that ammonia extract was not elevated to the OTA board level. Our board did not take a position on it, and in any case, we have a robust conflict of interest policy.

Further, NOSB did not engage with or seek special guidance from our ammonia extract task force, and we were not chosen as an inside advisor. The meeting minutes need to be corrected.

I'm happy to answer any questions you have on how we develop our policy positions. Frankly, I'd like to not take up your time on it

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because what I'd like to focus on are some lessons that we've drawn from what has been a really difficult process and an unusual circumstance prohibiting a natural.

We are challenged by the fact that products produced by the ammonia concentration method have been allowed for nearly a decade, and yet the organic sector is just now addressing these materials as a result of the petition.

We're challenged knowing that stripped ammonia was brought to NOP's attention in 2018 before any of these new and novel products were approved, but no action was taken to require NOSB's evaluation, and now as of 2020, at least six products and counting are approved.

We're challenged because while we are firm in our position that ammonia extract, stripped and concentrated, should be prohibited in organic farming, we do not take lightly the significance of removing farmer tools, especially when they've been in use for more than a decade.

We know that innovation is happening all of the time and we want this. New materials

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are going to continue to emerge and we're bound to bump up against additional non-synthetics that are inconsistent with organic farming.

So, how can we do better and how can we get out ahead of controversial products? A few thoughts. First, perhaps we need to look at the construct of the National List and explore an ongoing mechanism for proactively identifying and reviewing incompatible natural substances instead of waiting for individual petitions.

I'll note that the development of the National List included a proactive review of certain types of non-synthetic materials, the botanical pesticides specifically.

We believe the NOP framework needs to be evaluated for improvements to the feedback loops between certifiers, MROs, and NOP when a material review decision is questioned or a concern is raised.

Again, stripped ammonia was brought to NOP in 2018. NOP intervention could have ensured timely review of these substances prior to commercial proliferation.

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And finally, on a related note, we also want to reemphasize our longstanding position that MROs must be formally brought into the certification system via accreditation.

Consistent with the 2011 and 2012 NOSB recommendation, we believe that NOP oversight of certifiers and MROs is the most effective way to ensure consistency and integrity in the organic input material supply chain, and would provide the most powerful set of tools to prevent fraud.

And finally, finally (inaudible) on behalf of the Organic Trade Association, I'd like to extend a huge hug of appreciation for your service on NOSB. Thank you. Get that in there.

MR. ELA: Thank you. We do appreciate it. Questions for Gwendolyn? I've got one seeing no others.

Yeah, in terms of natural or non-synthetic natural substances and that basically they are fine in our program until prohibited, my understanding is the Canadian and European lists are kind of the opposite. They're not allowed until they are listed.

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How, you know, how do we move forward and really address that in a meaningful way without just a complete shift of the law?

MS. WYARD: Well, I think that's a good question and I don't have, you know, specifically what it would look at, but I think the suggestion that we have is, you know, if it's natural, it's allowed, but, of course, there's the rest of the context of the regulation, and with nitrogen products, what we look at.

But I think that there could be a way for a periodic proactive review of incompatible natural substances. I mean, that's a process, right, to figure out, you know, how frequent that periodic review would take place, how we could go about collecting that information.

But it just seems that if we continue to stay in a mode where petitions need to be submitted to prohibit a non-synthetic, we're going to just keep running up against this issue that we're in.

You know, commercial interests are almost always the case when you're talking about

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a National List material. That's just how, unfortunately, how it's set up. So, it doesn't seem like it would be so difficult to develop some kind of a proactive review.

Again, this was in place during the development of the National List, which took place over a course of a long period of time. So, I mean, that's really as far as I have gotten at this point, but that's our suggestion at this point is a proactive periodic review.

MR. ELA: And just I want to be clear. Am I understanding right that some of the other lists in terms of natural materials have to be added versus being okay to use? Am I understanding that right?

MS. WYARD: You're talking about the Canadian or --

MR. ELA: Yeah, like closed lists versus open lists.

MS. WYARD: Ask some questions to Jo about that who has a little bit more understanding of how those lists are structured. I'm quite the domestic regulatory person. I don't want to

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misspeak on that.

MR. ELA: Fair. Yeah, I'm just -- it's a topic that came up in my last year's on the board here, and I think it would be useful for other board members to understand when we're looking at equivalency, so I'll ask Jo.

MS. WYARD: Absolutely, all right. Well, thank you so much, everybody, appreciate your time.

MR. ELA: Thank you, Gwendolyn. With that, we will move on to Johanna Mirenda, then Wanda Jurlina, and Jessica Shade. So, Johanna, name and affiliation, and take the floor.

MS. MIRENDA: Okay, I'm here, can you hear me okay?

MR. ELA: Yes, you're good now.

MS. MIRENDA: Hi, I'm Jo Mirenda, the foreign policy director for the Organic Trade Association continuing our comments on ammonia extract. We support NOSB voting at this meeting to pass a proposal to prohibit stripped ammonia, and concentrated ammonia. Using the Organic Foods Production Act criteria, and the NOSB's own

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guidance, we believe it's not compatible with organic principle.

The unrestricted allowance of plant available nitrogen fertilizers is a practice we believe will move the organic standards farther away from, not closer to the principles of fostering soil systems as the basis of soil fertility, and plant fertility. A healthy market for organic products into the future requires a clear market distinction backed by strong standards.

The organic sector is already threatened by a stagnant standards development process failing to keep pace with consumers, industry, and the environment. Ultimately our concern is that the allowance of ammonia extract will erode consumer confidence in organic integrity, drive proliferation of add on labels that fragment the organic market, and could threaten the long term viability of the organic sector.

Our written comments fully analyze the compatibility criteria while also acknowledging

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some of the positive aspects of ammonia extract, and our comments provide technical background on impacted products. The cross board committee's proposal on stripped, and concentrated ammonia are an extension of a year long discussion about the definition of quote unquote ammonia extracts. At the last meeting, NOSB was clear in its intent to narrow the over-broad definition from the petition, and avoid implicating non-target materials, which we agree is so important.

We believe that reasonable interpretations of the proposal here have achieved this goal. For stripped ammonia, we understand the proposed listing in the phrase separating, isolating, or capturing ammonia to be describing the ammonia stripping process that removes, and purifies ammonia from an agricultural feed stock.

Ammonia is separated from the feed stock by evaporation, captured through distillation, and isolated so that the purified ammonia can be used independently from the rest of the feed stock constituents. We don't see it applying to products where the ammoniacal nitrogen

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phase with other constituents of the feed stock like compost T, or fish emulsion, nor do we see it applying to forms of nitrogen that are not ammoniacal, like protein, and soybean hydrolysate, or feather meal.

For concentrated ammonia, the proposal includes numeric thresholds which are much more straight forward to verify. If the stripped, and concentrated motions both pass, what's left are products that are not stripped, and do not exceed 3 percent ammoniacal nitrogen, which we believe protects non-target material. Lastly, the proposed new practice standard for nitrogen products is an important topic that still needs work, so keep it on the work plan, and we support the sodium nitrate proposal to reinstate.

MR. ELA: Thanks Johanna. Questions from the board? Wood has one for you.

MR. TURNER: Forgive me if this is in detail in your written comments Jo, I'm still working through them myself. You said it there in your brief comments, but I'm just again asking the question, how is your read so clear that the

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motions are not going to affect compost Ts, fish emulsions, compost, and the like?

MS. MIRENDA: Well, I myself want to make really sure that the definitions are clear, that was one of our main points in our spring comments, being really careful about the terminology. So, I fully am aware of, and want to avoid any unintended consequences. I feel that the use of the term stripped ammonia in the motion, as opposed to ammonia extract is one way to hone in on the particular manufacturing process.

And throughout the last two discussion documents at the board level, there's been this distinction between stripped, and concentrated.

And so you'll see it in the last two discussion documents, as well as the proposal at this meeting, and I'll also point to some of the other commenters who raised questions about the implementation of the stripped ammonia definition, acknowledged what they saw the intent to be.

Thus these unintended consequences weren't the intent. So, I feel like there is a thread good enough for the board to make a proposal

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to the NOP, which can then use its standard division to take hold of the technical aspects, and really clarify it. So, I do think that if the board were to vote on these, it would be important to reiterate through narrative commentary in your cover letter, really what the intent is, so that none of that is lost.

But I do feel like a reasonable interpretation of the language in context of the past year of discussion about these products is enough for, at least from my perspective, and others that I've talked with from our membership, and other certifiers, and mature reviewers that confidence in the outcomes ultimately is going to be a decision between the material review organization reviewing the manufacturing process of the brand name material.

So, there's a lot of information in that exchange that we don't have at this point. And so, I would encourage you to direct questions to mature review organizations to really stress test not just the language of the motion, but are we common in our understanding of this intended

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outcome.

MR. TURNER: Thanks.

MR. ELA: That was going to be some of my question as well about exact language versus intent, since NOSB doesn't write the rules. But where do you see, in sending the final motion back, how do you think it could be improved, or is it just a matter of having more time to really review it, and see where it falls?

MS. MIRENDA: Yeah, for us it was really just more time to review it. At this point we were really focused on the first two motions, and trying to really thoughtfully respond to the two motions that directly address the petition. And then for that third motion, it was the first time we were seeing it. It is substantial, and we want to have a really good understanding of what implementation actually looks like on the ground.

So our comments are mostly questions to try to understand what materials would get restricted, especially for materials that are on the borderline of this 3 to 1 carbon to nitrogen ratio, and then the calculation method,

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understanding that certifiers were already weighing in with a need for guidance on the sodium nitrate 20 percent, and recognizing that this practice standard would exponentially increase that calculation to all nitrogen materials on all operations.

And then questions about the applicability of that restriction across different production systems given that we don't have standards for many types of production systems like containers. So, mostly just questions, we want to sit with it, but we absolutely want to have those conversations, and come up with some good standards for the use of highly soluble nutrients, and so we hope that you'll keep this on the work agenda.

MR. ELA: Anything else from the board?

Kyla has a question.

MS. SMITH: I just didn't know Steve, if you wanted to ask Jo about the closed list for international standards, so since you didn't, I will. Jo, can you speak to that?

MR. ELA: Thank you, because I was going what question that I forgot to ask was I

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supposed to ask Jo. Go for it Kyla.

MS. SMITH: Anyway, yeah, Jo, if you could provide any more context to what Steve was asking about the difference between our national list here, with the USDA organizations versus other lists in Canada, EU, or other equivalent regions.

MS. MIRENDA: So, each scheme has its own flavor, but the common theme with most other international standards is to have a closed positive list. Meaning you can't use it, unless it is explicitly listed in the regulations. Now, it's been awhile since I've worked directly with the Canada standards, and the EU standards, and there have been some significant updates to both of those standards, so we're a little bit jealous of their continuous improvement in their standards.

But in my past experience, the closed positive lists do provide a lot of clarity, but they don't resolve all questions about materials that are allowed, because you have to look at the practice standards, and hierarchical systems leading up to the use of a material, and appropriate

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restrictions. And there is less flexibility for materials being allowed.

So, the closed positive list does also have some unique considerations for new materials, new innovations, and you really have to wait for the periodic reviews to add new materials. So, it's worth looking at as a solution in some areas, and then recognizing that not any system is going to be perfect.

MR. ELA: Yeah. I guess one of the reasons that I asked is hearing that more recently, as we look at international equivalencies on all our materials, sunsets, and proposals, that really changes how you interpret whether something is listed, or not listed. We tend to assume everything is the same as our list, so I think that probably the board needs to be a little more educated on that, so that we really understand how to interpret those.

So, thanks for fielding that question, and thanks Kyla for reminding me what I was trying to wrack my brain for. So, any other questions?

All right, thank you so much Johanna, we

appreciate it. We are going to move onto Wanda Jurlina, Jessica Shade, and then Thomas Buman. Wanda, name, and affiliation, and take the floor.

MS. JURLINA: All right, I think Michelle's going to put up a couple slides for me.

My name is Wanda Jurlina, I work with IMCD, they're a global distributor of ingredients across food in a wide range of different industries. My area of focus is on ingredient essentiality. I have over 30 years of experience in developing, and processing a wide range of food products.

Next slide please. The first thing I'd like to remind the board, as we're looking at where we are today in this industry with carrageenan, I want to remind you that this is a functional, and empowering ingredient for many parts of the world. I've included a chart here from IMR International, they've also shared it in their written comments, but reminding folks that carrageenan, and in turn the seaweed farming that was mentioned earlier is a huge source of cash crop in many world regions.

Particularly in Southeast Asia, and off

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the coast of Africa where women can generate cash for their families to help support their families in today's day, and age. It's an amazing story if you ever take the time to learn more about it.

On my part, I'm going to focus on the next couple of slides, and help you understand what makes carrageenan unique. Next slide please.

Plant based milks has been a category that has grown significantly in the last 15 years, with folks looking for options that they feel are more sustainable than the current dairy products that are on the market. Many different types of proteins are being used in these particular products, but they all come down to the same sets of challenges. They need suspension of insoluble proteins, or particulates of the insoluble calcium that they add to try and reach some nutritional equivalency with dairy based milks.

They look to seek some body mouth feel so that they taste like dairy milks. They need to emulsify the plant based oils that are used in them, and then I've added a category here, because not all of these options that I've listed here are

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suitable in organics. We really only have three choices in creating suspension in these plant based milks. Carrageenan is one of them, high acyl gellan gum, that is listed as a suitable ingredient.

And colloidal microcrystalline cellulose, which is labeled as cellulose gel, cellulose gum, which is not a choice for organic products. If you go through, and look at the parameters that suitable to this application, you'll see that carrageenan alone can meet all of these needs.

MR. ELA: Thank you very much. Are there questions? Wood has a question for you.

MR. TURNER: Wanda, I appreciate your comments, I'm just curious about the impact that you see to the global production of carrageenan from organic restrictions versus conventional. I just don't quite understand how much of the production that you're describing from a global economic development standpoint is organic versus conventional.

MS. JURLINA: So, if you look at

seaweed sourcing in the last 15, or 20 years, the amount of seaweed that continues to be pulled from the environment, so not farmed seaweed, has remained relatively consistent. The piece of the puzzle in meeting the demands of today has really come from farmed seaweeds. So, overall the growth in the carrageenan market has been supported by those farmed products, because there are limits to what can be taken from nature.

MR. ELA: Any other questions? Thank you very much Wanda, we do appreciate your testimony.

MS. JURLINA: Thank you.

MR. ELA: We are going to move onto Jessica Shade, Thomas Buman, and if Shanice, or Shanice Anderson is out there, can you please let the program know we don't see you. So, if Shanice is not there, we will move to Heather Spalding after Thomas Buman. So, Jessica, name, and affiliation, take the floor.

MS. SHADE: Great. Hi everyone, my name is Jessica Shade. I'm the director of science programs for The Organic Center. We are a

nonprofit organization that communicates research on organic, and collaborates with academic, and governmental institutions to fill gaps in our knowledge. I'm going to try, and combine info on three topic areas that we commented on, so bear with me.

First of all, I want to say thank you to the materials subcommittee for recommendations on research priorities. There was a questions to our stakeholders section of the document that we'd like to respond to, supporting investigations into benefits, and risks of livestock integration, and crop rotations, nutritional value of organic animal products, comparisons of pesticide, antibiotic, and synthetic growth hormone residues in organic, and vegetable products, and research into the effects of organic crop production on water.

We also encourage you to include priorities focused on how to protect organic farmers from chemical contaminants, and alternative to conventional celery powder for curing organic meat. We're also really happy to

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see the letter to Secretary Vilsack regarding climate change, and organic agriculture. We support the letter, and the proposed recommendations in response to the USDA's 90 day progress report.

We also had some additional points for consideration, and clarification with additional references that will emphasize the benefits of organic as supported by science that wasn't included in the final proposal, such as clarifying the impacts on the ban on synthetic fertilizers, and a stronger emphasis on higher levels of soil organic carbon in organic farms.

Finally we provided comments on ammonia extract, and would like to note that based on personal communication with researchers, and our review of the scientific literature, we found that ammonia products resulting from extraction are chemically the same as synthetic ammonia products, and their environmental impacts will depend on the chemical formula of the resulting product from extraction.

There's also a paucity of peer reviewed

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science on the environmental impacts of ammonia extract, so it's difficult to draw conclusions without a consistent analog, especially because the majority of available research hasn't been conducted in organic systems, the impacts of ammonia on soil health, and soil biodiversity are really variable across studies.

And research suggests that negative impacts of adding nitrogen fertilizers could be reduced if applied simultaneously with other soil amendments. So, thank you all so much.

MR. ELA: Thank you Jessica, very much appreciate your comments. Looks like we have a question from Nate.

MR. POWELL-PALM: Thank you for your comments Jessica. Could you speak, I think The Organic Center has put out papers describing how organic soils have a pretty incredible claim to being more, ultimately sequestering more carbon than conventional soils. What role do you think, on the conventional side, and ultimately AE, since as you just said, they're basically the same chemical, what role do you think that might have

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on a declining ability to make that claim? Ultimately a reduction in carbon sequestration on organic farms.

MS. SHADE: Well, one of the easiest ways to see that organic adds carbon to soil is through the actual addition of carbon in compost, manure, et cetera. So, that's the number one thing that is building that carbon. There is also feeding the microbes, et cetera. That all has impact. But we did this review recently that looked at not just the impacts of each of these best practices, but also how long each of those took to show benefits to carbon in the soil.

And the best practices when it came to soil amendments had the biggest impact, and the fastest impact. And I think one of the things that contributes the most to that is the physical addition of carbon. And that's not to say that other forms can't have positive impact, and feeding those soil microbes does have a big impact, it just takes longer to see. So, I think when you start relying, especially exclusively on practices that don't include that addition of carbon, you're not

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going to see as much in the soil.

MR. POWELL-PALM: So, if I may follow up to that, there's more to manure, if I hear you right, than nitrogen, and phosphorous, which I think are kind of the two things that have been big in a way, that we have phosphorous pollution, and we need nitrogen, but there's food for microbes that exist only with manure in its original state, is that correct? Is that what you've seen in the research?

MS. SHADE: So, I think that the food for microbes is more complex. What I'm talking about is the actual carbon of the manure, inside the manure. So, it's not just feeding the microbes. Because straight nitrogen can do that too, but when you're really looking at things, the more complex that that food that's available for the microbes, and the actual structure that you're adding to the soil, you're going to see this whole suite of benefits for the soil.

It's not just the nitrogen, and phosphorous as you say Nate. It's really this more complex system that we have to think about

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holistically.

MR. POWELL-PALM: Thank you so much.

MR. ELA: Other questions? I have a question Jessica, well actually two questions, one extremely technical, and one very, very broad. So, I'll try and hit you on both sides here. I'm not a biochemist, and it was not my best class in college, but I do have vague memories of it. Is there inherently a carbon to nitrogen ratio in a material that's protein, or amino acid based?

They have carbon structures, they have to to have a protein, or amino acid. And don't feel like you have to answer this, but it's my own curiosity of when we talk about the three to one ratio of whether you're using a protein, or amino acid, is it inherently above a certain C to N ratio?

MS. SHADE: That I don't know off the top of my head. But if you email me, I am happy to look into the literature, and try, and find that out for you.

MR. ELA: Yeah, that is a curiosity that when you're going to sleep at night, it pops into your brain, and keeps you awake. The much

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more broad philosophical question is regarding climate change, and the NOSB, what would you suggest to us as a board if we were to start talking about, beyond just the organic systems plan, or as you say, the addition of actual organic matter, and I guess I'd like to know if cover crops include that versus manure.

But where would we go for continuous improvement if the board were going to put out a discussion document, or move forward on it, what would you do?

MS. SHADE: So, you're thinking about continuous improvement on the standards?

MR. ELA: Yeah, in pushing organic, how would we continuously improve with regard, specifically regard to climate change, and how could the board work on that?

MS. SHADE: Yes, I love this question, because one of my favorite things about the organic standards is how dynamic they are. And so I think that being able to be flexible as new research comes up is really important. And including things that we're starting to see as the specific strategies

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within organics that are having those beneficial impacts. Because there's a plethora of research that shows that organic does better at having more carbon in the soil.

And now we're starting to have enough studies that we can actually piece out the pieces of the puzzle as to why organic is better. And if we can push for inclusion of those strategies that are having the biggest impact, I think that that would be the best way for continuous improvement. The complexity is that it's going to be different depending on where you live, what kind of soil you have, et cetera.

So, I can give my easy answer, but it's more complex than that, and I think it's going to be difficult to have a blanket improvement for the soil, for the NOSB just because if you're living in an area where erosion is your biggest problem, then you need to focus on reduced tillage. If you're living in an area where there isn't enough -- where soil compaction is a problem, then that's going to be a whole different strategy when it comes to building carbon.

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So, there's my easy answer, and then the it's actually going to be more difficult than that answer.

MR. ELA: Yeah, it's a huge subject, I just kind of wanted to get your sense of where we might go if we were to work on it, and obviously Logan, and Nate, and Rick have all very much noted that oh my goodness, there are regional differences for some reason, so thank you. Two, and even though I'm my own worst enemy in trying to stay on time, two more questions, one from Nate, and one from Asa, if we could keep them tight.

MR. POWELL-PALM: Real quick Jessica, there's been a lot of talk about tillage in organics. And I was wondering if you could speak to kind of the relative relationship with tillage between organic, and conventional, and specifically that due to crop rotations, does organic till more than conventional?

MS. SHADE: So, if you look at the data that's released by NASS, organic doesn't actually use less conservation tillage than conventional. They're both kind of around the same amount, 40

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percent, so not great, there's still a lot of room.

But this is kind of one of those fallacies that I hear over, and over again, that organic uses so much tillage, so it can't be that good. But when you actually look at the numbers, there isn't that big of a difference between organic, and conventional.

And I also will throw in a plug, just because this is another method that I hear, that the USDA ARS did this amazing study many years ago now that played to the critics, that actually looked at the difference between full till organic, and no till conventional, and still found that organic sequesters more carbon. So, even if that were the case, we'd still see higher carbon levels in organic soil.

MR. POWELL-PALM: Thank you.

MR. ELA: Interesting. Asa? Asa, you're on mute.

MR. BRADMAN: Sorry. This is a little bit of a comment Steve, but I'll make it a question.

I think in your letter highlighting the problems with inadvertent contamination of organic products

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is an important one, and there's both contamination of the food itself, but also as we've seen with dicamba, and other risks related to impact on plants as well, I'm curious if you could tell us a little more about some of the work you're doing, and where you think that research needs to go.

MS. SHADE: Yeah, so we have a planning grant that's funded by the OREI that we're working on with Washington State right now that is doing this big survey of organic producers to see how many of them have experienced contamination. And one of the things we're hoping is that we'll get some baseline of data that we can write a full grant to address this issue.

Because it's something that I hear about a lot when I'm talking with farmers, but there hasn't been a lot of data collected, and the only data that I've actually seen is the most recent NASS data, which isn't that helpful, and also I get the feeling like organic producers are not eager to tell the USDA when they might have had a contamination event.

So, we're hoping that it'll be, we'll

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make sure they know it's completely anonymous, et cetera, get some honest answers, and start looking at what kind of impacts they're having. So, is it monetary, are they losing crops, are they losing certification? Is it more a time issue? And then we're going to put together a full OREI proposal trying to drill into each of those issues individually.

MR. BRADMAN: Thank you. And full disclosure, I've provided some advice on that. Also, I think another important place to go is to take advantage of monitoring, and testing that's been done by certifying agencies, and those of you who are listening, I think that we have an opportunity to conglomerate all the data that may be already existing.

Perhaps we can do it in a way that is confidential, but there's a lot of integration that may be out there that just really needs to be deidentified, and then analyzed to inform this issue.

MS. SHADE: Yeah, one of the points we want to make is that no matter whose fault it is,

it's the organic farmers that end up paying for it. So, that's kind of our bottom line, is the organic farmers are the one paying for this. Let's figure out how that doesn't have to be the case, and, or how to make it stop.

MR. ELA: Perfect, well thank you to both of you for those thoughts as well. We're going to move on, thank you so much Jessica, we do appreciate it. We're going to move onto Thomas Buman. Again, if Shanice Anderson is on the line, let Michelle know, otherwise we'll jump over, and then Heather Spalding, and Jason Ellsworth. So, Thomas, name, and affiliation, and give us your comments.

MR. BUMAN: Yes, are you able to hear me okay?

MR. ELA: You're good, go ahead.

MR. BUMAN: Okay, I cannot start my video, because it says the host has stopped it, so I'm not sure -- there I go, perfect. All right, thank you for the opportunity to provide oral comments. My name is Tom Buman, I'm the CEO of Precision Conservation. Today I'm asking you to

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spend a little more time considering the petition to eliminate the so called ammonium extracts based on four concerns I have.

First, the misinformation surrounding this issue. Second, the collateral impacts from this petition. Third, the environmental need for novel nitrogen products. And fourth, prohibiting nitrogen products based on the scale of livestock operations from which these products are derived. First I'm concerned about the misinformation surrounding the term ammonium extract. As far as I can tell, there is no evidence that any scientific researchers have attempted to define the term ammonium extract.

The definition provided in this petition is vague at best, and open to much interpretation, that will be a lot to ask of certifiers. The second issue is the collateral impacts from prohibiting ammonium extracts. I am concerned that the current wording would unintentionally affect organic products currently marketed. The definition does not make it clear which products would be prohibited, and what

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products would be allowed, at least to me.

The third issue I want to address is that organic environmental need -- the agronomic environmental need for novel organic nitrogen products. Organic farming should be considered the flag ship of environmental protection. Raminer (Phonetic.) and cover crops will always play an essential part of building soil fertility, and soil health in organic farming. However, to have the best environmental outcomes, organic farmers need access to an adequate supply of nitrogen sources that are reliable, immediately available, and naturally occurring.

Only this will stop the guesswork in nitrogen crediting, and therefore leeching of excess nutrients. Fourth, there are many oral, and written comments calling for the prohibition of ammonium extracts because they are derived from so called conventional factory farm waste. If you are going to apply this standard to ammonium extract, then I suggest that you should also apply this standard to all organic products derived from animal byproducts including bloodmeal, bonemeal,

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feathermeal, compost, pelleted chicken manure, et cetera.

This seems like an incredible double standard. I encourage you reject all comments that are predicated on the scale of livestock operations, or apply the same standard to all organic products. Based on these four concerns, and other concerns voiced both yesterday, and today in oral comments, I strongly encourage the NOSB to setup a technical advisory panel that is educated, and trained in soil science, organic farming, and environmental outcomes, and can provide accurate, precise, scientific advice. Thank you for your efforts on NOSB.

MR. ELA: Thank you Tom, are there questions? Yes there are, one from Wood, one from Nate.

MR. TURNER: I totally appreciate your last comment about the double standard, I think it's really amazing to hear in the comments that somehow this is a different issue than so many other applications of manure. But I did want to ask you another question about, I sound like a broken

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record here, but why is your reading on the collateral impacts different from some of the other folks that we've heard?

I'm very curious as to why you're reading that certain products, and I want to make sure I'm speaking clearly, there's things that I've mentioned before, I'm concerned about compost Ts, fish emulsions, compost. Less concerned about brand name products that may be of consideration.

So, can you speak to that a little bit, and why your read of it is different than some of the other folks we've heard from?

MR. BUMAN: Yeah, I think when I speak to some of the people that kind of have had products out for awhile, they don't know if they're in, or they're out, right? They've been selling it, it's been listed by OMRI as approved, and they've been following under the guidelines, and they're just uncertain of whether they would be in, or out based on your petition.

MR. ELA: All right. We'll go to Nate, Logan, Amy.

MR. POWELL-PALM: I was just hoping to

see, I believe -- or rather from yesterday we had a group of farmers talking about basically needing to compete with AE customers for the chicken litter. And I was wondering if you could speak to sort of the availability, and kind of what you see that impact as being. Obviously the costs of AE, and the value derived from processing manure into AE is really good for the processor, but also very much more expensive for the farmer.

And I was wondering, when we're talking about manure restrictions, and limitations as far as availability, what you're seeing out there.

MR. BUMAN: Well, I think there is certainly manure available out here. But I think my comment addressed that if you're going to let large animal operations provide manure for organic farmers, how is that different than this? Or bloodmeal, or feathermeal, or anything else? I'm just saying it either needs to be a standard when you consider large livestock operations, or it is not a standard that you apply.

Because certainly when you look at bloodmeal, feathermeal, bonemeal, all those are

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outputs of slaughterhouses that rely heavily on very large livestock operations.

MR. ELA: Okay, we're going to go to Logan, then Amy.

MS. PETREY: What is nitrogen crediting?

MR. BUMAN: Well nitrogen crediting is that how much you credit for your legume, how much you credit for your cover crop, how do you come up with that credit? And any time you're dealing with a cover crop, or legume, it depends on the warmth of the soil, the rainfall, there are a lot of factors that go in to make that nitrogen either available, or not available.

And so in certain years, or in most cases, the best way to mitigate that risk is to apply extra manure so that if the breakdown is slow, you've got enough nitrogen out there readily available right from the start, or whenever you need it. But in a good year, where a lot of nitrogen is released, then you have an overabundance of nitrogen. And balancing that nitrogen credit out is very difficult, impossible

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from year to year.

So, with a readily available nitrogen source like ammonium extract allows you to be much more precise in getting your nitrogen right, and not having that leeching.

MS. PETREY: How much credit do you typically get from a legume? Does it vary a lot, or are you working with a pretty tight range?

MR. BUMAN: Well, I recently looked at all the states surrounding Iowa, and everybody is difficult. If you just take alfalfa, some states give alfalfa one year credit, some of them will give two year credit. Some states it depends on the quality of the stand, how many plants per square foot you have. Other states, they don't have that.

So, the recommendation of how much nitrogen is available after a legume crop is very much up in the air. It is a complicated issue.

MS. PETREY: So, in California they're starting to be really restrictive on the nitrogen, actually using the nitrogen credits, for growers, the legume as a cover crop, they're actually be used again, some percentage of nitrogen that they

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can apply on a crop, and it's going to be monitored.

So, if it's not exactly very reliable, or hard to -- it may be hard to measure.

But it's still going to be used against the grower for total nitrogen in a crop, I can see that being kind of problematic to make sure that that crop is getting what it needs. But, so do you think it might be an unreliable measurement, at least to standardize it?

MR. BUMAN: I think you're facing an impossible task to decide how much from year to year in advance, how much your legume crop is going to release immediately available, and then how much manure you have to substitute along with that to be able to comply with your water quality standards.

MS. PETREY: Thank you.

MR. ELA: Amy?

MS. BRUCH: Yes, thank you Steve. Thanks for your comments today Tom, and your written comments. I saw that you're from Iowa, I'm from Nebraska, and there was one comment that was written that talks about cold, wet soils in

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the spring, and how the amount of nitrogen maybe doesn't mineralize right away in those conditions.

And from my standpoint in our crops, and I know it's all regional based, but the amount of nitrogen we need early on is very low, especially in the spring for our crops. And when I look at root cause analysis, it's not necessarily I need to have more nitrogen to put on my soil to make it available, it's actually identifying what the root cause is, if it's mineralization, and it's cold, wet soils, it's probably mycorrhizal fungi not functioning versus the lack of nitrogen available, because it's in the soil.

So, I just wanted you to comment a little bit more on how your process is on root cause analysis versus just assuming that it's a nitrogen deficiency association, or a mineralization of nitrogen deficiency.

MR. BUMAN: So, I am not a soil scientist Amy, but from my standpoint, when I look at the research, some of the availability is based on the weather events, and not the soil type. Now, if there is information on the soil type that is

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readily available, and it helps people hone in on that, I have not seen that information, I don't think that's readily available.

I don't know how robust it is, I just think that the real concern for most farmers is do I have enough nitrogen when I need it, if the weather conditions are bad, or if I get a really wet spring, and I have a lot of leeching, and I run out in that three, four week period, there's a lot of things going on. I know the rainfall in Nebraska certainly isn't what it is in Iowa, you probably have a little more leeching issue with the heavier rainfalls, but I think that is still a very difficult thing to plan out, even if you said I have healthier soils.

MS. BRUCH: Sure. Thank you for your comment, appreciate it.

MR. ELA: I know we need to move on, but I'm going to again be my own worst enemy. A different type of question, you mentioned that we should convene a technical advisory panel rather than relying on the TR, and I know in the written comments that came up any number of times, that

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the NOSB should be using TAPs, and not TRs based on past history. I guess do you agree that that, or it seems like you're alleging that that's kind of a procedural violation of how we look at things? Is that correct?

MR. BUMAN: I am not at all. I'm just saying that I think that this is a complex issue that deserves a deeper dive. How you deal with the implementation is not my call, so I don't see that as procedural, or not. I just think it's something that requires a deeper dive.

MR. ELA: Great, okay, I appreciate that, because certainly some commenters were accusing us of lack of -- or improper procedures, so I just want to double check. All right, thank you so much, we do appreciate your comments.

MR. BUMAN: Thank you.

MR. ELA: Next up we have Heather Spalding, then Jason Ellsworth. After Jason, we're going to take a break, we're definitely running behind time. After the break, we're going to go to Meghan Germick, but -- and I do want to mention that Asa is back on the call. I noted when

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he had left, he's actually been back on the call for, I don't know, 15, or 20 minutes, but just to note that for sure for everybody to note.

You saw him ask the questions, so I guess that's inherent, but Heather, please state your name, and affiliation, and take the floor.

MS. SPALDING: Good afternoon everyone, I'm Heather Spalding, deputy director of the Maine Organic Farmers and Gardener's Association. Thank you for the opportunity to speak, and for your tireless efforts to keep organics strong. MOFGA turned 50 in August, we're a broad based community working to create a food system that's healthy, and fair for all.

We started organic certification in 1972, certifying 27 farms, and now we certify more than 500 (Inaudible.) We're a member of the National Organic Coalition, which has submitted detailed comments on our behalf. Here's what we want USDA to prioritize. Reinstate the organic livestock, and poultry practices rule, finalize the origin of livestock rule.

Finalize strengthening organic

enforcement rule. Restore, and consider expanding the Organic Certification Cost Share program. Embrace organic agriculture as a key climate change solution, and build our food system back better with bold infrastructure investments.

We also want USDA to honor, and elevate your role by increasing transparency about prospective members, providing financial support as needed for members to attend meetings.

Clearing the back log of your recommendations, allowing you to set your own work agenda, and reversing the 2013 policy change to the sunset process for synthetic materials on the national list. We urge NOSB to develop social justice standards for the NOP based on IFOAM's Principle of Fairness. Ensure fraud prevention through NOSB congressional funding rather than leaving it to certifiers, and operations.

Adopt the crop subcommittee proposals for ammonia extracts, and sodium nitrate as written. Require crop production to be based in the soil. Please add back to your work agenda, the (Inaudible.) production item. Require

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further research to understand the long term effects of adding BBM film to the soil with petroleum based plastics. Soil contamination is a big topic in our neck of the woods.

Maine farmers are extremely worried (Inaudible.) fluorinated forever chemicals. PFAS contaminated farmland through decades of spreading sludge from municipal wastewater treatment facilities. PFAS is linked to many serious human health problems, we all have a PFAS body burden. Industry assured farmers that spreading sludge was safe, and now some have lost everything, including because of the PFAS contamination.

Organic farmland is not immune to this legacy. We also urge you to learn more about the growing threat of these ubiquitous forever chemicals, including their allowance as inerts in organic production. Thank you again for the opportunity to share our comments.

MR. ELA: Thank you so much Heather, are there questions? Asa has one for you.

MR. BRADMAN: I just want to thank you

for raising again, issues around origin of livestock, and the poultry standards, there hasn't been so much talk about that at this meeting so far, but it's really tragic that the origin of livestock in particular after the Seattle meeting some time ago has not been implemented. And I think that is a real stain that needs to be addressed.

MS. SPALDING: Yes, thank you Asa, we're really feeling the effects of that. The dairy farms in Maine are feeling the effects of that right now with the pending loss of the horizon contracts.

MR. ELA: Other questions? I have a quick one, and I don't know if you can address it.

But as a certifier involved in that, I know NOC came out with saying the ammonia extracts, they were in favor of all three motions. From the certifier perspective, do you see issues with how you would interpret those, or look at them when you're out on a farm?

MS. SPALDING: I don't know the answer to that, I'm not going to fudge that one. But we

are fortunate in that we have, as you heard from Caleb Goossen, who is our organic crop specialist, we do have a very well established farmer programs division that's sort of between the firewall of MOFCA, and MOFCA certification services, so there's a lot of that that we can do to help farmers navigate that.

I'm not exactly sure how that would work with the certifier. And Chris Grigsby has submitted more detailed written comments, so he may have addressed that, but I certainly could try to get that information to you.

MR. ELA: Yeah, I'd be curious, and I didn't mean to put you on the spot, and I didn't know if it was an answer you could answer anyhow, but I was compelled to ask, so thank you so much Heather, we appreciate your comments.

MS. SPALDING: Thank you.

MR. ELA: We are going to go to Jason Ellsworth, take a break, and after the break, Meghan Germick, if you're out there, we don't know where you are, and the same for Gladys Cooper. If neither of those two are there, then we'll go

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to Steve McCorkle after the break, and then Mike Menes.

So, just to give Steve, and Mike a head's up, you may bump up the schedule. But we will go to Jason Ellsworth. Jason, name, and affiliation, and give us your comments.

MR. ELLSWORTH: Good afternoon, my name is Jason Ellsworth with Wilbur-Ellis Company.

I have a PhD in soil fertility from Iowa State University, I spent my time there, and my time since looking for ways to improve fertilizer, and nutrient use efficiency in rural crops. In order to continue the trend of double digit growth the organic industry has enjoyed these many years, we must increase the number of organic acres in the U.S., and the production on those acres.

As stewards of the land, we must continue to enhance the soil with sustainable practices, reduce our carbon footprint, and increase the sustainability of our soils, and protect our environment. Now, the criteria for the selection of fertilizers for use within organic production seems to be based on fundamental

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misunderstandings of where, and how plants acquire nutrients.

And these criteria are then implemented arbitrarily, and inconsistently across nutrient sources. We have to increase the nutrient use efficiency from fertilizer products we currently have if we are going to continue to rely on animals as the basis for plant (Inaudible.) while at the same time increase yields, and the availability of organic food, we must capture, and use every bit of nutrients, nitrogen in this case, from every source we have at our disposal.

Now, what better way to accomplish all of the objectives of organic agriculture than to capture nutrients normally lost to the environment in a natural, and sustainable way from common waste sources. Enabling these nutrients to be used judiciously, and appropriately with greater regard to the environment. Not one proponent of ammonia extracts, or manure derived products has suggested that soil health is not a concern.

Every one of them, in both written, and oral comments, has said that the additions of

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carbon to soil practices to maintain, and improve soil health with such things as cover crops, and no till, and the judicious use of fertilizers are paramount to soil health, and the integrity of the organic program. I worry that the NOP will not take up anything the NOSB sends forward because of the clear, and plentiful comments on both sides of the issue.

While this would seem a win for some, I believe it is in the best interest of the NOSB to come up with a proposal that could be agreed upon by all parties. These proposed rule changes must be reconsidered, and I encourage you to send it back to committee. Thank you for your time today.

MR. ELA: Thank you, appreciate it, and Nate has a question for you.

MR. POWELL-PALM: I just wanted to explore a little bit more, your statement of waste streams. It sounds like from the commenters yesterday, that there's a bit of a shortage of manure, that folks are having a hard time getting their hands on it. But you're saying it's

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something that's just kind of thrown away. And so, I'm curious as to why don't we just put the manure on the land?

Why do we need to have this intermediary step if we're trying to ultimately clean up the environment as best we can? If we're seeing it as a means of dealing with excess manure.

MR. ELLSWORTH: That is a good question. So, one of the issues is that while people have manure, they're limited because of, for example their soil test phosphorous levels, so they can only put down enough manure to satisfy their soil test phosphorous requirements, and they're still left with the nitrogen shortage. We're in a situation now with fertilizer prices, and along with everything, but fertilizer prices especially, that are just incredibly high now.

And so manure has a new found value. In fact we know of conventional growers who are putting down manure because the phosphorous, and potassium is less expensive than their traditional sources of phosphorous, and potassium. So, that's really been a source of frustration, and caused

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some concern among organic growers, because it's harder, and that is driving the prices up. The other thing --

MR. POWELL-PALM: Let me follow up on that thread real quick. Would you say that the competition for manure then would not increase?

Because there's now raw manure competition from both manufacturers, like Wilbur-Ellis as well as conventional growers. I think something that's always struck me about organics, is that the power of the organic dollar is left really to the farmers, because there isn't this big fertilizer bill to pay.

And we also have a lot of stability in organics, because there's not this deep correlation between inputs, and the nitrogen used to grow the food. Do you see us going more towards purchased fertilizer playing a larger role across the board with the allowance of ammonia extracts, or are we safer to have more stable fertilizer usage just through manure with farms using manure directly?

MR. ELLSWORTH: Well, stable becomes

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a relative term, especially when you start looking at manure applications in the Delaware Bay, and up around Ohio. So, some of those issues that we've had with nutrient contamination can be pointed back to phosphorous, and nitrogen release from manure. But I mean in my comments this time, and especially the one in April where I talk about some verify specific cases where these products would be used in addition to manure.

So, as an example, the 4-4-2 that is the byproduct, or the end result of one of these processes still has the same nitrogen concentration of the raw product. And that's because we're capturing what's normally lost in that process. And so we have to consider the whole system, and how all of those things work together.

MR. POWELL-PALM: And this is my last follow up Steve, I promise. The 4-4-2 product, pellets are 45 bucks a ton direct from the barn to the farmer, that 4-4-2 product is about 165 dollars a ton, what's the benefit to the farmer?

Where do we see this as, if you need to have long significantly diverse crop rotations, and manure

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just becomes very, very expensive, how are we helping organics grow in a meaningful way? As opposed to just propping up conventional?

MR. ELLSWORTH: If you're getting raw manure for 45 bucks a ton, there's a lot of growers that want to talk to you, because that's not the case. The biggest thing is, is that with the crumbles, and the pellets, it gives growers a wider latitude in how they can apply it, and how they can store it. It's drier, and it spreads easier, so they have less passes through the field. It comes down to a logistics thing.

MR. POWELL-PALM: Thank you for the comment.

MR. ELA: We're going to jump to Amy, and then Logan.

MS. BRUCH: Hey, thank you Steve. Thanks Jason for your time today, and your written comments. I must admit, I went to Iowa State, took agronomy 212, and I don't remember this mnemonic device that you share in your written comments, but anyway, I learn something new every day. But I wanted to follow up on your answer to Nate. You

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had mentioned that some producers fertilize, or apply their manure based on their phosphorous content, and that might be excessive.

So, at the end of the day though, just applying ammonia extract to give you more nitrogen still doesn't get rid of our phosphorous problem, and when we're trying to troubleshoot, and do root cause analysis in our organic systems, we still have a problem with phosphorous. So, how do you long term think your way out of this phosphorous problem?

Because I don't see it being solved necessarily just because you're adding in a nitrogen source. So, I just wanted to hear your thoughts on that.

MR. ELLSWORTH: Well, I mean the two are different. We're using two tools to satisfy a crop need. So, in terms of solving the phosphorous, that's just going to take time. And through crop removal, we'll mine that phosphorous down. What we're doing, or what we suggest with the ammonia extract is that my soil test is high, and so I can't put anymore manure down, but my crop

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still needs that nitrogen, and potassium for that.

And let's talk about potassium, another mined soluble nutrient that we put into the soil that doesn't necessarily fit the feed the soil, feed the plant mantra. But one of them, we're trying to limit the environmental impact of the phosphorous, and the other one, we're just trying to supply the crop need for nitrogen. And we're applying products that have NPK in them, then we have to limit the one that's going to contribute to the most damage, and in this case it would be the phosphorous.

MS. BRUCH: And I think that's the differentiating factor here. With organic farming it is this long term thought process, and it's not always feed the plant, because we do have to solve some of these nutritional balances. So, I think that's why producers are starting to opt to grow the nitrogen out, and not necessarily plant the high nitrogen demanding crops to then reset themselves to square one. So, okay, thank you, appreciate it.

MR. ELLSWORTH: Thank you.

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MR. ELA: Logan?

MS. PETREY: Hi. Okay, so we grow a lot of high nitrogen crops as vegetables, but to point out on the application methods of the end product, yes, you can use it in season, where if you're using a raw product, you're actually going to be using a completely different spreader, I mean the row spacing on it, you would run over the crop if you were to apply this because of the type of spreader that you have to use.

So, your process is giving something that is pelletized, or of course that can be used in season, and there's a lot of that product already out there, that pasteurizer, that cooked litter.

Could you -- people are concerned with taking the raw that may be used by commodity type growers that need a lower cost around the 45, or 50. I mean we're getting litter about the 45, or so as a raw product.

So, the fear is that we're going to take away that product, and turn it into this expensive cooked, or pasturized product that is very needed, or essential for vegetable growers because of the

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food safety concerns. I mean you have to use these pasturized products in season, and because we need sidedress applications for linking stuff, but could you partner with people who are already making that product to make the ammonia extract, and then there's not that threat to the other growers that are relying on that raw, and think that it's going to become a limited source?

MR. ELLSWORTH: One of the things that I see is that there's a real disconnect between the (Inaudible.) treated, finished product. And so to build a system to connect --

MS. PETREY: Did y'all miss that? Did everybody miss that? Okay, can you go back about a minute, it paused for a little bit.

(Simultaneous speaking.)

MR. ELLSWORTH: I muted it there --

MS. PETREY: Just start over with my answer, yeah, thank you.

MR. ELLSWORTH: I'm getting an internet unstable error. There's a real disconnect between the manure producer, and the grower that needs it. We've seen situations where

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a chicken, a hen house, or an operation is shipping manure to the east coast, or a swine operation is shipping manure 3, and 400 miles away, because the person who needs it, that's the only person they know to go to.

And so there's a disconnect in that, and that's one respect, but somebody that could develop a tool that could connect either the raw product, or a finished, heat treated product with producers that are closer, I mean then we're limiting the carbon consumption in all this trucking, but we're getting people connected with a product that they need. And to me, we're just not doing enough for that.

When we're shipping raw manure, we're shipping all that water, and dry material hundreds of miles for the sake of storing carbon, but how much are we burning in that process? So there really need to be something done to hook up those growers with a provider that's quite a bit closer.

MS. PETREY: Also is your nitrogen content higher in the end part because you are pulling the water out of it, so it is a drier source?

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MR. ELLSWORTH: That adds too, so it's the -- I mean you're going from a 30 to 35 percent moisture down to a 12, or 13 percent moisture in that. You're only --

(Simultaneous speaking.)

MS. PETREY: (Inaudible.) water, correct, yeah.

MR. ELLSWORTH: And that's just one of many, it would be the same with dairy, or swine as well.

MS. PETREY: Yeah, thank you Jason.

MR. ELA: One quick question on economics that we've been kind of questioning on here, but if the price of manure is going up because of conventional demand, that's one outlet, so wouldn't the price of manure to make ammonia extracts also be going up? Because your alternative market would be the higher priced material.

So, it seems to me that it wouldn't be suddenly that ammonia extracts would be more cost competitive, because the base material is also going up. Am I thinking correctly?

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MR. ELLSWORTH: You are right. Everything, anything that's used as a nutrient in agriculture is going up across the board. I mean the growers that 20 years ago were looking at this as waste are saying hey, I can get a little extra income here, and they're starting to charge, and that's economics, capitalism.

MR. ELA: Yeah, so I know, you can look at my (inaudible) but thank you so much, we do appreciate you.

MR. ELLSWORTH: Thank you, appreciate your work.

MR. ELA: We are going to take a short break. Because our next, the two speakers aren't here, it's going to really help us. On the other hand, it would be great to get at least a few people on the wait list, so I'm going to say let's take a ten minute break, and then settle in for the last lap here. So, let's come back at a quarter after the hour, and dive back into it.

If anybody needs a little bit longer, go ahead, but we'll start working down the list at a quarter after. All right, take care.

(Whereupon, the above-entitled matter went off the record at 4:05 p.m.)

MR. ELA: I know that was a really short break for everybody, but we're going to dive back into it. And so we're going to start with -- Michelle, Meghan Germick and Gladys Cooper, you haven't found them yet, have you?

MS. ARSENAULT: I have not, nor have I seen their phone numbers. I checked to see if they were just on the phone, but I don't see them.

MR. ELA: Okay. So we'll just say, Meghan Germick or Gladys Cooper, if you're on with us, somehow please let Michelle know. And if you are, we'll come back to you.

So we're going to go to Steve McCorkle, followed by Mike Menes and then Zen Honeycutt.

So, Steve, name and affiliation, and give us your comments, please.

MR. McCORKLE: Okay. Well, good afternoon. Can you all hear me okay?

MR. ELA: It sounds great. Go ahead.

MR. McCORKLE: All right. So my name is Steve McCorkle. I'm founder and CEO of Ag Waste

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Solutions, which is a company formed to produce, actually, cow manure biochar and carbon-negative transportation fuels.

So I'm going to comment today on Listing 205.602(a) in support of the proposed annotation from the Crops Subcommittee. The sustainability of the food production and animal agricultural industry will be significantly enhanced by this new adaptation.

As most of you know, Nestle, the largest food company in the world, is now requiring their 150,000-some-odd providers to reduce their carbon emissions to achieve net zero compliance. As Nestle goes, the rest of the industry will soon follow because the goal is driven by consumer demand, the most significant economic driver in any industry.

Dairy digesters are often seen as the only solution to promote sustainability and carbon neutrality in the cow manure industry. However, digesters are only one piece of the puzzle required to bring the industry to sustainable carbon neutrality performance. Improved raw manure and

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digestate management practices are the other pieces of the puzzle, and cow-manure-derived biochar completes the puzzle.

Organic classification of cow-manure-derived biochar opens new opportunities for smaller-scale, regional farms to more sustainably manage their raw digestate and manure digestate as valuable resources rather than as waste to be disposed of, especially in regions where digesters are not feasible or cannot be permitted due to the digestate issues. And then seeing high greenhouse gas manure sources in the cow-manure-derived biochar significantly reduces greenhouse gas emissions.

The integration of biochar production with anaerobic digestion increases the conversion efficiency of manure feedstocks into carbon-negative products, thus decarbonizing the environment while enhancing financial incentives.

Cow-manure-derived biochar from a true pyrolysis process increases soil organic matter and can convert dying or dead dirt into healthy, productive soils. It has positive impacts on crop

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yields, provides an effective sorbent for nutrients and contaminants, improves water quality and availability, and generates carbon credits and offsets.

Products generated from the syngas coproducts of biochar productions, such as low-carbon transportation fuels, reduce greenhouse gas emissions even further. Burning the syngas instead of petroleum fuel as the pyrolysis heat source reduces the carbon intensity of the entire process.

Thus I hope you can see the benefits of organic classification of cow-manure-derived biochar far outweigh any perceived disadvantages.

New precedents and bold actions are required to achieve our decarbonization and sustainability goals, and it is time to remove the 26-year ban on the organic classification of cow-manure-derived biochar.

Thank you for hearing my comments and for all of the good work of the NOSB.

MR. ELA: Thank you. Brian has a question for you.

MR. CALDWELL: Thank you, Steve. I really appreciate the comments. In the past, I think that one of the objections to burning manure was the loss of nitrogen that would happen because of that. And so I'm just wondering, what is the fate of the nitrogen that's originally in the manure in your process?

MR. McCORKLE: Well, in our process, we have a slow pyrolysis process that does volatilize some of the nitrogen off, but it also, if you properly form the biochar matrix in the process, retains quite a bit of nitrogen. So you will lose some, but it retains some more.

But in our model for working alongside of an anaerobic digester, for example, where we take the more than 50 percent carbon that is still remaining in the digestate, we dewater that and create a nutrient-balanced fertigation water. And then, from the solids that are separated from the liquids, we make biochar and transportation fuels.

But as we apply or the farmer applies the fertigation water, which is nutrient balanced

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and nitrogen rich, that will also be not volatilized as much as it would be if it was just land-applied, and the biochar will kind of soak it up and retain it, giving more available nutrients, and nitrogen in particular, to the crops.

MR. CALDWELL: That sounds good. What is the actual nitrogen content of the biochar product?

MR. McCORKLE: I don't have that right in front of me, but it varies with the quality of the manure and the availability of the manure, that kind of thing. But it's about one part nitrogen to three or four parts phosphorus and potassium.

MR. CALDWELL: Just one last question. I'm sorry to draw us out, but is the potential for organic toxins to be produced, like creosote type of materials, higher in high-temperature pyrolysis or low-temperature pyrolysis?

MR. McCORKLE: Well, in both, if you are -- it's kind of a hard question to answer because if you're talking about PAHs and other aromatics, those are typically produced more in

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lower-temperature pyrolysis than in high-temperature pyrolysis. But in high-temperature pyrolysis, they will be volatilized more and retained in the solids.

So, in low-temperature pyrolysis or in slow pyrolysis, which is our process, we have to remove all of those potential contaminants before they have the opportunity to get into the solid biochar product.

MR. CALDWELL: Thank you very much.

MR. McCORKLE: You're welcome.

MR. ELA: Other questions?

Two quick questions for me, and then it looks like Asa has one. So when you say you have to remove those contaminants, where do they go?

MR. McCORKLE: So they get removed in a water treatment process, and they basically go into an agglomerated solid that is -- it's our only waste product, actually. We can send it back through the pyrolysis unit to make more syngas, or we can crack it to make transportation fuels or fuel for the pyrolysis burner.

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So cracking it is kind of an expensive process. It can be landfilled as well, but again, it's a very small volume in comparison to the rest of the manure. But we do have the technology to crack it into more syngas to fuel the process.

MR. ELA: And then you mentioned nutrient-balanced water, but then -- what does nutrient balanced mean?

MR. McCORKLE: Well, it means that we -- through a centrifugal process, we remove about 90 percent of the total suspended solids, over five microns in size. And we've tested the machinery and the process through many accreditation agencies.

And in doing so, the science has shown us that we can remove about 90 percent of the phosphorus from the water, about two-thirds of the TKN nitrogen, and about 40 percent of the salt, basically, depending on what kind of polymer you might use.

If you don't use a polymer, you're going to have more nitrogen into the water, which is probably good for nitrogen-starved environments.

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But that's the process we use, basically, to produce this -- what we call a nutrient-balanced water.

MR. ELA: Okay.

Asa?

MR. BRADMAN: Yeah, I just want to follow up on Steve's question. He kind of asked my question. When you say PAH is removed by water process, if we look at the (inaudible) of PAHs that are like three to six -- so how efficient is that water process? I would think you would need some other kind of solvent. Do you use solvents beyond water?

MR. McCORKLE: Well, the PAHs are in the gas as it was produced, the syngas. So the first part of the water treatment system basically blasts some high-pressure streams of water through the gas to drop out all of the solids, and the PAHs would be in those solids. It converts into solids at that point, and then they're fairly easily removed.

MR. BRADMAN: Okay. Thank you.

MR. McCORKLE: You still have to treat

the water further to produce recyclable water because we have a closed-loop process that can cool itself based on that treated water and recycle the cooling water.

MR. BRADMAN: And when you say it can be cracked for fuel or landfill, how much is used for fuel and how much is landfill?

MR. McCORKLE: Well, we can use it all. If we crack it all, we can use it all for fuel for the process.

MR. BRADMAN: But a local producer is probably not going to necessarily have that equipment. So if you don't crack it -- you talked about this being a resource for local producers.

If it's not refined -- I guess what -- you're saying it all can be cracked, but I guess how common is it for facilities who do this to produce fuel versus essentially a toxic landfill material?

MR. McCORKLE: Well, it can all be cracked through our proprietary process, but we operate with a build-own-operate model where we are operating the equipment, so we don't have to depend on local producers in order to crack the

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PAHs or the tars into more syngas to fuel the burner or the process or for any other purpose.

So I'm a little confused by your question about local producers.

MR. BRADMAN: Well, I guess, you said that it could be cracked for fuel or landfill. How much is actually -- do you crack for fuel, and how much do you landfill?

MR. McCORKLE: Well, it's a more expensive process, obviously, to crack it into fuel. But it can all be cracked into fuel, depending on the capital resurgence of the product itself.

MR. BRADMAN: I guess I'm not saying -- I understand it can be, but I'm just interested, like on a given operation, how often does that happen, and how much is landfilled? Do you have a proportion, or it just some/all goes to landfill, and some/all goes to fuel?

MR. McCORKLE: Yeah, we don't have a proportion yet because we haven't actually done that on a commercial basis yet. But we're starting a commercial project now; we will be doing that.

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And I can't give you those exact proportions.

MR. BRADMAN: Okay. Thank you.

MR. McCORKLE: Mm-hmm.

MR. ELA: All right. Thank you very much, Steve. Appreciate it.

We are going to move on to Mike Menes, Zen Honeycutt, and then Zea Sonnabend.

So, Mike, name and affiliation, and start your comments.

MR. MENES: Good afternoon. I just want to do a quick sound check. You guys can hear me okay?

MR. ELA: You're good.

MR. MENES: Good. Thank you.

My name's Mike Menes, VP of Food Safety and Technology at True Organic Products. Thank you to the NOSB for your tireless efforts in protecting the organic seal. I want to thank you for your complete review of ammonia extract. Your review was very in depth and included the discussion document, technical review, and the detailed proposal with multiple opportunities to publicly engage in the process.

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The result was the Crop Subcommittee proposal that captured the intent of the petition.

As a petitioner, I can say that we fully support the three motions outlined in the proposal. The Crop Subcommittee was effective in producing definitions that encompass the current and future forms of ammonia extract.

In addition, comments from OMRI, the ACA, and it turns out the OEFFA have said that AE definitions are complete, sufficient, and clear and verifiable. Our hope was to bring to light that a nonsynthetic source of ammonia had begun to be used in organic crop production.

Our position is that there is no place for AE in organic. Our organic approach is very simple. An ammonia or ammonia fertilizer is 100 percent time available. Other organic fertilizers are protein based and require soil organisms to help them break down.

Ammonia is direct, just like a synthetic fertilizer, while traditional organic fertilizers are slower acting and rely on biological-based cycles in the soil.

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So the assertion by the TR that AE is chemically identical to synthetic ammonia and ammonium compounds is absolutely correct. There is no debate that the plants cannot differentiate between AE and synthetic ammonia.

A recurring topic is the concern of unintended consequences for non-targeted materials. As a fertilizer manufacturer, we would naturally have concern for this. Our analysis of many nitrogen-containing inputs shows that the proposed definition of AE will not affect the other fertilizers used by organic growers.

The key concept provided by this Crop Subcommittee is separating, isolating, and/or capturing of ammonia or ammonium.

Next slide, please.

For example, manure slurry requires only the removal of solids, not the separation, isolation, or capturing of ammonia. So it's not prohibited. Protein hydrolysates, fish emulsions, does not require separation, isolation, or capturing of ammonia. It's not prohibited. None of these exceed three percent ammoniacal

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nitrogen, and they don't separate ammonia.

We agree with OMRI and the ACA, and the definition is clear. And the definition is clear and produced the desired results.

I'll leave you with this. If you put a protein in the ground with no plant, the soil gets richer. It's being fed. If you put AE in the ground with no plant, ammonia will just dissipate.

In closing, don't get distracted. AE is 100 percent plant-available nitrogen and will take us a step closer to conventional farming practices. Continue to build consumer confidence and protect the seal by prohibiting AE in organic.

MR. ELA: Thank you, Mike. Appreciate that.

Are there questions from the Board? Let's hear Logan.

MS. PETREY: Hi. Can AE be added to one of your products with a carbon base to raise the nitrogen level so that the available nitrogen would be higher? Could you use it in that way?

MR. MENES: We're the petitioner of

ammonia extract prohibition, so I haven't considered combining any of those. We haven't traditionally combined anything including sodium nitrate in any of our blends, and so haven't considered blending --

MS. PETREY: You do add guano in?

MR. MENES: Absolutely. The guano is included in some of our --

MS. PETREY: Why do you add guano?

MR. MENES: We add guano because it's a good source of -- it makes a great fertilizer.

MS. PETREY: Right. I mean, it has a very high availability, nitrogen availability, in its contents. Is that one of the main benefits that our growers want in the guano?

MR. MENES: Well, we use it because it -- again, it just makes a great fertilizer.

MS. PETREY: I mean, I agree with you. I order it during the winter when I get (inaudible) from you guys so that I can get an available nitrogen from it. And I've seen on your website that it has the benefits of guano added to your products.

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And so I just -- I don't know what the difference would be. It's also evading the microbial breakdown. It's going straight to the plant. And so, if you're using that, I don't know the difference of using ammonia extract.

MR. MENES: Under the current definition, guano is not separating, isolating, or capturing ammonia. So we are able to use it in that regard --

(Simultaneous speaking.)

MS. PETREY: No, you're certainly able to use it. It's just the concept of using it is where it's the -- you know, the nitrogen and the readily available nitrogen source that we could get out of it as a consumer.

MR. MENES: We haven't considered combining it at this time.

MS. PETREY: Okay. Thank you.

MR. ELA: Brian and then Nate.

MR. CALDWELL: Thanks, Mike. I'm a bit concerned about some of the definitions. And in particular, you showed us a slide saying that there could be manure, and then water would be added

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to it, and then the slurry then would be -- the solids would be removed, and then the liquid would be applied to the field. Is that right?

MR. MENES: Can you repeat that again, Brian? I'm sorry.

MR. CALDWELL: Am I breaking up? I hope not. But -- there we go. This slide that's up there right now, it says manure -- you add water.

You got manure slurry. Then you filter it, and the filtered slurry is applied to the field. Is that right?

MR. MENES: Yes. That's my understanding.

MR. CALDWELL: So how is that not separating a bunch of nutrients via water, via just adding water, from the original feedstock and then applying to the field, including some ammonia?

MR. MENES: Okay. That's great. You'll see that the difference is, in some of the other examples that I give, that the ammonia is very low. Ammonia is not the purpose -- manure slurry, I don't believe, is purpose (inaudible) for getting nitrogen content out there. Again,

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you have a lot of other techniques to be able to use that.

I think the focus there really is -- and this is in the case of compost tea also -- is the biological activity that we'll be using there. Certainly, nitrogen is certainly part of it. But I'd like to focus on the separation, isolation, and capture of ammonia itself.

So if we're looking at the filtering process, is there truly separation there? What we learned today and in a number of cases is that when you filter it, the remaining solids will have ammonia, and in fact as high as four percent. 442 and -- or 443, I think, was mentioned earlier.

That four percent, that means that there's nitrogen or ammonia in there, in that solid. So that ammonia has come from somewhere when you start filtering it off. Sure, there will be some ammonia that goes with the water side of it, but there's also some that stays with the solid part of it. So it's not separating.

I don't see that as separating. That's why I feel that the definitions are appropriate:

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separating, isolating, and capturing of ammonia.

MR. CALDWELL: So, in your mind, you would have to be removing all or virtually all of the ammonium from the original substrate in order for separation to have occurred?

MR. MENES: Yeah, I would look at, also, the -- well, for example, the soybean example --

(Simultaneous speaking.)

MR. CALDWELL: I'm just -- I guess, in my mind, just kind of reading things very literally, it seems like some ammonia is being separated from the original substrate, and then it -- so it seems to me that that material that's applied to the field would be considered stripped.

So I'm just -- I don't want to nitpick anymore, but I just want to kind of have that out there. And I see what your response is. So thank you very much. It's just kind of a confusing issue.

MR. MENES: Yeah, absolutely. I see it being very -- thank you for your question.

MR. ELA: Anything else?

Thank you, Mike. We appreciate it.

We are going to move on to Zen Honeycutt, Zea Sonnabend, and Doug Currier.

Zen, name, affiliation, and start your comments.

MS. HONEYCUTT: Hi, everyone. Thank you. I'm Zen Honeycutt, and I'm the founder and Director of Moms Across America, and I'm speaking on behalf of moms. I appreciate everything that you do so much.

You may not know today is Children's Environmental Health Day. So I find it very fitting that I'm speaking to you about keeping toxins out of our children's environment and their food. And we would like to ask you to please continue to keep these following toxins out of our food supply and work harder to keep them out of the organic food supply.

And that is heavy metals, especially in baby food, and we ask the NOSB to support testing and the legislation which is going on right now.

Also, carrageenan, which can lead to stomach ulcers and stomach cancer. My son has a

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carrageenan allergy, and the only way that we could determine that was through extensive alternative testing, not Western medical testing. And most people cannot afford that, so this is really a socioeconomic issue to continue to allow carrageenan in the food supply and for people to be able to respond in a way that takes care of their health.

Number three, antibiotics, which clearly weaken the immune system, and that's something we do not need right now around the world.

And copper sulfate. We also ask you to consider that -- continue testing for glyphosate herbicide contamination because you may not know that glyphosate herbicides, Roundup, contains PEG, polyethylene glycol, which the FDA acknowledges has been connected to anxiety, tics, seizures, irritability, hostility, aggressive behavior, homicidal and suicidal ideation, emotional blunting, and depression -- so obviously not something we need in America right now.

I would ask you to consider that we have a crisis in trust in America right now, and that's

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particularly in the food system. Too many of our moms and parents question the integrity of the USDA organic symbol, and it's heartbreaking because I personally have been working on it for nearly ten years of my life to promote organic. We've put up billboards in 191 locations, five of them over the period of a year, getting millions of eyeballs to learn about the benefits of organic, and parades and millions of social media posts.

And to be really honest with you, we do not want to have to do this all over again for real organic or regenerative organic. We prefer that organic processes just evolve to become real and regenerative. And we submit that it does not have to be either/or.

So I respectfully request that the industry stop fighting and start working together.

Consumers are exhausted by the drama in our lives, and we don't need more from the very groups we depend on to keep our children healthy.

So we ask you to do what you do best, which is create healthy, nutritious food that literally keeps our children out of the hospital.

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Our children cannot live without you, so please do continue to do your jobs in that way in keeping our food safe.

And we assert that if a farmer says that they need a chemical to grow a food, that is a desire, not a need. They need to grow food to keep that is safe and healthy for consumers, especially for our children, and we need you to make sure that our food stays safe. And thank you very much for doing so.

MR. ELA: Thank you, Zen.

Questions?

MS. HONEYCUTT: Thank you for your time.

MR. ELA: I'm not seeing any. Thank you so much for sharing your thoughts. We appreciate it.

We are going to go on to Zea Sonnabend, then Doug Carrier, followed by Bill Wolf.

So, Zea, name and affiliation, and give us your thoughts.

MS. SONNABEND: Okay. Can you hear me?

MR. ELA: Yeah, we can. Go ahead.

MS. SONNABEND: Okay. Hi. My name is Zea Sonnabend from Fruitilicious Farm in Watsonville, California. I was on the NOSB from 2012 to 2017, and so I know exactly how much work you all have to do. And I would like to applaud you for taking up the mantle after I left the Board to continue on this important work.

I also spent a career working as an organic inspector and materials work. I'm one of the cofounders of OMRI and worked for CCOF for a number of years, both as an inspector and in policy.

So I have a little background in this.

I only want to speak today about two subjects. One of them is the ammonia extracts.

You've already heard a lot about it, so I'm not going to go into detail, but I do agree with the proposal to prohibit the ammonia extract products.

These products are incompatible with the original philosophy behind organic farmer, and I'm kind of an old-school girl. As an inspector and policy specialist, I've seen a lot of fraud in the fertilizer realm in the past, and I'm sure

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it's still going on now.

The products are ripe for fraud, and especially if you adopt any kind of rule that would allow 20 percent like Chilean nitrate, that would just make it easier to do fraud because even though it's agronomically feasible, from an organic point of view, it's very much harder to detect.

Now on to excluded methods. I was one of the co-originators of having the NOSB look at GMOs and excluded methods terminology, and I wrote the recommendation that still hasn't been adopted yet by the NOP for guidance on the subject, and definitions and criteria.

At each meeting, I make the point that it's very important for this issue to stay in front of the public, the NOP, and the USDA as a whole at every meeting. Otherwise, the forces that want to contaminate us with GMOs will think we're not paying attention, and they will only creep more insidiously into every aspect of our organic integrity.

However, now that we've tackled most of the most straightforward terminology and now

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that we have adopted criteria and definitions, what's left is complicated. So it might be time to change strategies and work on other aspects of GE issue, such as how to deal with testing, how to set thresholds, how to evaluate new methods that we don't have enough criteria for.

So I suggested some of those in my written comments, and I think it's very worthwhile to keep working on it, but some creative thinking is needed how to go forward. Thank you.

MR. ELA: Thank you, Zea. Brian has a question for you.

MR. CALDWELL: Thanks a lot, Zea. I know you've thought a little bit about this, and I really would love to hear you expand on it, but what are the best ways to move forward to make sure that we can prohibit some of the novel new gene editing and other types of excluded methods as we move forward?

MS. SONNABEND: Yeah. Right. Well, we have been urging the NOP -- and while I was on the Board, we tried to do it through the NOSB, which I hope that you continue to do, to just pressure

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them to create some type of genetic integrity task force because you guys, and even I, do not have the expertise to know what the state of testing is for all the novel methods, for instance, what the state of enforcement or not is.

And yet there are many stakeholders out there who are more on the cutting edge of this, and it's a very, very complicated, involved subject. So I think trying to get some sort of test -- whereas originally we wanted to call it seed integrity, but really, it has to do with all of genetic integrity. They can deal with testing.

They can deal with how to enforce anything that is adopted about keeping organic integrity pure.

And so that would be my number-one recommendation. But you can also do things like we did when I was on the Board of having expert panels convene during NOSB meetings, if we ever have them in person again, to discuss these issues and any number of other things like that.

MR. ELA: Mindee has a question.

MS. JEFFERY: Thank you, Zea, for all your work on this issue. Just thinking about

looking at what to do moving forward, a lot of the public comments suggested that we don't develop new criteria.

And I think, for me, I'm looking at that in that most of the TBD list terms deal more with plant reading, but to me, the marketplace looks like we're developing into things more like California's considering releasing GMO mosquitoes, and then we have mRNA sprays on the horizon that could manipulate the microbiome.

I'm just wondering if you have any perspective on how we can move forward in this work as a Board. We're going to need additional criteria for determining excluded methods that aren't just directly plant breeding techniques.

So if you have any perspective on that, I'd really love to hear it.

MS. SONNABEND: Yes. And I think I was one who put in my comment, my written comment, that there's no need for an additional criteria right now, but as the new cases come up, there may be in the future to handle those specific cases.

And I think that most of the new things

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in plant reading are already handled by the existing criteria such that you don't really even need to have all of the complex definitions and synonyms that I put in that original table of the things that were already decided, because those are obviously prohibited by the criteria as soon as the definitions and criteria are adopted.

So I think you just have to look at it like -- say the case of GMO mosquitos. There, the issue is, can you prevent them from flying onto an organic farm? And is that, therefore, prohibited if they do fly on an organic farm? And so you have to look at the case and then look at what criteria you have and see if you can apply those criteria to that situation. And if not, maybe there's another one about air trespass, say, or something like that that you need at the time.

MS. JEFFERY: Thank you. I appreciate that. Just sort of in the higher-level thinking about democracy in general, I look at this issue from the perspective of organic has its place in democracy and in our regulatory frameworks. And I really see the USDA as being the most coherent

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place to provide us with transparency in the marketplace.

And I love all the creative work that organic has done to protect ourselves from genetic transgression, but do you see another way for us to produce transparency and protect ourselves other than grand assistance from higher regulatory bodies?

MS. SONNABEND: Yeah, really, keeping shouting about it. You know, I have a hard time -- and if I had longer, I'd tell you about the event we went to about coexistence that several of us organic people went to with all the conventional industry. But it's very much of an individual rights issue because we as individual organic farmers have the right to farm without contamination, in my opinion, in which case it's a lot like gun control.

The Second Amendment, for organic, should enable us to be able to not be contaminated.

However, how you get there, I think, is just keeping working on it and keeping shouting about it as loudly as possible.

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MS. JEFFERY: Thank you, Zea.

MR. ELA: All right. Thank you, Zea.

As always, we appreciate your comments.

We are going to move on to Doug Currier, then after Doug, Bill Wolf, and then Jackie DeMinter.

Doug, name, affiliation, and start with your comments.

MR. CURRIER: Thank you very much.

Hi, everyone. My name is Doug Currier, Technical Director at the OMRI, at Organic Materials Review Institute. I'm presenting comments today on ammonia extract and sodium nitrate.

OMRI supports the definitions of stripped ammonia and concentrated ammonia as proposed. Our staff reviews detailed manufacturing processes every day, and we seek advice from our advisory council and user review panels as needed to ensure our quality of analysis is high, and our recommendations are supported by the USDA Organic Standards.

We are confident that we can use the

same level of expertise we've developed over the years and use these proposed definitions to identify materials which are now under petition.

We see there being an important reason why there are two definitions being proposed, one which identifies specific manufacturing processes and one that focuses on the quantity of ammonia.

As I think should be clear by now, there are many materials which contribute ammoniacal nitrogen as a fraction of total nitrogen and undergo a concentration step, which are not under petition. While the levels of ammonia are expected to rise in these materials as a result of that concentration step, the levels do not rise to those which could lead one to reasonably want them in with the materials under petition.

A specific numerical figure in the proposed definition of concentrated ammonia is needed in order to avoid applying a definition to materials beyond those under petition. We looked at nitrogen values of products on the OMRI list while reviewing the proposals.

And I just want to be clear we do have

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products that likely meet the proposed definitions on the list right now. They're all (inaudible) and subject to NOP Guidance 5012.

OMRI also has concerns regarding the proposed addition to the soil fertility and crop nutrient management practice standard. The use of the term nitrogen fertilizer in the proposal is too broad. We encourage the development of a resource, such as a closed list of fertilizers of concern, i.e., those that are expected to have C:N ratios at or below three to one, to help narrow the focus of that broad term.

We're also raising concerns about the shifting focus to the ingredient level there and understanding that the carbon contribution of a nitrogen fertilizer when applied is of interest.

So, for that reason, we support the evaluation of the C:N ratio of final fertilizers rather than at the single- or multi-ingredient level.

And finally, sodium nitrate, we support reinstating the listing, as it'll get it back on the sunset schedule and will clarify the status of the material under the USDA standards. We never

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stopped restricting the products that are contained sodium nitrate because it never went to rulemaking.

But we have a question for the Board, though: what effect the prior recommendation will have to remove the annotation, and what effect that will have on the vote to reinstate sodium nitrate.

And we were wondering if a vote is needed to withdraw the previous vote, and recognizing clarification might be needed on that.

So thank you for your time and for listening.

MR. ELA: Well timed.

Questions? Amy has a question for you.

MS. BRUCH: Hi, Doug. Thank you for your written and oral comments. Appreciate it.

I just had a question for you in relationship to your spring comments and then tying them into the current comments.

In the spring, you had mentioned -- or OMRI in general, your organization, mentioned -- about isotope testing and mass balancing when it came to these complex

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formulations was very tough to understand what was all involved in the product.

So then, looking at the current comments and the practice standards, we are getting into a more ingredient-type focus. And there are some comments on your side about maybe we need to shift our focus into the overall product.

So can you tie that all together for me?

MR. CURRIER: Yeah, I think for the practice standard recommendation, I was looking at it as a contribution from the final fertilizer product. And you could have a fertilizer component that might not be meeting that C:N ratio, but something else in the product is going to push that carbon content up. And so we weren't really quite sure if moving to the ingredient level would be necessary at that point.

The testing -- carbon testing is not one that we normally see. And so, just to be clear, we're getting nutrient analysis on a certain set of fertilizers and not all of them. So the high-nitrogen liquid fertilizers, we're getting

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a good profile on the product. But for other fertilizers, it's not part of our requirements any longer to get labs. Oftentimes, they're sent in, and manufacturers are likely to have them.

But the burden -- we saw the burden on review staff, at the certifier level and our level, increasing if there's a new requirement to look at carbon. And because of that, that kind of leads into that question about which fertilizers are of concern.

And getting to that broad definition, I thought, was kind of untenable because there are some that are obviously going to be above 3:1 carbon-nitrogen, others that are going to be borderline or below.

So that kind of ties into the terminology there and then the testing and the evaluation at the product level rather than the ingredient level.

MS. BRUCH: Mm-hmm. Would it be easier if you tested the actual nitrogen components at a broad product level than looking at nitrate, nitride, ammonia, urea, those type of ingredients

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of the final product? Would that be easier, then?

MR. CURRIER: I don't think so. I guess I was looking at it -- you're looking at the total end contribution carbon content. But the ingredient level, I don't think, gives you the full picture because you've got that blended fertilizer that's being applied.

And there could be -- I'm thinking about -- there's a manure slurry/bark fines combination. And if you're testing the manure slurry, you're going to get one result. If you're adding bark fines to it, you're going to get another.

And ultimately, it's the manure slurry/bark fines product that's being applied.

MS. BRUCH: Okay. Thank you, Doug.

MR. CURRIER: Sure.

MR. ELA: Kyla has a question.

MS. SMITH: Hey, Doug. So there's been so much focus on these non-target materials.

And so I just wondered, from your expertise as a material reviewer -- or material review organization -- how you would interpret and review

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those examples and whether or not you feel as though they would be included in the definition of stripped ammonia or the annotation. So if you could speak to that, that would be great.

MR. CURRIER: Yeah. I might be looking at this a little differently or maybe incorrectly, but if you get tied up in that definition of stripped ammonia and start talking about is it isolating, is it -- I don't have the terminology right in front of me, but there could be some borderline there. I've heard those arguments today.

But then, if you look at the concentrated ammonia definition, that's when you could say, well, it's not meeting that. And we looked at the nutrient components of a lot of these products that are of concern, meaning they're of concern because they're going to get potentially tied into this, the fish fertilizers, the manure teas. And their ammoniacal content is far below three percent. And it doesn't seem to be fitting the materials that are under petition.

And so if you're getting caught up in

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the, is it stripped ammonia, well, it may or may not be. But then you could say, well, it's not meeting the concentrated ammonia definition. And so that's where I kind of come to, is it's not meeting that, so it's not of material concern.

MS. SMITH: I think that would be assuming that the Board votes and passes both, and --

MR. CURRIER: Yeah.

MS. SMITH: -- that could not be the path, right? So we could be left with a split vote or -- I mean, who knows? Whatever -- where one would get voted through and one wouldn't. And so, in that case, I think then you don't have those percentages to fall back on. So does that make it more complicated, or --

MR. CURRIER: Yeah, potentially. But again, I think it comes down to looking at the manufacturing process and being able to use the definition. And again, I think that definition is sufficient to end up looking at the ammoniacal content of the product, looking at the steps that are taken to make it, and then being able to say

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these are the ones of concern and these aren't.

MR. ELA: All right. Other questions?

Doug, I've got one. OPWC, you know, kind of looked at this too and had some similar questions.

I mean, I'm very heartened to hear you say there is, as an MRO it's straightforward because we know you all are the front line for these things.

But OPWC said, okay, even if there were these questions that, to, in the cover letter that put our intent, and I think she said, Lynn said, specifically to exclude filtering or removal of water that is not augmenting the ammonia concentration preferentially.

Would that make it even clearer to NOP for us to put in, we're not intending this like, compose you would add water. You may be capturing ammonia but we're capturing everything else with it. You're not, you know, filtering is okay as long as you're not preferentially trying to isolate out some of these materials.

Do you think that would address those other, the questions that maybe these other compounds could be snared in the process?

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MR. CURRIER: I'd have to think about that a little bit. Potentially, yes. I think that, yes, there needs to be some acknowledgment that, yes, there is going to be some of these filtering steps that might elevate the ammonia that's already there.

But yes, I think, yes, I have to think about it a little more.

MR. ELA: Good.

MR. CURRIER: Yes.

MR. ELA: Good.

MR. CURRIER: Sorry. Yes.

MR. ELA: No need to apologize.

MR. CURRIER: Okay.

MR. ELA: But for you, I mean, certainly the combination of the two motions really makes you feel quite comfortable?

MR. CURRIER: Yes. I think it's important that there are two there. And again, I think that it would be workable on a review scale.

MR. ELA: Okay. And then coming back, your sodium nitrate comment where the recommendation to the Board was to prohibit, but

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that never went through. And technically the product had been sunsetted because that was the process then.

To me it, once it's sunsetted and it's off the list and then we just go forward. So, if we look at it that way, do you think that takes away your concern about kind of competing, competing Board motions?

MR. CURRIER: Yes. I've more often heard it say, or phrased, as an invalid listing rather than it's been sunsetted.

I believe it would have to go through rulemaking in order for that sunset process to have wrapped up under the provisions at the time. But yes, if it is sunsetted, than yes, that makes it clearer that it would need to go back on the list at that point.

MR. ELA: But if it were, given that technicality, if it were added back on the list, and you said you've been reviewing products with that in mind, it would give you the iron clad backing to say, yes, this is how we have to review things?

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MR. CURRIER: Yes. Yes, absolutely.

It would make things a lot clearer. Again, we have never stopped restricting it but I know some have. And so, getting it back on is going to get it on the sunset process again and make it clear what the standard is.

MR. ELA: Sounds great. Any other questions from the Board? Thank you very much, Doug.

MR. CURRIER: Sure.

MR. ELA: We certainly appreciate your comments.

Next we are going to go to Bill Wolf, then Jackie Deminter and then Lawrence Carlson. So, Bill, name and affiliation and give us your thoughts.

MR. WOLF: Okay, you should be able to hear me now.

MR. ELA: Yes, we can.

MR. WOLF: Okay, great. I'm Bill Wolf with Second Star Farm and Wolf & Associates. I've been an organic farmer, entrepreneur and consultant for organic for 50 years. All those

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years working to increase organic acreage.

NOSB topics were much simpler in 1992 at the very first NOSB meeting I attended. Today you tackle the most complex issues of any FACA.

I thank you for your awesome volunteer work. And I suggest that you need the support you deserve.

Slide 2. Organic has grown exponentially, but this support to infrastructure has not kept up. Wolf & Associates submits many written comments, including ways to address this growth.

Among them we recommend prioritizing and sometimes rejecting non-essential topics. We also request that commercial availability apply to Section 605, which will be encourage organic and reduce your workload.

I'll go into more detail on two more.

One, view the national list as the toolbox for growth and improvement. And two, get critical expert support for your work.

Slide 3 please. The national list is a toolbox, not a soapbox, to attract political and

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non-organic social agendas. The goal is not to make it smaller.

Farmers and handlers need a complete and robust set of materials that meet the strictest evaluation criteria in the world. Annotations should clarify, not complicate. And the decisions you make should protect choices. Materials not widely used now may be useful in the future. Organic farmers deserve and need a robust toolbox.

And when publishing proposals for comment, please make sure the information is accurate, which takes me to the next slide.

As an expert, as an advisory board your job is to make recommendations and difficult decisions, not be experts on everything or to manage the process. Three areas where expert support will help you do your work.

Verify facts, help prepare subcommittee recommendations. Summarize and accurately report on the content of oral and written public comments.

Three, draft your recommendations and regulatory language so that it can be accepted,

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implemented and enforced. You need their support.

Next slide. Earthworms are our defacto mascot of organic agriculture. I've brought earthworms to many in person meetings as commenters. When you vote, please consider what would be good for them.

Slide 6. Applying all of these principles we prepared and submitted comments on numerous topics, some listed here.

Slide 7.

(Laughter.)

MR. ELA: Nice animation, Bill. Thank you for your comments. Are there questions? It looks like Sue has one for you.

MS. BAIRD: Yes. Hi, Bill. It's great to see you again. And I've read all your comments and I do appreciate them.

You mentioned that we, and I totally agree, that we need a lot of expert support. And can you give some examples of how you think that would come about?

MR. WOLF: Well, I think, for example, one of the places where you have to do a lot of

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work in a very short period of time, is to review all the comments that have been submitted.

And there are experts who do that professionally for the government. For federal register rulemaking processes.

And you could, the NOSB could ask the NOP for help for summarizing and organizing all of the comments, first the written comments, and then again the oral comments. So that you are freed up to actually hear that information earlier in the process. And you can have more dialogue between you about what should be in here.

My observation about the summaries of the comments is that they have not been accurate.

Recently. Especially when the issues became very controversial and complex and many people were speaking about them.

I've had a number of people come to me and say, I heard summaries of these comments that didn't include the facts that we had presented.

For example, we submitted comments, and this is another area where that expert support would help.

We submitted comments in the spring

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about copper sulfate. That the information about copper sulfate was not accurate being published by the subcommittee. That it was claiming that copper sulfate was not a permitted material in other countries. In Europe, Canada, Japan, et cetera.

And we submitted written comments saying that's not correct, it's just not listed that way. Because they have a positive list. They list it as Bordeaux mix, and they do allow Bordeaux mix. And Bordeaux mix is essentially copper sulfate.

In addition, the information about, just continuing with copper sulfate, didn't include the fact that copper is also an ingredient that is on the national list separately as an allowed fertilizer, based on soil tests. So, just looking at that and saying those kinds of things could be captured would help.

And then the other big issue is the fact that many times the language that's been drafted, won't make it through regulation. Or can't be enforced.

And so, the experts that would understand the regulatory process, which is challenging, and actually somewhat broken right now, you need help with that language to make sure that it is viable.

MS. BAIRD: Wow.

MR. WOLF: So that's kind of two examples.

MS. BAIRD: Well, I appreciate that. I also appreciated your comment on, that we need to consider the toolbox for farmers. I say that all the time.

Since I've been around, not as long as you, but echoed by CCOF, but I think it's something that we need to take with careful thought at NOSB.

MR. WOLF: I've seen a couple of materials since that now off the list that in fact had a great deal of potential, but because they never completed the process of being used, and adequately implemented. The manufacturer actually just backed away from the organic market and now they feel off the list.

MS. BAIRD: Right.

MR. WOLF: So we lose tools pretty regularly.

MS. BAIRD: Right.

MR. WOLF: And we need more.

MS. BAIRD: Yes. I actually, I'm in agreement with that. Thank you.

MR. ELA: A quick question from Jerry.

MR. D'AMORE: Thank you very much for your comments. The toolbox is a favorite of mine but it's got a counterpart, which is continuous improvement.

And on your specific example of copper sulfate, again, I agree with everything you've said. But on that example, I'm finding, you know, I have found it tough to strike a balance because we're being accused of kicking a can down the road for years and years and years.

And I would have to agree, to a large extent, that our ability to promote continuous improvement, vis-a-vis the toolbox, and again, I'm a toolbox guy, has been difficult.

MR. WOLF: Interestingly, the challenges of the vagueness about inerts has

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actually held back developing replacements for materials like copper sulfate.

I've worked with pest control manufacturers who have also backed away from development work because they didn't know what the formula would be. And the EPA process takes years and years. Even longer than putting something on the national list to go through.

And so, they have been hesitant. There are people like Marrone and others who are dedicated to developing organic products.

But I would agree with you, that we do need better tools. And the less toxic the better.

I mean, obviously our first choices are biological management, integrated pest control systems that don't use anything that has a negative impact.

But then we do have situations where we need even pyrethrin. It's actually not on the national list at all because it's a botanical. But it does need the list 4's.

I've used copper sulfate myself for 50 years, and I haven't considered it to be the highly toxic dangerous material that it was represented

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to be in some of the language published by the subcommittee.

MR. D'AMORE: Thank you for that.

MR. ELA: All right. All right, Kim, like micro quick.

(Laughter.)

MS. HUSEMAN: Thanks. Okay, this is actually quite quick, and maybe slightly rhetorical.

Bill, you mentioned that in the comment time period it's a very small time period and quantity of comments doesn't necessarily equate to if this should be accepted or not accepted. But we have heard from stakeholders that because of the short time period, maybe that doesn't give stakeholders the ability to comment.

Any ideas on, because I do think even though the quantity of comments isn't necessarily dependant upon the decision making process, it is in the best interest to try to reach as many of the stakeholders as possible. Any thoughts on how that can be done outside of the 21 day process, twice a year?

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MR. WOLF: One of my pet peeves is the fact that there isn't a winter meeting. The meetings are currently timed to absolutely conflict with busy farmer schedules. So I would take a look at that.

And maybe have a virtual meeting in the winter, like these, that's focused on comments, and a longer comment period. And then a longer consolidation of those comments and an opportunity for you to review. That's one suggestion.

I agree that it's a challenge. I certainly wouldn't, I wouldn't make your decisions based on a vote count --

MS. HUSEMAN: Absolutely.

MR. WOLF: -- of how many comments were submitted, but rather, what is the information being provided. And what sources of technical expertise we're sharing information for you as well.

MS. HUSEMAN: Thanks, Bill.

MR. ELA: All right, thank you, Bill. Much appreciated. We are going to go --

MR. WOLF: Thank you.

MR. ELA: -- on to Jackie Deminter, then Lawrence Carlson and Mike Dill. So, Jackie, go ahead.

MS. DEMINTER: Good afternoon. My name is Jackie Deminter. I am the certification policy manager at MOSA. We certify approximately 2,050 organic operations throughout the U.S., and including over 1,800 with crops.

I'll summarize our written comments on mulch film, sodium nitrate and ammonium extract.

Thank you for your work and for providing this meeting in a virtual format.

Mulch film. We support the proposal to change the bio-based content requirement. And we continue to encourage a review of currently manufactured mulch film products to see if there are any with a potential for compliance with all parts of the standards. Including the composition, the new proposed 80 percent bio-based content and the biodegradation and compostability parts of the requirement.

If none are found, we think the listing should be allowed to sunset at the next review.

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Our written comments note a couple of additional considerations.

206(c)(6) allows for plastic or other synthetic mulches if removed at the end of the season, which is not applicable to this synthetic mulch. And (c)(1), which allows for mulching with fully biodegradable materials. Our written comments gives suggestions for revisions.

Sodium nitrate. MOSA is clear on the requirements for the verification of sodium nitrate use.

In our experience, the sodium nitrate in blended fertilizers would not exceed the minimal expectations for use by a longshot. As a primary input, as part of the fertility program, we have no clients exceeding the minimal expectations either.

In short, we do not see abuse of this input. If the materials should not be allowed, then we encourage the NOP to act on the existing recommendation. But in the meantime we are okay with the status quo.

Ammonium extract. The third motion

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introduces new thinking, and we are concerned with the proposed calculation requirement for us of fertility inputs.

The term nitrogen product and the C:N ratio for some ingredients needs further discussion and definition. Who supplies the C:N verification.

It is our understanding that to calculate the cumulative total of the 20 percent measure, we would need to have a total quantity of each of the nitrogen containing ingredients with a C:N ratio of 3 to 1 or less, or any nitrogen product. The nitrogen analysis of the ingredient, the rate of application for each input, as well the crop the input is applied to and the desire yield of that crop.

This also needs further discussion. We encourage the NOSB to vote on the petition as submitted. And if there is an additional discussion to be taken up on the broader topic of highly soluble nitrogen fertilizers then that should be added to the NOSB's work plan for future consideration.

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In closing I'll draw your attention to the remaining letters we submitted. We appreciate some additional clarifications where a few gene methods. And we encourage the NOSB to revise and improve the public comment process. Thank you for the opportunity to comment.

MR. ELA: Thank you, Jackie, we appreciate it. And are there questions for Jackie? I am not seeing any, so thank you so much.

MS. SMITH: Oh, Steve, sorry, I was late.

MR. ELA: Oh, Kyla's got one.

MS. SMITH: I couldn't get my raise hand. Hi, Jackie.

You were talking about sodium nitrate and like not seeing abuse of that by a longshot, and so I just wondered if in general you're seeing noncompliances or it being hard to enforce the other soil fertility requirements at 203?

MS. DEMINTER: Well based on that, the old calculation, the way we used to do things, we've never given a noncompliance for over use of Chilean nitrate or sodium nitrate. Nor are we seeing that

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farmers use it in excess of the old way we used to calculate.

Like I think, let me put my chart away.

I got that old chart out recently and I was looking at it and doing some math and comparing field plans and input inventories to what we see on what the farmers are using. And it just wasn't happening where there was a overuse. I mean, they're using it well within the recommendations that we used to calculate to.

So, in our experience, in our area on the farms that we certify, we didn't see the calculation measures as necessary.

MS. SMITH: I think that maybe what I meant to say, or meant to ask, was just a little bit more broadly enforcing soil fertility, the soil fertility requirements and if you all find that to be challenging to enforce those aspects in a operator's organic system plan?

MS. DEMINTER: You're talking overall soil building practices and things like that. I want to go to, or point back to, Nicole Dehne made a comment yesterday, and in that comment she said,

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it's easier to see the infractions than to measure compliance.

And I liked that statement because it is easier to see the red flags when they pop up rather than to try to measure an absolute compliance on whether or not they're using a suitable amount of the different types of fertility.

On the operations we certify we definitely see blended fertilizer programs. Like, there is multiple inputs, there is not just a single use of sodium nitrate, as the only fertility input.

So as part of the overall program, Kyla, I definitely think it's not something that we're seeing as excessive use. And if there is a red flag for, we haven't seen red flags really with just specifically sodium nitrate use.

I think we see overuse of manure more frequently on some of the fields that are up close by the barn or those areas that we've concerned with more frequently than we would for a purchase fertility input. I don't know if that answered

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your question better.

MS. SMITH: Thank you. Yes.

MR. ELA: Logan, then Nate.

MS. PETREY: Hi. Okay. Conner brought up a question, but, all right.

So you're saying that your growers, they have the use of sodium nitrate, which is readily available. And so, it seems like your growers are only using it when they really think it's necessary. And they still use other things for nitrogen. For nitrogen management. Probably to cover crops for rotation and other carbon-base, like manures and things like that.

Would you expect the same management if they were to be, let's just say it were to be allowed, do you think that growers would use it in the same sense, in the same way, and not over use it because they do need the carbon-based products and the other rotational? And to cover crops as well.

MS. DEMINTER: Well, as related to AE, I think our experience is very limited. Actually, it is an allowed input right now. It's a natural

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material.

And we're aware that it's included in some un-relisted products, but we don't have a quantity of how many farmers are using un-relisted products with AE as an ingredient.

I'm aware of one in our database that is in use. And I think I put how many clients.

It was maybe two or three clients. A very small amount of clients using that as part of their fertility program. And that's as part of a multi-material fertility program.

MS. PETREY: Yes, ma'am.

MS. DEMINTER: And so, it's related to that. In our experience with what we're seeing on input inventories, we also see many and multiple inputs in a --

The one client that is using an extract product that is from a manufacturer that is selling both the solids as well as the liquid product there, it is just one of like 15 inputs on there. Input inventory in combination with manure and compost and all of the other things that we expect to see.

MS. PETREY: Okay, thank you, ma'am.

MR. ELA: Nate.

MR. POWELL-PALM: Just wanted to see if you could talk a little bit, Jackie, about your regionality.

I think most is really lucky to have a lot of farms that are integrated with livestock. It's not a livestock desert. And so you have manure in cover crops, is that correct?

MS. DEMINTER: Yes.

MR. POWELL-PALM: Am I reading that right?

MS. DEMINTER: Yes.

MR. POWELL-PALM: Okay.

MS. DEMINTER: We certify, it's many hundreds of livestock farmers. It's our primary business.

MR. POWELL-PALM: Right. And so your client portfolio might not be those cash croppers who don't have a cow within a hundred miles, as sort of a reference point.

One question I was hoping to touch on though is, given the current status of sodium nitrate, do your inspectors actually do any

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calculations on sodium nitrate, on inspection?

MS. DEMINTER: No, we don't require that anymore because it's not part of the requirements. But we do collect information on field applications and verify that through audit.

So we're able to see the rate of application that people are using inputs, as well as compared to their input inventory. And do a little assessment internally with our review staff to ensure that the overall standard is being met, that they're not contributing to contamination in any way through the use of a single input.

MR. POWELL-PALM: Okay. So it's really just looking at, are they single, are they using it as a single input rather than a mass balance on it that would probably be more appropriate at inspection to really get the granularity of it, is that correct?

MS. DEMINTER: Yes.

MR. POWELL-PALM: That you're looking at it as tracking their input list, so they say, I bought this material, and then the next material they say I'm out of this material. But we have

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other options.

Do you have any growers that use sodium nitrate without livestock integration?

MS. DEMINTER: Oh boy. I could get you that information but it would take a little bit of extrapolation from our database.

MR. POWELL-PALM: Okay.

MS. DEMINTER: I'd be sure that they would because one of them was an in-house grower that used one of these similar products. So with that one I could assume that they might not have livestock.

We do certify a large number of vegetable operations as well, and those would be the operations that I could see using these inputs as part of their package for fertility inputs.

MR. POWELL-PALM: But those operations, like you're saying report, do have pretty good access to manure being in southwest Wisconsin?

MS. DEMINTER: Right. Well, we certify nationwide but, though primarily in the mid-west. The upper mid-west here. So in this

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area we do see a lot of availability. We don't have farmers unable to secure their manure inputs or otherwise.

MR. POWELL-PALM: Okay.

MS. DEMINTER: At least not that I've heard in my role at MOSA.

MR. POWELL-PALM: I appreciate it. Thank you.

MR. ELA: All right, thank you so much, Jackie.

MS. DEMINTER: Yes, thank you.

MR. ELA: I appreciate it. We are going to move on to Lawrence Carlson and then Mike Dill and then Jeremy Rowland. So, Lawrence, name and affiliation and give us your comments.

MR. CARLSON: Absolutely. Good afternoon. My name is Larry Carlson, I'm the CTO VP of Quality and Regulatory for Tygrus, LLC here in Troy, Michigan.

First of all, we commend your hard work and expertise and due diligence in reviewing our petition. The following comments offer objective evidence to the three objections that were raised

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with our petition and for reconsideration of your vote.

First, a little bit of background. This is from the requester, Mr. Bill Prosser, president and CEO of Winterfalls Ranch in El Dorado, California.

We produced a liquid fertilizer derived from composted llama manure. One of the challenges we constantly face is shelf-life for our products.

With our current process we can expect approximately eight month self-life for 70 percent of our unopened consumer bottles before the microbes take over. Once the microbes gain ground in our bottles, the product is no longer appealing to our consumer due to the offensive odors, et cetera.

With the addition of your chemistry to lower the ph, we see an increase of the self-life to 24 months in 99.6 percent of our bottles. This allows us to reduce our waste and cost due to recycling of the destabilized product bottles and less energy and resources used to replace the

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products and bottles, product line, delivery trucks, et cetera.

Other products used to stabilize, such as citric acid, were not effective and harms the environment when allowed in the ecosystem. Another benefit of your product and chemistries and fish emulsion hydrolysate, phosphoric acid is currently used in our products to stabilize the product.

We have found that stabilized hydronium is very effective in stabilizing fish emulsion, at the same time, not harming the environment the way phosphoric can and does due to the overuse of leaching from the fish emulsion. The use of stabilized hydronium in fish emulsion will allow for a reduced footprint in the agricultural and consumer industry.

So, the three objection points that were raised in the response of the petition was, number one, that it's not been approved by the EPA because its, hydronium is a biocide expected to have an impact on the biodiversity, it's microorganisms with unknown effects. And the

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concentration.

The answer to that is in their liquid Peruvian Gold Copal products, it's used in 0.98 percent. And I do have a letter, which I don't think you have the benefit of receipt thereof, from the EPA and the inerts branch, from Lisa Austin.

Who is in the inerts branch at epa.gov saying that we are approved under 40 CFR 180.910 as a ph control agent for non-aerosol formulations.

The EPA considers it as an inert with non-biocide properties whenever the end use concentration over 1.40 material is at or below 0.98 percent volume for volume.

And so, the second objection that was raised were many organic acids could probably be used as hydronium as described.

Mr. Prosser has been testing for over three years the things on the national list that are available and found that they did not meet performance expectations.

Thirdly -- thank you very much for your review and your comments. Thank you for your consideration.

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MR. ELA: Thank you, Larry.
Questions?

MR. BRADMAN: Larry, do you want to
make your last third point there?

MR. CARLSON: Yes, just briefly. The
biocide, the objection with the biocide activity,
the product and the lack of EPA approval make it
incompatible with the system of sustainable
agriculture.

And I just wanted to point out the
product has been registered with the U.S. EPA as
an inert ingredient and not an active biocide.

MR. ELA: Okay, thank you so much,
Larry. Very much appreciate it.

MR. CARLSON: Absolutely. Thanks for
the opportunity. Good afternoon.

MR. ELA: Or Lawrence, I'm sorry, I
mispronounced, I just identified you wrong.

MR. CARLSON: No, Larry is just fine.

MR. ELA: Okay. Next up we have Mike
Dill, followed by Jeremy Rowland and then John
Wicks. Mike, are you out there?

MR. DILL: I'm here. Yes.

MR. ELA: I know you're under some time constraints, but I think we got enough time for you.

MR. DILL: All right, perfect. Thank you. Hi, my name is Mike Dill and I'm representing the Organic Produce Wholesalers Coalition. My comments today are on the topics of modernization of supply chain transparency as well as oral and written comment submissions.

We really appreciate the CACS focus on traceability, fraud prevention and even capitol, as well as continuing emphasis on organic integrity and eliminating fraud in the supply chain.

However, we do not support the concept of the organic link system because we think it would create undue reporting requirements, especially for handlers. Further, we do not believe the OLS would detect or prevent fraud with any better reliability than the oversight procedures already in place.

What the organic trade really needs is more focus on proactive systems as opposed to reactive measures such as reporting purchases and

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sales long after the product has entered the supply chain.

We feel that practices, such as those outlined by OTAs organic fraud prevention initiative, provide tools and guidance that could be tailored to each operations unique means. Performing commodity specific vulnerability and risk assessments and then addressing those risk through mitigation and monitoring practices is a more proactive system for identifying fraud and for preventing fraudulent product from entering the supply chain.

In our opinion, widespread adoption of this program would have greater impact than the OLS proposal. That's because OLS would require documenting millions of transactions but would not make that data visible to those in the supply chain who are in the position to react in real time.

As referenced in our written comments, OTA's fraud initiative is just one of several traceability and anti-fraud initiatives already in motion. Let's not duplicate or undermine those initiatives and instead focus on alarming the trade

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with tools that can detect and deter fraud before it happens.

In our opinion, an important element of overseeing the supply is the need for standards for non-processing handling activities. So everything from post-harvesting handline, packing, storage and transportation to receiving handling work in progress and, of course, sanitation.

We offer draft handling standards in our written comments as a starting point for future board work topic.

Lastly, on the topic of oral and written comment submissions, we had some time after this daunting comment period to give it more thought.

We suggest there is a need to reduce the stress, pressure and overall burden to board members, NOP staff and the public that comes with such heavy NOSB agendas.

From our perspective there is a need to allow the public adequate time to analyze the subcommittee positions, engage with stakeholders, develop meaningful feedback, and wherever

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possible, contribute viable solutions or alternative concepts.

So in the spirit of new ideas, how about the idea of spreading the workload across four meetings annually. Two meetings dedicated to sunset materials and petitions and two meetings for topics geared toward advancing organics. Thank you. And sorry for the interruption.

MR. ELA: No worries. My (inaudible) is going to get on you for a proxy speaker there on your lap, but no worries.

(Laughter.)

MR. ELA: Kyla has a question for you.

MS. SMITH: Hi, Mike. I just wanted to say thanks so much for including the proposed handling requirements. Was I understanding the written comments correctly that you all had submitted those in response to the SOE proposed rule?

MR. DILL: That's correct. Yes.

MS. SMITH: Okay.

MR. DILL: As we were going through SOE and kind of analyzing the whole purpose of it, we

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felt that there was one big missing part. And that is, you know, the way that it all applies to handlers who kind of have, play a big role in organic integrity.

And as you know, every operation, regardless of skill, performs some function of handling. And if you've read the regulations you know there is not much in there specific to handling.

MS. SMITH: Yes, you bet. As a certifier I'm a big fan of like more clarity and more, in the regulations that makes our job a lot easier.

So anyway, we'll see, I guess I was just going to say, we'll see what comes out in SOE. But depending on what, or if, or what was included or not included, being on the handling subcommittee, I would be definitely excited to explore this more and take this up.

MR. DILL: Thank you. And if you have any questions, feel free to reach out to us.

MR. ELA: Any other questions? It looks like you're off the hook, Mike. Thank you

so much.

MR. DILL: All right. Thank you.

MR. ELA: Take care. We are going to go next to Jeremy Rowland and then John Wicks and then Russ Hamlin.

It looks like we're skipping over Bob Quinn because he is not able to be on the call.

But if that changes, let me know. So, Jeremy, name and affiliation and give us your comments.

MR. ROWLAND: Okay. Can everybody hear me okay?

MR. ELA: You're in good shape. Go ahead.

MR. ROWLAND: Good, okay. Thank you. And thank you to the Board for your work in this marathon few days and everything you do behind the scenes.

This is Jeremy Rowland, I'm with Bion Environmental Technologies. It is our position that the nonsynthetic ammonia fertilizers are compatible with organic agricultural production.

They provide a sustainable recycled source of nitrogen produced from a renewable resource,

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manure.

Today there are ten nonsynthetics prohibited for use in organic crop production. Eight of these have been prohibited since the NOP final rule was published in the year 2000.

There was no opposition to the subsequent addition of the other two. Calcium chloride in 2003 and rotenone in 2018.

The ammonia extract petition, the technical report and the resulting subcommittee proposal are unprecedented and misguided with that perspective. Adding ammonia fertilizers to the short list of prohibited non-synthetics would be arbitrary and capricious and would lack a rational comprehensible and consistent legal foundation.

OFPA is clear that a substance may only be added to the prohibited list if the USDA secretary determines in consultation with HHS and EPA that it is harmful to human health or the environment and is inconsistent with organic farming practices.

Ammonia fertilizers cannot clear these hurdles. And it's not reasonable to conclude that

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ammonia fertilizers are harmful to human health or the environment.

Indeed, the proposals discussion of human health effects is minimal and does not seriously raise any issues. Further, the proposal does not demonstrate that the production or use of ammonia fertilizers causes environmental harm.

Regardless, I want to note that the burden is on the NOSB, and ultimately the NOP, in consultation with HHS and EPA to determine that ammonia fertilizers are harmful. That is the burdens of proof and persuasions are on the proponents of the proposal.

This particular proposal improperly attempts to shift the burdens of proof and persuasion for adding a nonsynthetic substance to the national list from the proponents to those using the approved nonsynthetic product.

Further, the NOSB, as a federal advisory board, doesn't have legal ability to make law or issue regulations. The NOSB is used to the compatibility criteria are merely guidance. From what I've been instructed, the application of

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compatibility criteria here is legally deficient.

Finally, I want to say the proposal ignores the fact that nonsynthetic ammonia fertilizers at issue will only be applied under a certifier approved organic system plan. This application reality almost certainly means that in the alleged environmental concerns for ammonia extract use would be mitigated or eliminated by its use within the OSP.

So it's our position that the NOSB should reject this proposal or in the alternative, return it to the ammonia, return the petition to the crop subcommittee for further consideration.

Thank you.

MR. ELA: Thank you, Jeremy. Are there questions? Asa has one for you.

MR. BRADMAN: Yes. I just want to get your concerns about environment and human health effects.

I mean, we are talking about a soluble nitrogen that is similar to, chemically to other synthetically derived nitrogen fertilizers. And of course, nitrogen leaching is a huge issue in

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terms of effects on surface waters, rivers, the ocean, drinking water with a lot of environmental, and public health, factors.

I mean, I've reviewed cases in California where kids have died from nitrogen contamination.

So maybe you're trying to limit your comments to the ammonia extract in particular, but there are a lot of concerns about nitrogen fertilizers that are definitely legitimate. And --

MR. ROWLAND: Yes.

MR. BRADMAN: -- and how they apply to this, maybe that's more in question. But nitrogen fertilizers in general have --

MR. ROWLAND: Yes.

MR. BRADMAN: -- substantial and major impacts on the environment and health.

MR. ROWLAND: Yes. No, that's a great point, Asa. I a hundred percent agree with you. And I think you're right.

The origin of what we're doing is in an environmental restoration activity. We are

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remediating nitrogen in groundwater. The nitrates. We're remediating the nitrogen that gets lost downstream that goes into the rivers.

On our project in Pennsylvania we were able to obtain environmental credits for our project. So what we're doing is we're taking that nitrogen that's lost downstream, that's lost into the groundwater that you referenced, and we're capturing it for a more efficient use.

This is manure nitrogen, so instead of it being lost downstream, we're capturing it and being able to use it more efficiently. And that is what we're doing. So this is an environment restoration exercise, what we're doing.

MR. ELA: Nate.

MR. POWELL-PALM: Just a quick question on that last point you just made there.

Are you saying that you actually pull the nitrogen from the water?

MR. ROWLAND: No.

MR. POWELL-PALM: Or you pull it from the manure so it doesn't end up in the water?

MR. ROWLAND: No. The manure, or

nitrogen, as everyone here knows, is extremely reactive. And it gets lost quickly.

It volatilizes in the barn, it volatilizes in the lagoon, it volatilizes after it's on the field. It dissolves, goes to the ground where there is a lot of pathways.

What we're doing is capturing the manure quickly. We're getting it captured quickly, and we process it before the nitrogen can escape to the environment. So we're not creating a new nitrogen source we're just capturing the ammonia nitrogen before it's lost.

And as far as the data behind that, that was part of our Pennsylvania project where we got environmental credits for that because we showed the just applying manure, what happens. The various agronomy guys say, you know, maybe 15, 20, 25 percent of the nitrogen is taken up, the rest is lost.

We're intervening in that process. So the nitrogen we have is manure nitrogen and it's restoring the land while it's enhancing the use and efficiency of unfarmed nitrogen.

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MR. ELA: All right. I have one quick question myself that I've been puzzling over. So you're talking about the nitrogen use efficiency but how is the ammonia extract, when it is applied to the crop, how is, I mean, some has got to be lost in that application as well.

I mean, you keep noting that manure and these other are losing ammonia at the application as well. But if I were to going to put it through a micro-sprinkler or something like that, it seems like it would be susceptible, that same potential loss.

MR. ROWLAND: Yes. So that's up to the agronomist and the organic system planner to put it on at the right time. Manure, as you know, isn't always placed on the land when it's time for uptake.

So you can put it on at the optimal time and that enhances the efficiency.

MR. ELA: Okay. But it seems like that each, and I'm a little unclear. I mean all these things, if properly applied, is the mantra.

And we keep applying, it seems like we keep comparing something that's improperly applied

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with something that's properly applied. So I guess, I'm not in love with the comparisons that aren't apples-to-apples, but --

MR. ROWLAND: Yes.

MR. ELA: Well, I got a couple other questions for you. It looks like Amy and then Sue.

MS. BRUCH: Yes. I just, thank you for your comments today. I just had a question about, and we actually asked this earlier, I think in the meeting, about, just how do you stay in your capturing some of the ammonia because you're getting after the product in the barns.

But how I understand, every time you move a pile of liter that ammonia is released. So how many touch points would you estimate are done with the primary product prior to you processing and capturing the ammonia?

MR. ROWLAND: Well, it depends on the species in the barn, et cetera. But the quicker you capture the manure and get it in a digester, the less nitrogen is lost to the environment through volatilization.

So it just depends what kind of scrap

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systems. In California, the central coast, a lot of flush systems, et cetera.

If it's from egg layer manure it can be captured one way. So it just depends on the species.

The bottom line though, what's consistent, the quicker you capture it and get it stabilized in a digester the less nitrogen is lost to the environment.

MS. BRUCH: Okay. And then I know on conventional systems when they're applying some of these higher concentrated liquid streams of nitrogen, they're actually applying stabilizers with them.

And unfortunately in organics I don't believe that there is a stabilizer for these liquid components. So would you agree that there is a chance for this product to leach fairly quickly without a stabilizer once it's applied?

MR. ROWLAND: Well, if it's applied in the ground, inconsistent with an organic systems plan, I think all of that is worked in, in a more controlled environment than dealing with manure

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in a lagoon or manure in a barn. So, yes.

I mean, you're not -- we're a nonsynthetic process, as are the others. We're verified nonsynthetic, so we're not creating a conventional fertilizer with this.

So we stabilize the nitrogen with a bicarbonate ion. That's why we have ammonia bicarbonate. But I know there are other ways to do it.

But yes, once it interacts with water, say, that will start to break down and become available.

MS. BRUCH: Okay, thank you.

MR. ELA: Okay. We are running well over time here, so Sue and then Logan. But really quick or I'm just going to say we'll have to end.

MS. BAIRD: I'll just pass. I think that, and maybe ask my question. I guess I'm a little conflicted on this application.

It does seem like if you got ammonia product that would create less nitrate runoff than a manure would that runs into our stream, you know, we have a lot of poultry in our area and it's a

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huge issue. But maybe not. I'm really conflicted, so sorry.

MR. ELA: Logan, did you have something? It doesn't sound like --

MS. PETREY: Sorry. Yes, sir, I'm sorry. I'm trying to hit my unmute button. Yes, okay.

So, with the fact that you're able to create a product, the ammonia extract product and it has nitrogen in it, and the fact that you're also able to have a solid with nitrogen in it, doesn't that prove that you are capturing ammonia that would otherwise be released into the atmosphere?

MR. ROWLAND: Just by the massed balance, Logan, thanks for the question.

MS. PETREY: Correct.

MR. ROWLAND: Yes. So just from the massed balance, if you follow what the nutrient management planners have as far as what gets land to pipe, from the lagoon for example, and you compare it to as voided nitrogen from the manure, it's about, in general, half the nitrogen is gone

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before it's even land applied.

So the nitrogen that we're dealing with in our product is a lot of that delta. That's stuff that's lost in the air, we're stopping that ammonia loss and we're turning that into a stabilized manure, nitrogen product. So that's what I mean when I talk about a renewable enhanced nitrogen use product.

When you use, I'm not familiar with all the states agronomy guys, but in Penn state it's 15 percent or so of the nitrogen is assumed to be taken up from the manure. And so, yes, we have a lot more nitrogen available then would otherwise be available.

MS. PETREY: Yes. Thank you.

MR. ELA: All right. Just to give people information, we've got three more speakers. We're just a little bit before the hour, and we're already a half hour over time.

So I think the, I just want to let the wait list people know, I don't think we're going to get to you. We always try to, but 98 speakers later here we've made a pretty good cut at it.

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I apologize to the wait list people.

One thing you can do is, in order to try and honor you're wanting to comment is, if you do want to submit any further written comments, send them to Michele and she will get them on the public docket for us. So again, apologize not to get the wait list people, but we're going to go through our last three speakers and call it a day.

We got John Wicks, Russ Hamlin and then the final, Harriet Behar. So, John, go ahead.

MR. WICKS: Hello. My name is John Wicks. I've been running the family farm in Montana since the passing of my father in 2006.

I farmed strictly conventional till 2016 when I began experimenting with organics to break free from the high input conventional model that was bankrupting so many family farms around me.

I do not support the use of ammonia extracts and organic. I got organic to escape high input use and costly fixes of throwing money at the problem, while throwing management out the window.

I do not use any purchased organic

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fertilizers. I believe over time these ammonia extracts will become cheaper and more widely used if approved for organic.

This will not only entice get rich quick farmers to look to take advantage of organics, but it will soon be used in large scale operations flooding the market with cheap commodities hurting prices across the board. I don't believe that chasing yield is the answer.

I also got into organic to combat climate change by improving soil health. I don't believe that applying purchased fertilizers is the best for soil biology.

Making cheap fertilizer is more available for farmers that will make them pressured by bankers and others to give up on good stewardship practices of growing their nutrient, which helps the environment. Instead they will go with the easy fix that over time will seal the fate of family farms and the integrity of the organic label. Thank you.

MR. ELA: Thank you so much, John. Questions? Nate has one for you.

MR. POWELL-PALM: Yes. I like to think that all Montanans are as thrifty as you are, John, but I feel like I have proven that wrong.

But thank you for your comments. I think that the question I, the piece of your comments that stood out to me was this idea of needing the ammonia extract.

Could you describe your crop rotation a little bit, and sort of, you went from that high input style, when you were conventional, over to organics. What was that change like for you and what practice did you have to figure out and learn about in order to be organic?

MR. WICKS: So, yes, I guess I'll start with the crop rotation and things. I got out of that because it was just kind of bankrupting our farm.

And I used cover crops with nitrogen fixing legumes, which then I used cattle to graze down. So we do have cattle on the farm, but I'm getting paid to have them run rather than paying for their, another byproduct of them.

And I just, I guess some of my views

don't really go towards feedlots and some of their byproducts, so I don't buy anything from any business that I don't deem sustainable that I wouldn't do. I guess I forgot the last part of your question.

MR. POWELL-PALM: That's okay, that covered most of it. I was just thinking about, what practices did you have to learn about, and ultimately adopt?

Because you probably weren't doing all of these different rotations when you were conventional --

MR. WICKS: No.

MR. POWELL-PALM: -- what did you have to learn to become organic?

MR. WICKS: I basically had to learn to farm again. And start over with soil health in mind.

And, I mean, all the, I had to go back to square one and it was rotations, cover cropping, what do all those cover crops do, integrating livestock. And it was a lot.

MR. POWELL-PALM: Do you think you

would have done all of that work and learning if you could have just gone from anhydrous ammonia over to ammonia extract?

MR. WICKS: No, I don't think so.

MR. POWELL-PALM: Thank you. Really appreciate your comments.

MR. WICKS: Thank you.

MR. ELA: Okay, Logan.

MS. PETREY: Do you grow vegetables?

MR. WICKS: I do not, no. I grow small grains, legumes and oil seeds.

MS. PETREY: Okay, thank you. Because of the, which I assumed so just because of the livestock. There is a lot things to take into concerns with vegetable growers, we can't really use that source of nitrogen. But thank you.

MR. WICKS: Yes.

MR. ELA: All right, thank you, John.

MR. WICKS: Thank you.

MR. ELA: Much appreciated.

MR. WICKS: Yes.

MR. ELA: Glad you called in. We have Russ Hamlin and then Harriet Behar. So, Russ, name

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and affiliation and the floor is yours.

DR. HAMLIN: Yes, can you hear me?

MR. ELA: Yes, we've got you. Go ahead.

DR. HAMLIN: All right. My name is Dr. Russell Hamlin, I'm the general manager of farming for Grimmway Farms in Bakersfield, California.

I only have a few comments today that I want to discuss. Grimmway has submitted other written comments. And I would encourage the Board to reflect on those as well.

Grimmway Farms is the largest vegetable producer in the United States. The largest organic vegetable producer.

We supply over 65 different vegetable varieties for our customers year round. We grow in eight different states under a variety of different field and environmental conditions.

We use hundreds of millions of pounds of carbon-based traditional organic fertilizers and soil amendments every year. And to be sure, we know their benefits and their limitations.

We recognize that some growers do not

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want or need soluble nitrogen products in organic farming. Our message to the NOSB is that we do need these products and so do many other farmers across the United States.

Available nitrogen, like that found in guano and ammonia extract, is imported in organic crop production. The foundation of our need relates to crop quality and customer expectations.

And fortunately, the conventional market has created the expectation of perfection when it comes to the appearance of fresh organic fruits and vegetables. Like it or not, that's the standard.

Because of this standard, any shortage of plant nutrients may threaten the marketability of entire fields. And traditional carbon-based fertilizers do not always deliver as expected.

We cannot afford, ever, to have periodic nutrient deficiencies and organic vegetable production if we are to meet customer expectations. The limited use of ammonia extract products would help solve these problems.

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Our message to the NOSB is that without soluble nitrogen fertilizers, like sodium nitrate and ammonia extract, farmers will be limited in their ability to expand this category, particularly into nontraditional growing areas.

If the goal is to expand the organic market and our footprint, if the goal is to provide healthy organic food to the masses and not just those with means, then we must give organic growers the tools that they need to succeed. Ammonia extract could be one of those tools.

The only other point that I wanted to make was that if we continually decide to limit the amount of available nitrogen and organic fertilizers, it may inadvertently lead to the over use of permitted organic fertilizers by farmers.

This overused of carbon-based fertilizers could stain our reputation of being sustainable. It could lead to environmental problems and pollution. And would effect the ability of some farmers to comply with regulatory standards in states like California.

Our advice is that the NOSB would table

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their decision on ammonia extract to gain more information about how your decision will affect the industry as a whole. And I absolutely appreciate all of your help on this subject.

MR. ELA: Thank you, Russell. Good timing on that. We've got a question from Nate and then Amy.

MR. POWELL-PALM: Russell, could you describe, say, your complete rotation. So year-to-year, what is your crop rotation?

(Laughter.)

DR. HAMLIN: Nate, we have 6,000 plantings a year. We grow 60 to five different crops. We try to rotate eight to ten different plant families.

If you could pick a particular planting I could tell you the rotation.

MR. POWELL-PALM: Totally. How about nitrogen feeder versus nitrogen fixer?

DR. HAMLIN: Nitrogen, I'm sorry, can you explain?

MR. POWELL-PALM: A legume, do you have any legumes in your crop rotation?

DR. HAMLIN: We do.

MR. POWELL-PALM: Okay. And where does those land? How often do, by plantings, if you pick just any of them, how often do they get planted?

DR. HAMLIN: The legumes are planted often. They are typically planted in front of the longer season crops that we have, like carrots, of which we're largest producer in the world. But we also rotate with other cover crops.

Something that's important to mention is that the ability to plant cover crops in California is also very largely dependant on water availability. It is not always guaranteed that you have the ability to do that.

MR. POWELL-PALM: Thank you.

MR. ELA: Amy?

MS. BRUCH: Yes, thank you, Dr. Hamlin, for your participation today. Sorry, I was going to build off of Nate's question in regards to these crop rotations. And not necessarily thinking of the crop rotation, just your cover crop, but just actually complementary crops.

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We heard the mid-west does crop rotations because of nutrition. And then the east and west coast are using crop rotations mainly to suppress disease and pests.

So when we think about your operation and the soil quality of California, or Florida, or some of those places with the lighter soil, sandier soil, some get more rain, some don't. Do you see the need to maybe alter some of the crops that you're growing, because it seems like fruit and veggies really need a lot of nitrogen. Especially if you're growing them consecutively.

So I was just questioning the longevity of your soil over time. Are you seeing some advancements, improvements, et cetera?

DR. HAMLIN: Well, you know, I come from the southeast where Logan is, on beach sand. And so anything is an improvement on that.

And so as far as I'm concerned, California has some of the best soils in the world.

And in California, I would bet my paycheck that Grimmway has some of the best soils of any organic farmer.

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Do we need to add to our crop portfolio, we're always looking to add to our crop portfolio.

We can, you know, a lot of the driver is what customers want. If customers don't want certain crops, they're not in consideration.

And then the other option is just adding different cover crops that may add value to our growing operation. But yes, we're always on the lookout for other crops.

MS. BRUCH: Okay, thank you.

MR. ELA: Sue, last question.

MS. BAIRD: I do a lot of inspections in California, Salinas Valley and Arizona. And I know that it's pretty common for you guys to have to use sodium nitrate.

When the NOSB did their vote, did you stop using it for a while or has it always been still allowed for you?

Did you get decent carrots and/or leafy greens during that time?

DR. HAMLIN: Yes, Ms. Sue, I wish that I could speak to that. The truth is I've only been in California for about two years and so if you

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would like, I could get others who have been here longer to write you the answer to that. But I don't know that I can answer it well.

MS. BAIRD: Yes, I think that would be a valuable input to this discussion. Thank you.

MR. ELA: Thank you so much, Russell, we do appreciate your input. We are going to go to our final commenter of the day. Former Board Member Harriet Behar. Harriet, name, affiliation and make your comments. You know the drill.

MS. BEHAR: Okay. Hello, NOSB Members, I am Harriet Behar, organic farmer, inspector, educator and advocate, and a former NOSB chair.

Once the materials are added to the national list it is quite difficult to remove or improve its sanitation because producers have become reliant on the material, as well as the high barrier borrower of a two-third affirmative vote to remove.

Proposals should be sent back to subcommittee rather than pass something that does not address the issues.

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More organic products in the marketplace is a good goal, but we cannot let the integrity of the organic standards be lowered to meet this goal. The many organic producers whose operations meet or exceed the standards are already experiencing a lower trust in the organic label and a lower price for their products in the marketplace due to fraud, allowing some organic hydroponics and inconsistent enforcement of the pasture rule and origin of livestock. You must always err on the side of strict and enforceable standards.

Ammonia extract. Highly soluble inputs do not encourage an agricultural system based on healthy soil biology and tilth.

As a farmer, I know there are times when extreme conditions can lead to lost production.

So I think a small allowance, but only in times when the extreme conditions can be proven to exist should be developed. The current allowance in the proposal, even at only 20 percent of the nitrogen needs, does not sufficiently limit the use.

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Biodegradable mulch film. I do not see that many of the issues have been answered in a satisfactory way. Since the mulch does not degrade in water, why do pieces of it blow into a body of water causing harm to many types of wildlife.

We do not understand the effect of use year-after-year on this sensitive balance of the soil food web. The material will be degrading into much larger tracks of land and that cannot be compared to paper pot use.

The NOSB needs to express their support for rulemaking on the disincentive to destroy native ecosystems. These precious ecosystems show us how to repair our environment, and provide for a beautiful and diverse planet.

The NOSB must also have greenhouse and container growing systems added to their work agenda. This is an area of inconsistent and questionable enforcement in organics. Thank you for your time and commitments.

MR. ELA: Thank you so much, Harriet.

Very much appreciate. Questions for Harriet?

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MS. BEHAR: Everybody is tired.

MR. ELA: That is true. But just trying to think how to phrase my question, Harriet.

Back to the soluble fertilizers. In the upper mid-west, and there is certainly speciality crops up there as well as row crops and dairies, et cetera. I mean, it's probably one of the more diverse cropping areas I know of.

With really, with good crop rotations, and I think several people mentioned management, do you think the nitrogen needs can be pretty mild met up there by thoughtful management?

MS. BEHAR: Yes. Yes, I do. But I know that there are times when we can have a very cold July and a lot of plants flowering. I mean, we're talking not only about nitrogen but other soluble fertilizers too.

And so, I think that having some allowance, especially with climate change to have a variance to allow for its use, but I don't want to see producers become reliant on the soluble fertilizers because they will actually then end up missing out on the beauty of organic farming.

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Which is having nature's tools provide what we need and mimicking those interdependent systems that we get from healthy soil, native plants, all of that in the system.

But that we get heavy rains, we get unexpected colds, that sort of thing, where a little shot could make the difference between having a crop for the season or not. But I do want it to be very clearly spelled out that it's used only in those emergency situations.

MR. ELA: Great. All right, thank you so much, Harriet. We appreciate it. We appreciate your thoughts.

MS. BEHAR: Thank you. Good seeing everybody.

MR. ELA: Okay. With that, and again, I apologize to the wait list people that we couldn't get there, but I think we made a pretty good cut across the spectrum.

So that completes our public comment webinar. Thank you to the Board for staying with us this whole time, that's very impressive. And for the stakeholders, I know many of you listened

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the whole time too, so that's particular impressive.

We are going to reconvene on, help me out, Tuesday. I don't know the date off the top of my head but --

PARTICIPANT: Tuesday --

MR. ELA: -- there we are. Thank you.

On Tuesday, October 19th. All the Zoom links are on the website. And we will have the Board deliberations based on all the written and public oral comments we've received.

Jenny, do you have anything to add before we adjourn?

DR. TUCKER: Steve, I just wanted to say thank you. That was a remarkable two days of public comments. We appreciate the range, the diversity of feedback.

And we so, so, so are grateful for your leadership, Steve. So big round of applause for Steve's leadership as we all exit this phase of the meeting. We look forward to seeing all next Wednesday.

So thank you so, so much for everyone

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who spoke up, for everyone who listened. And just for the entire community. Thank you.

MR. ELA: Yes, thank you to everybody as well. It's wonderful hearing all the diverse comments and thoughts that we all do take into consideration.

So with that, we will see you next Tuesday. And hope everybody has a good weekend.

All right, take care.

(Whereupon, the above-entitled matter went off the record at 6:11 p.m.)

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UNITED STATES DEPARTMENT OF AGRICULTURE

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NATIONAL ORGANIC STANDARDS BOARD

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FALL 2021 MEETING

+ + + + +

TUESDAY
OCTOBER 19, 2021

+ + + + +

The Board met via Videoconference, at
12:00 p.m. EDT, Steve Ela, Chair, presiding.

PRESENT

STEVE ELA, Chair
NATHAN POWELL-PALM, Vice Chair
MINDEE JEFFREY, Secretary
SUE BAIRD
ASA BRADMAN
AMY BRUCH
BRIAN CALDWELL
GERARD D'AMORE
CAROLYN DIMITRI
RICK GREENWOOD
KIMBERLY HUSEMAN
LOGAN PETREY
KYLIA SMITH
WOOD TURNER

ALSO PRESENT

JENNIFER TUCKER, Deputy Administrator,
National Organic Program, USDA; Designated
Federal Official

JENNY LESTER MOFFITT, USDA Under Secretary,
Marketing and Regulatory Programs

MICHELLE ARSENAULT, Advisory Board Specialist,
USDA

MARNI KARLIN, Senior Advisor for Organic and
Emerging Markets, USDA

KAREN ROSS, Secretary, California Department of
Food and Agriculture

JARED CLARK, National List Manager, Standards
Division

ANDREA HOLM, Materials Specialist

DAVID GLASGOW, Associate Deputy Administrator,
National Organic Program

ERIN HEALY, Director, Standards Division

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P-R-O-C-E-E-D-I-N-G-S

(12:01 p.m.)

MS. ARSENAULT: Well, I have the top of the hour, so I think we can get started now and it looks like some folks are still joining us. Welcome everybody to day one of the National Organic Standards Board meeting. I am going to now hit the record button. So we are going to get started there. All right. All the attendees for the Board meeting beginning today are in observation mode only, so you guys don't have access to camera or mic. But at the bottom of your Zoom screen -- I'm just going to take a peek at mine Zoom screen -- you should have a chat feature. So you're welcome to chat with each other.

The Board does not take questions from the audience during this portion of the meeting these three days, but feel free to chat with each other, say hello. We'll also add the Zoom phone numbers in case you are having audio issues and you want to dial in on the telephone. If you're having issues with Zoom, you can also contact their support. The help center is very helpful,

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actually. The address is on the screen there or if you search for support.zoom.us.

After the conclusion of the meeting on Thursday, we will have transcripts available. They take a couple of weeks to come to us and we'll post those on the NOSB meeting page once the meeting is complete and we have the official transcripts available. Right. I'm going to turn it over to Jenny Tucker to reconvene us from comment webinars last week. Jenny.

DR. TUCKER: Okay. Thank you, Michelle. Michelle, I can't find Jenny Lester Moffitt on the list. Can you see if you could find her and take over that process for me?

MS. ARSENAULT: Will do. Thank you.

DR. TUCKER: Yes. So she says she's on but I can't find her on the list. So between Michelle and Marni, if you guys could kind of figure this one out while I am kicking off the meeting that would be very very helpful.

MS. ARSENAULT: We can't lose Jenny.

DR. TUCKER: Okay. All right. So I will put finding Jenny Lester Moffitt in Michelle

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and Marni's capable hands. I've been looking for her under the J's and don't see her. So you guys take over there and in the meantime, I will kick off the meeting. So again, Michelle, thank you.

My name is Jennifer Tucker. I'm the Deputy Administrator of the National Organic Program. Welcome to all our National Organic Standards Board members and our public audience. After two days of successful public comment webinars last week, I am very much looking forward to being with you these three days.

I'd first like to again acknowledge and celebrate our three Board members who are beginning the last meeting of their terms. First, our Chair for the last two years, Steve Ela, Sue Baird, and Asa Bradman. So I want to thank you for your hard work and service for the last five years. So this is also where we get to practice our Zoom applause, and so everybody, let's applause to our hands into the camera and you can do this at home even though we can't see you. We know you're there in spirit.

So let's give our outgoing members of a round applause.

And so this webinar continues our public meeting that started on October 13th and runs through October 21st. Meeting access information for all meeting segments is posted on the NOSB meeting page on the USDA website. Transcripts for all segments will be posted once completed. This meeting, like other meetings of the National Organic Standards Board, will be run based on the Federal Advisory Committee Act and the Board's Policies and Procedures Manual. I will act as the Designated Federal Officer for all meeting segments.

So we are very lucky to have two very special guests with us for opening remarks. So originally we were planning on having this meeting in Sacramento, California so we wanted to have a California state leader at today's meeting. As such, we're going to hear from Karen Ross who is the secretary of the California Department of Food and Agriculture. Then we're going to hear from Jenny Lester Moffitt, who was recently confirmed by the Senate as the USDA Under Secretary for Marketing and Regulatory Programs.

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After we hear from these speakers, I'll review the agenda and introduce the federal team.

So before I introduced Secretary Ross, let's see if we have figured out how to find Jenny Lester Moffitt. Have you guys figured that one out? We good?

MS. ARSENAULT: Yes. She is on the call under somebody else's name and we're going to rename her now.

DR. TUCKER: Yay. Okay. And so our Zoom glitch for the morning fixed. Yay. Not bad for only, you know, 12:06. We're doing very, very well. So now I will turn to introducing Secretary Ross. And so Secretary Ross was originally appointed as Secretary of the California Department of Food and Agriculture in 2011. When she was reappointed in January 2019, the governor cited her strong leadership in both national and international agricultural issues in areas including environmental stewardship, climate change adaptation, and trade.

Before joining CDFA, Secretary Ross was Chief of Staff for USDA Secretary Tom Vilsack

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during his first term. Before that, she was President of the California Association of Wine Grape Growers from 1996 to 2009, and was Vice President of the Agricultural Council of California from 1989 to 1996. So during Secretary Ross's tenure, the department is focused on core functions to protect and promote California agriculture.

She has strengthened partnerships across government, academia, and the non-profit sector to maintain and improve environmental stewardship and develop adaptation strategies for the specific impacts of climate change. She has also initiated programs to provide greater opportunities for farmers and ranchers to engage in sustainable environmental stewardship practices through water conservation, energy efficiency, nutrient management, and ecosystems services. So please all join me in a Zoom round of applause to welcome Secretary Ross. Welcome.

MS. ROSS: Thank you, Jenny. I am so happy to be here for just a couple of minutes. Very briefly, of course. I was so looking forward

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to welcoming you in person over a great meal of California certified organic healthy food and wine. I do have a passion for the food and wine sector of California agriculture. So I'm hopeful that in the near future we will all be able to gather together, but welcome to California virtually. Look forward to your next visit.

And I wanted to spend just a few minutes to talk a little bit about agriculture here in California, and specifically the importance of the organic production that we are very proud of here in California. We are a \$50 billion industry. That's just the farm gate value without value added. And we have had the state organic program in place -- which many of you are probably very familiar with -- for over 30 years.

And we work very closely with stakeholders led by our California Certified Organic Farmers about ten years ago during my first term in office, to really streamline that program and really re-evaluate, do we still need a state organic program?

And we came to the conclusion that for

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the consumer trust and to make sure that we could use our boots on the ground to ensure the integrity of organic, it was an important program for us to continue. But we have streamlined it and we have really improved, I think, coordination with our advisory council, which is a very important part of our committee.

In this past year, our state organic program and our county staff -- our county agricultural commissioners make up a very important part of our ability to enforce and maintain the integrity of the organic program.

We actually conducted 1571 inspections. We investigated 129 complaints, and we collected 514 samples for residue testing. That's an important snapshot of what our staff does in cooperation with our county commissioners. And I would add our analytical chemistry lab is an important tool for us to be able to use, not only for our programs, but with our partners at the Department of Pesticide Regulation. Out of the work that was done this year, there are two very high profile cases that many of you may have read

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about.

One was early this year, and I will say it was a bit of a shock to me. After doing our investigation, we actually had to do a stop use notice and a state wide quarantine of a product that was found to be adulterated with diquat and glyphosate. I don't know. It's too early in the morning for me. I know it's noon for some of you, but it's still 9:00 and I've only had one cup of coffee. That was an alarm to us, but it also reinforced the importance of the investment we've made in our state organic program and having the capability both through boots on the ground, as well as -- I'm going to stress again, the importance of our chem lab to being able to quickly move when we found this.

And now we are in the process of working very closely with our Attorney General's office on this very serious case. One that really set off our alarm bells. And unfortunately later this year in June, we had a second case where we're working in conjunction with the Department of Pesticide Regulation on weed and grass killer that

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were also found to be adulterated with a number of products including glyphosate, carbaryl, and several others. So we continue to embrace boots on the ground, responding to complaints as they come to us. And using science to be able to do the best enforcement job that we possibly can.

That's so important to us because California is the largest producer of organic crops. We have grown 40 percent. In 2014, we had 1.6 million acres, and now we have 2.8 million acres and we continue to grow that. It's important to us to be able to have a program that supports our 5400 producers, our 1300 handlers, and our 216 processors. I wanted to chat and close my comments with the importance and the appreciation that I have for our advisory committee. This is made up of people from all of our stakeholders, farmers, processors, handlers, some public members.

The purpose of our advisory committee is to give me updates on where they would like to see the program go. But we have increasingly been focusing on how to improve enforcement and make sure that we're as effective and as efficient as

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we can be; what we can do to improve education outreach to really sing the praises of all that organic production and processing in organic products contribute to our way of life; and we are increasingly focused on research and what we can do to help grow this sector.

So the COPAC -- we call them COPAC -- the advisory committee has formed recently a subcommittee that's really going to be digging into what is the next chapter here in California with regard to research, with regard to outreach and education, and to continually improve our standards and the enforcement of those standards.

So I'm looking forward to working with that subcommittee and the recommendations that it comes up with.

And then I went to close around the very important topic of climate change, the importance of our organic producers, and the role that they're playing with that. We have in our budget that was just signed by the governor several weeks ago, we have a total of \$1.1 billion to invest in climate smart agriculture.

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This includes on-farm water use efficiency that reduces energy use and it reduces overall water use and reduces greenhouse gas emissions; our Healthy Soils Program, which the momentum behind that has just exploded, will have a \$160 million for incentive grants for that program over the next two years. Methane reduction.

And we have a couple of new programs I'm especially proud of. One for pollinator habitat will have \$30 million. We have a newly established California Pollinator Partnership. Obviously our organic producers are critical player in all of that that we do for native as well as all those domesticated pollinators that we shifted to the state of California.

And a new program will have \$42 million for ag conservation planning grants. This could be a carbon farm plan. It could be a whole farm conservation plan. We could focus exclusively on nutrient management. But guess what? In the first year of this program, the legislature asked that we prioritize \$7 million for those farmers

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and ranchers who want to do an organic transition plan and I'm very excited about us being able to bring these resources to the table to leverage what our federal park natural resource conservation service do.

As we know that farmers and ranchers can lead on solutions to climate change. We are the ones with our on-farm practices, especially with our intent to do soil health that can actually sequester carbon and create resiliency to climate, resiliency to drought. And I'm really proud of all the work that we do and the staff that we have and the partnership with you, Jenny, and everyone at USDA. Looking forward to the outcomes for the National Organic Standards Board. I know you always have lots to discuss and vigorous debate.

I appreciate our ability to progress for science, but never abandon those indigenous practices that have made agriculture the great contributor to the quality of life that every person on the globe gets to benefit from. So thanks for holding your meeting virtually in Sacramento. I hope we get a rain check for the

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in-person meeting so we can share some good food and wine next time you are in the state. Thanks for giving me a few minutes. I really appreciate the opportunity.

DR. TUCKER: Thank you so so much, Secretary Ross. Let's all give Secretary Ross some Zoom applause. Ms. Ross, you have to imagine like a 160 people all waving at their screens and thanking you. So thank you so much for being with us and we do look forward to coming out and seeing you in person in California in the future. So thank you.

And now I will introduce our new Under Secretary for Marketing and Regulatory Programs, Jenny Lester Moffitt. And so Jenny Lester Moffitt is again our new Under Secretary. She previously served as Under Secretary of the California Department of Food and Ag, where she was also Deputy Secretary from 2015 to 2018. So before that, Jenny spent ten years as managing director at Dixon Ridge Farms, which is her family's organic walnut farm and processing operation. So growing up and working on the farm, Jenny learned firsthand the

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importance of taking care of the land and the people who farm it.

So additionally, Jenny served on the Central Valley Regional Water Control Board from 2012 to 2015 and worked for the American Farmland Trust from 2002 to 2005. As a farmer and policy maker, Jenny is engaged with agricultural stakeholders on critically important balance of sustaining our environment, strengthening our rural economies, and building healthy communities.

A former 4-H and FFA member and current 4-H volunteer, Jenny grew up raising market lambs and learning about the value of hard work and working together. Jenny is graduate of Brown University and the California Agricultural Leadership Program. Outside work, she spends time with her husband and daughter. So let's welcome Jenny Lester Moffitt, and please take it away.

MS. MOFFITT: Thank you, Jenny. And it is truly a pleasure for me to be here with you-all today. I just want to first off, echo what you said Jenny, about thanks to the outgoing -- to all of the NOSB members, but especially to the outgoing

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ones whose last meeting is today. When Jenny and I talked about this about a month ago, I said, so what are we doing to make sure that we celebrate?

Because I've been to a few NOSB Board meetings in my time and I know how much work is involved in serving, and so we want to make sure that as Secretary Ross said, as we get together and enjoy the beautiful organic bounty of food and drink that we do so and also recognize and thank everyone who's served and who hasn't had the chance to be recognized in-person once we can do so. But then also just thank everyone for your service in this.

The NOSB is such an important dialogue and an important forum for the organic industry.

I know I went to my first meeting, I think in the Woodland meeting, a few years ago and have been to about a few since then. And I just know how important the work is of the Board members as well as the organic industry, both producers, consumers, and everyone in-between in engaging in the dialogue about organic production and what does that mean. And really continuing the projection

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as was designed from the beginning of moving organic and in shepherding the organic process.

So thank you for all of your perspectives. And Steve, particular, thank you for your services as Chair for these past two years.

As I mentioned, and as Jenny mentioned, I previously was an organic farmer and I know how important organic production is to the livelihoods of all of our communities, to markets, and everything in-between. And so I really do want to thank you guys for again, that service.

And let's just say the robust conversations that do happen here at the NOSB, but then also across the department of the USDA as well.

I want to just say that as I started in August, one of the first things that I heard and one of the first conversations that I had with the Secretary was on organic production. This is something that is of particular interest to him, certainly particular interest to me. It is about growing all markets in the United States, especially our food markets.

But organic production is key part of

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all of that. So we want to make sure and he is certainly interested in the work that you guys are doing and the work that we're doing across the department in organic production. We have some big priorities. No surprise. We have certainly some big priorities in the Biden-Harris administration under Secretary Vilsack at USDA that I just wanted to highlight and share with all of you.

As Secretary Ross mentioned, climate smart agriculture, that is definitely a key priority within our administration at USDA and at the federal government as well. It was just announced last week that we're going to have 12 cabinet members attending the UN Climate Summit next month in Glasgow, just shows the commitment that the administration has in climate change generally. And we know how essential and key climate change solutions are in agriculture and how key agriculture can be to those climate solutions.

So just at the end of last month, at the end of September, Secretary Vilsack in Colorado

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made a big climate announcement. We're really looking to solicit opinions and ideas and concepts on that climate announcement. There is a lot going on in the climate space really about how do we use the power of government in partnership with industry as well as the private sector and private investors to really spur and leverage and grow climate smart agriculture across agriculture and organic is a key part of that.

We know, as Secretary Ross mentioned, all of the things that we talk about in the organic system plan -- I had ten years of writing organic system plans and going through inspections, and there's so many pieces in organic system plan that really are healthy soils practices, hedgerows, all of these different soil building, and other practices that are important for climates, for agriculture. So organic is a key part of our climate solutions and I know you guys are planning on having a conversation later today about that and I look forward to getting a report back from Jenny and the team about just what you guys are looking.

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Really, we do seek your guidance and we are interested in hearing from you on this. Equity is a key priority as well for our administration. We want to make sure that as we're serving agriculture, as we are serving the food system, that we're not leaving certain groups behind. And so really casting our net wide in casting and making sure we don't have any gaps.

And so equity is an important part of what we talk about and what we're doing. And so that's another key thing.

Really our goal within the agricultural marketing service and then also across USDA is building climate smart, resilient, and a more equitable food and agriculture system. That is really what we're focused on. And that includes things like support for fair and competitive markets. We're doing that in the meat and poultry industry. As many of you might have heard, we've made some big announcements on that and we're working on that as well. Again, really much more focused on not just regulatory approaches, which is definitely key, but it's a whole suite of thing.

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So it's also investment in new processing capacity in the meat and poultry industry. As we do that, we're very mindful of all of the markets that are available, including organic market. And so that's another important place that, you know, we certainly hope that the organic industry is participating and I know many have. So we want to thank you guys for that.

We have \$4 billion total for Build Back Better system work. One part of that was an announcement Secretary Vilsack made earlier this summer, which is \$200 million of that for organic transition support. So we're working with our team now on what does that mean. What are the key parts and components and what is needed and desired from the industry. We're also hearing and soliciting feedback from the industry as well because you guys know what you need and we want to hear from you guys about what that looks like.

And then the other thing I just wanted to -- as we think about transition, you know, we're hearing market development is key. Also as key is, again back to equity, making sure that we have

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systems in places to support all producers who are interested in becoming certified and helping to shepherd through that process.

Finally, I wanted to just share that we're really excited and I know she'll be participating later on in the meeting that we now have as Senior Advisor for Organic Markets, Marni Karlin. She's probably no stranger to many of you.

We're really thrilled to have her on Board. She'll talk a lot more about what she's working on. But key to this is of course shepherding a lot of the processes that I just talked about, but also the work across the department. So that we're taking a whole government approach to organic.

As a farmer, I know how important it is that we're not just in one area, one area, one area, but that all of those different areas are working and conversing across the department to best serve organic producers, organic processors, and organic consumers. So I'm excited to have her on board. I know you guys are going to be hearing from her later today. Another thing I wanted to just talk about is, as we talk about all these other

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great things across the department, we know the work of NOSB, the feedback, and the work that you guys have had on informing us on different rule making has been as crucial and important and valuable to us.

So Strengthening Organic Enforcement final rule, which is something I'm sure you're all very familiar with, as well as the Origin of Livestock Final Rule have been written and we're starting the USDA review process. I'm moving those ones forward. In June, the Secretary announced that the National Organic Program would work on Organic Livestock and Poultry Practices rule. This rule has been written and is based on the 2017 Organic OLPP -- we'll just shorten it down -- final rule and that has also started the review process. All three rules will go through the office of management and budget process later this year and early next year, and we're hoping for Spring 2022 publication dates.

We are committed to tackling the complicated issues of inner ingredients as well and the ongoing national rule making. So that is

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also an important live as we all know of producers.

I know a lot of what you guys do. It's the bread and butter and some of the key things that you guys spend a lot of time on the NOSB doing. And so we're committed to keeping those processes going as well as we move these other three big packages along through the process.

So I just want to thank you again for your service to us. We hear you and we value the great work that you're doing, and so thank you to the service to both us at USDA, as well as to the organic industry. Thank you for all of the stakeholders, all of the people who are on as participants, who are participating in the process. It is so valuable to us and I'll just turn it back to Jenny who is our key champion in all of this and thanks again also to Jenny for the work that you've done.

DR. TUCKER: Well, thank you, Jenny, and it's a pleasure, pleasure, pleasure to have you here today. Thank you so much for joining us.

Let's all give a big Zoom applause to Jenny Lester Moffitt. And again, Jenny, you have to imagine

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now 159 people all waving in the camera. Thank you. Again, thank you so, so much. It is a pleasure working with you.

And that closes our welcoming speaker segment of the meeting and so, Secretary Ross and Under Secretary Moffitt, thank you again both so much for being here. You're welcome to listen in for a bit or log off for the rest of what I am sure are very, very busy days for you starting your day on the west coast. So thanks again for giving us your time and being with us to say hello to the Board and we really appreciate your comments. So thank you. Okay.

Now we will switch to taking a look at our meeting agenda and I'm going to introduce some other members of the team. So first, the agenda.

We are meeting from 12:00 to about 5:00 or 6:00 Eastern today, tomorrow, and Thursday with an hour break in the middle of each day. Today, the Board Chair will get us started. We'll have some time for a USDA update and NOP/ NOSB discussion. Then we'll move into the subcommittee's work which will extend into Thursday. We will close Thursday with

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board elections, a recognition of our outgoing members, and a look ahead.

So turning to team introductions, I'd like to introduce, as Jenny Lester Moffitt just did, the newest member of our political appointee team, our Organic Policy Advisor, Marni Karlin.

Marni will say hello in a bit at the beginning of the USDA and NOP update. Next, I'd like to thank the National Organic Program team. Michelle Arsenault is our advisory board specialist.

And I think as folks who have been to these meetings before know, Michelle is fully devoted to the Board and makes the management of all the countless subcommittee meetings and these public webinars look easy. So Michelle, thank you. I'm going to do a special round of applause for Michelle because we would not be able to do any of this without Michelle. So Michelle, thank you.

I am also very, very grateful for the leadership of our Standards Division Director Erin Healy. Erin has been leading the team well, as we've engaged with multiple rule making projects

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this year -- you've just heard from Under Secretary. Erin came in at the beginning of January this year and it has certainly been a very, very full nine or ten months for her. Jared Clark, our new National List Manager, continues to do amazing work. We're very, very lucky to have him.

Andrea Holm is one of our three Materials Specialists in the program, has been doing fabulous behind the scenes work and Andrea is skilled in a lot of different areas. And it just makes a lot of things move more smoothly. And then Devon Pattillo is our lead role writer in the division working extensively on our current livestock rule. So thank you, Devin. Let's give a round of applause to all the staff that worked really, really hard to make not only these meetings successful, but also do all of this rule writing to meet industry needs.

So thank you to the team. Next, I'm going to turn it to Steve Ela, Chair of the Board, who will be introducing Board members. All of these representatives devote hours and hours and hours of volunteer time to serve the organic

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community. And many of them have never met each other in person face to face yet, which is really quite incredible given what -- it's amazing what they've been able to build given that reality.

And so let's give the whole Board a round of applause as I hand it over to Steve. And, Steve, thank you in advance for a great meeting. Take it away. It's all yours.

MR. ELA: Thank you very much, Jenny, and I just really wanted to say thank you to the program staff. You all make it look easy on the virtual meetings, but also just the amount of background support and initially reviewing petitions and TR reports and the rule writing and such. And I think despite all the -- sometimes the comments from stakeholders about NOSB independency. I think, you know, as a Board we are independent and also it's so nice to have the background of all of you that are often very quiet, but make this all work, so.

And I'm especially excited to hear from Jenny Lester Moffitt and Karen Ross. Those were nice presentations and thank you for organizing

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those. We're going to move onto the Board members of the NOSB and I'm just going to -- in general, like I'm voting, we're going to go alphabetically because that is really the only way we can do it virtually. And as you know, we start with a different person each time in the voting, but in the roll call, I'm just going to go alphabetically as well. So Sue Baird, which you introduce yourself and say just a little bit about you.

MS. BAIRD: Hi, I am Sue Baird. I'm from Missouri. I'm currently not, but I was at the time the Executive Director of the Missouri Organic Association. We also have a food hub. I serve in special interests group and I've especially been active with the livestock committee.

MR. ELA: And Sue serves in the consumer public interest seat. And, Sue, thank you for five years. It goes quickly and it takes a long time. Asa Bradman.

MR. BRADMAN: Thank you, Steve. I'm Asa Bradman and I am a Professor of Public Health at UC Merced, moved over here from UC Berkeley.

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I've worked for many years on issues around agriculture and health in real communities, looking at the relationship of pesticides and other environmental factors related to child health and development. I've also worked in many other aspects in agriculture.

And back in the day, I picked grapefruit and apples for export. Back when I was young. And also worked on a chicken farm and managed the produce area -- produce department for a small grocery store. And I've been excited to be on the Board and looking forward to this meeting. So I currently serve on the resource and conservation seat.

MR. ELA: Another shout out for Asa for making it through five years as well with his expertise. Thanks, Asa, it's been a very, very deep pleasure to serve with you and get to know you. Amy Bruch.

MS. BRUCH: Thanks, Steve. Hi, everybody. My name is Amy Bruch. I serve in the farmer seat. I'm a sixth generation farmer and president of my family farming operation that's

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a 100 percent organic or transitioned organic located in East Central Nebraska and we grow various different row crops, small grains, pulses, and oil seeds there that are irrigated.

In addition to my family farm, my background's agri engineering, and I've had over 20 years' experience with various agribusiness opportunities and farm management opportunities both domestically and internationally. Very happy to be here and to be able to serve on the Board. Thank you.

MR. ELA: Thank you, Amy. And you're in your first year of the five-year term and thank you so much for jumping into the fray with all of us. Next, Brian Caldwell.

MR. CALDWELL: Thanks Steve and hi everybody. This is my first year also. I'm in the consumer and public interest seat on the Board.

Located in central New York, near Ithaca, New York. I retired from Cornell University a couple of years ago, and I have a small farm where we grow organic apples and chestnuts. So I'm very excited to be in my first fall meeting.

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MR. ELA: And like Amy, Brian, it's great to see you on the Board and we're going to wish you the best of luck in your next four years.

Thanks for signing up for the program here. Jerry D'Amore. Jerry, we're not hearing you.

MR. D'AMORE: Sue, I'll carry on your legacy when you depart. Thank you, Steve. Jerry D'Amore. I sit on one of the handling seats in NOSB, and I live in Watsonville, California. For much of the 1970s I built and operated hydroponic greenhouses in the Kingdom of Saudi Arabia. For all of the 1980s, I constructed, owned and operated hydroponic greenhouses in Virginia. In 1991, I moved for six years with my family to Turkey, working for Chiquita Banana. I was responsible for all the Black Sea ports for the delivery of the product. So it would be Bulgaria, Romania, Ukraine, and Russia. I spend a total of six years with Chiquita.

In the year 2000 I joined Driscolls where I participated in a wide variety of posts harvest responsibilities including sales and marketing. From 2006 onwards, I spent most of my

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time engaged in the blueberry industry, both in the growing of the varieties and got deep into the cold chain management about that point. Agriculture has been a wonderful career and I'm honored and sometimes overwhelmed to be on this advisory group. Thank you.

MR. ELA: Thank you, Jerry. And you're one of the group that we did new member training in person and then promptly went to all virtual. So thanks for trying to figure out all this on the fly and in the virtual environment. Carolyn Dimitri.

DR. DIMITRI: Hi everyone. I'm Carolyn Dimitri. I'm a faculty member at New York University. I'm an applied economist and I am extremely interested in the social and environmental costs of the food system. Before I joined the NYU faculty, I worked for the Economic Research Service as the organic marketing person.

And when I was hired at ERS, they basically said, under no circumstances are you to work on organic, and then I spent a good dozen years developing a rich and robust research program on

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organic. And like everyone else before me and following me, I'm very honored to be on this board.

I sit in the consumer seat and I feel that organic is such an important part of our food system. And I'm excited to be here.

MR. ELA: Thank you, Carolyn. And you as well were one of the new members that got to do your new member training virtually which was a new experience for all of us. But thank you for doing what you do. And I think I'm especially excited to have your perspective on the Board because you bring a very important other side of organics to our experience. Next, Rick Greenwood.

MR. GREENWOOD: Hi, everyone. Rick Greenwood. I'm in the environmental protection resource conservation seat. Had sort of a split career. I'm a public health professional, epidemiologist, infectious disease person by training and been involved in disease control for years. Transitioned into environmental protection, environment health and safety. At the same time, I'm CCOF certified avocado grower in Southern California. And so I've struggled with

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the drought and all of the things that are involved with agriculture for over 20 years.

Happy to be on the Board. I think of myself as the new guy, but actually I'm just closing out four years. So I'm in my final a year. My day job is I'm on the California Governors COVID task force, which I started back in March, over a year ago, and also work on other infectious disease programs. So happy to be here and it's been an interesting and fun time. I'm going to be sad to see Steve leave because I won't have anyone to kid about apples. I thought I'd get my shot in now, but I guess they're okay. But, you know, avocados are much better.

MR. ELA: Thanks Rick. I'll see if in my final days as Chair if I can keep the playing field even here, but yes. Rick serves in the environmental resource conservation seat. And as he said he's going to be the lone fifth year person next year. Our board rotation is a little bit skewed as you can all tell. But Rick, I'm sure you'll bring the historical perspective of the Board to all the rest of the folks. So it's good

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to have you staying on one more year. Kim Huseman.

MS. HUSEMAN: Hi. Good morning from Colorado. My name is Kimberly Huseman. I sit on the --

MR. ELA: Sorry, Kim. We can hear you, Kim. Oh, now we can't hear you.

MS. HUSEMAN: Okay. Can you hear me?

MR. ELA: Yes. You're on.

MS. HUSEMAN: Okay. You scared me there. Steve. Try that again. So good morning. I'm from Colorado. My name is Kimberly Huseman. I sit in the handlers seats. I've been on the Board -- this is my conclusion of my second year. I work for Pilgrim's. We are a poultry production company. I've been with them for a little over seven years and I am the Director of Specialty Ingredients. So I've developed all the input program for the organic poultry operations that Pilgrim's has.

I grew up production agriculture on a farming and ranching facility in southeast Wyoming. A proud member of both the 4-H and FFA organizations all through my years of schooling

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and still support them both today. It's been a very interesting two years on the Board with the virtual environment. But I am very proud to serve with the members that we currently have, although I've only met in-person six of them. One of which, my other fellow Coloradan, is fixing to go off the Board. So thank you to everybody.

MR. ELA: Thanks, Kim. Kim was another member that we got the initial training in person and then promptly went virtual after that. So Kim, it's great to have another Coloradan, and it's also great to have a livestock and handling representative on the Board. And certainly your past experiences is very interesting and useful. Mindee Jeffrey.

MS. JEFFREY: Good morning. I guess it feels early here still, but you guys are really in your days already over there in the east coast.

I sit in the retailers seat in Good Earth Natural Foods in Northern California. I've done a lot of work with the Independent Natural Food Retailers Association. So it's really fun to interact with retailers all over the country and a little bit

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of experience working in the co-op space. Really big fan of all the work that goes on out there in the retailer landscape.

So yes, I'm happy to be here and I'm having a good time and thanks for everybody's hard work and all the program people making the virtual world work for us. Thank you very much. I look forward to hearing all the debates.

MR. ELA: Yes. And there will be some.

Mindee also serves in the secretary position for the last year and is another member of the group that we got to meet in person, before everything fell apart. So Mindee, thank you for serving as secretary and giving your input into the executive Board. It's wonderful to have you. Logan Petrey.

MS. PETREY: Hi. Thank you. I'm Logan Petrey. I'm with Grimmway Farms. Serving in the farmer seat. I'm actually the southeast ranch manager for Grimmway and we've been over here for -- Grimmway has been over here just a couple of years trying to figure it out. It's got its challenges for sure. We grow organic vegetables, the leafy vegs. Carrots are our main thing. We

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are also in rotation with corn and actually trying out some peanuts this year. And so yes, just trying to work all that together, fill up this plan, and do our job. We are on the subcommittee for materials and for crops. And I'm happy to be here and I'm happy to serve.

MR. ELA: Thank you, Logan. It's wonderful to have somebody from the southeast and you bring a great perspective to the Board. A very different farming perspective from that part of the country, which is always interesting to hear.

I do have to comment that you all, you and Amy, also represent the flatlanders side of things. Looking at your pictures amazing that you can see that far without a hill. That's very different for me as well.

So thank you and thank you for jumping in the fray as well. And thank you for serving despite new changes of life with a new baby. So I know that's its own challenge. Nate Powell-Palm.

MR. POWELL-PALM: Hi everybody. I'm Nate Powell-Palm. I'm based out of Bozeman,

Montana and I raise organic pulse crops, oil seeds, and zero grains, but got my start in organic beef cattle. And so I've been certified organic since 2008. And since 2012 have worked as an organic farm inspector and am now an organic inspector trainer. So my world is organic and I'm really grateful for such a dynamic and interesting world to be a part of. I serve on the farmers seat and have served for last year as the Vice Chair of the NOSB.

MR. ELA: Thank you, Nate. Your diverse experience between pulse crops and livestock brings a great perspective to the Board. And thank you for serving as Vice Chair and contributing to the executive calls and such. It's been great to have you. Kyla Smith.

MS. SMITH: Hi everybody. My name is Kyla Smith. I come to you from central Pennsylvania State College area. I'm having some resurfacing of my road done in front of my house so hopefully it doesn't get too noisy. I am serving in the certifier seat. I work for PCO, Pennsylvania Certified Organic based here out of

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Pennsylvania. We certify nationwide, but mostly in the Mid-Atlantic region.

I've spent my entire career pretty much in certification, doing most of the jobs from inspecting to reviewing to material input reviewing to policy development. I often joke that I've done almost every job at PCO except for accounting and like HR.

But yes, I'm really honored to serve on the Board. I'm ending my first year and just really grateful for the opportunity. And, you know, we as certifiers try to come together and be as consistent as possible and this is a great way for me to carry that forward in a much bigger way. So that's sort of my goal of being on the Board is to really promote that consistency and transparency across certifiers, and working with the Board and the NOP to drive that home. So thanks. Looking forward to the meeting.

MR. ELA: And Kyla's another one that only knows the virtual environment and hopefully that can change. But has very ably taken over for Scott Rice and I agree that the certifier position

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is huge and helping the Board understand and sometimes clarify what the things that we do, how they apply going through the systems. So thanks, Kyla. Wood Turner.

MR. TURNER: Steve, I'm keeping my fingers crossed that a future member of the Board will be late in the alphabet so I'm not the last one, always dream this will be, but we'll see what happens. I'm Wood Turner. I'm Head of Environmental and Social Impact for Agriculture Capital. I'm based in the Bay area, but my heart is always in North Carolina where I grew up, and in Seattle and New Hampshire where I spent most of my career.

I've been here in California for about seven-and-a-half years now. We're a grower of organic blueberries, organic table grapes, as well as citrus and hazelnuts. I spent my career focused on sustainability in climate solutions. I'm trained as an environmental planner and landscape designer. And really love this experience and love being a part of -- you know, this close to the organic food community is just a huge honor

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and really a powerful experience for me to serve this way. So thanks to all of you for being here and letting me be here.

MR. ELA: Thanks Wood. And as a group that -- the last of the group that we got to meet in person, it's been in pleasure and I especially appreciate your deep thinking on so many issues pertaining to the environmental seat. It's wonderful to interact with you. And I will put in a plug for to the program for somebody whose name starts with a Z in the nomination, as far as board diversity goes.

And finally, I'm Steve Ela, serving as Board Chair for the last two years and served as Vice Chair before that. I'm an organic fruit grower. Apples, pears, peaches, cherries, plums, and heirloom tomatoes -- which are a fruit, just to be clear -- out here in Western Colorado in a little town of Hotchkiss. We always say it's a town of 800 as long as it's tourist season and nobody has died. But I have been -- well, fourth generation grower here in Western Colorado.

Obviously we've been through all the

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changes. You know, through the lead arsenic for codling moth control, through conventional, and then we started transitioning in 1994 and became a 100 percent certified, I believe it was in 2004.

It's been just a real pleasure to serve on this Board. It's always a learning curve from all the other Board members. So it's been fascinating and lovely to hear all of the things that goes on.

With that, I'm going to just do a little housekeeping things before I turn it over to Mindee for the minutes. I do want to point out, due to some board member travel arrangements and constraints -- which I have to laugh, in a virtual meeting we're having travel constraints, but that is true.

So we're going to, on the agenda, we're going to swap the materials and CACS time frames.

We did have a CACS scheduled for this afternoon at the end of the day and materials on Thursday afternoon at the end of the day. So we're swapping this. So the Materials Subcommittee will be at the end of the day today and CACS at the end of the day on Thursday. Just to be very clear. And

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all these of course, the Board -- for anybody that messes up in terms of listening, all the Board meetings will be available by transcripts so you'll be able to hear exactly what was talked about.

And then within the Handling Subcommittee, just a minor change where we're going to move -- Wood's going to present his two materials and then carrageenan will follow that. But that's quite a minor change. So just to pay attention to those scheduled changes. As always, to the Board members, stay on mute unless you're talking.

And it's wonderful if you'll open up your camera when you're presenting and talking just so everybody can see your faces and get to know you as best we can in this environment.

I already mentioned we'll be voting alphabetically and then moving one-person down on each vote. And often the nominations for the new Board -- four new people that will be coming on are announced at this meeting. That didn't work for various reasons and administration changes exactly. So we'll look forward to the new board members whenever they're announced and then we'll

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see what expertise they will bring to the Board.

So with that, I am going to turn it over to NOSB secretary Mindee Jeffrey, to give the secretary's report.

MS. JEFFREY: Thank you. NOSB members, do you accept the meeting minutes from the April 21, 2021 NOSB meeting as written, and are there any concerns?

MR. ELA: Any additions or corrections? Not seeing any, so --

MS. JEFFREY: Thank you. Then minutes are accepted.

MR. ELA: That's great. Thank you so much, Mindee, for like I said, serving on the executive committee and giving your thoughts and input. I think some people don't realize the input that the secretary gives in all the leadership of the Board. So very much appreciate you're willing to do that. All right. This is the chance for the Chair to give my report. In the past it's always, you know -- sometimes it's been very -- poking at the program asking for things to be done. Sometimes it's very relaxed in

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general.

You all know my personality, so I don't think I will be inflammatory in my final chance on the soap box here, but I do want to point out some things that are of importance to me. And I would like to start off with, when I was a graduate student in soil science, my office was in the bottom of Borlaug Hall, the University of Minnesota.

It was always kind of striking to be in Borlaug Hall because Borlaug was one of the authors and proponents of the green revolution back in the '60s, I guess it would be late '50s. And the green revolution really was to bring, you know, highly bred seeds and fertilizers and to a certain extent, pesticides to the world with the philosophy of feeding the world and helping the world be self-sufficient in all areas in terms of food.

And that to a certain extent worked and to many extents did not. It certainly disrupted traditional cultures in many places and traditional agricultural systems that were developed specifically for certain areas. And as we know to this they, there are still many, many

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parts of the world that experience hunger and lack of adequate food production.

And so, you know, to me that feed the world philosophy that started with me in Borlaug, has not really come to fruition. And so I think that's really important as we, as organic growers continued to realize that because we often hear a many number of topics that we have looked at and debated on that this will help feed the world.

And while I applaud that philosophy, we do want food security for the whole world. I will just point out that conventional agriculture is also failed in that endeavor to feed the world.

And I think that's really important. We do want food for everybody. But it's going to take a lot of thought and a lot of work and embracement of what people already know and working within they systems.

And so, you know, I really feel like the organic philosophy of approaching things as an ecosystem is really important to how we're going to provide food security to people, and not trying to solve things with one magic bullet or two or

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whatever. But that we really look at production over the long-term. And production that embraces the native ecosystems and that provides resilience to the climate change that we're all experiencing.

And I know that climate change will affect our agricultural system. I feel it personally right where we farm with more variable temperatures. So sitting in the basement at Borlaug Hall just gave to me a great perspective on how we approach food production. And I just want to point out that organic, I think, is very much a part of how we're going to approach food production across the world.

I also want to note that, you know, despite the sometimes, I don't know -- concern about the organic program being part of the federal government and sometimes being very slow. And for example, with the rules that we've asked for the whole time I've been on the Board that they're finally making it through the rulemaking process.

And we certainly heard about the backlog of things that haven't been acted on.

And I think those are really important

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topics, but I also know that the power of the federal government is something we wouldn't have if the organic program were private. We get to work with the border and customs service in terms of working on organic certificates, and that would never happen with a private company. We also get the legal teams of the federal government. And all those things, I think, would be very difficult to fund if we were private.

Despite the criticisms, and some that I very much recognize and agree with, I also think we have to remember some of the benefits that we have in terms of the interaction with the program.

And I have to thank Jenny Tucker, Dr. Jenny Tucker, at least the past several years as Board Chair, I so much appreciated the conversations with her and the back and forth with how the Board can interact with the program, how we can stand up for ourselves, and at the same time find ways to accomplish some of our shared goals.

I also really want to think, and I think this is the most sobering part and fun part of serving on the Board is we all bringing ourselves

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credible expertise to the Board. And I've heard criticisms that this Board does not have the know-how to understand complex subjects and interpret data and look at scientific reports and, you know, provide adequate interpretation of all that.

And I looked down the list and we have three PhDs, a member of master's people, and people that have had 20 years of experience in working within ecosystems. And I just have to say I'm stunned by the capability of this Board and I completely reject any assertions that we do not have the capability to look at things, read them, interpret them both scientifically and such.

And then I also am stunned by the stakeholders that we have. Even within the expertise of the Board, we have hundreds of people out there providing their input and working on, for example, the paper pots proposal. There were so many people giving really good thoughts and inputs of how things could be interpreted and how things should move forward. And we've seen that with biodegradable mulch. We've seen that with

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so many other topics. Sanitizers, we're going to see it with ammonia extracts, and the other things on the Crops Subcommittee.

And I just really want to applaud this process of a huge collected wisdom that feeds through the system of stakeholders, really thinking about these big topics, and the Board with the expertise on it and that total synthesis of, you know, really trying our best as a community to advance organics in the best way we know how.

So I just think we have this tremendous system of stakeholder input and Board input that I hope brings forth the best of collective wisdom.

And I know on the Board we've had very strong disagreements on certain topics and I just want to encourage future boards to have those strong disagreements, to honor them, and once a decision is made on them to move forward as a collective group and not let those decisions interfere with respect to the next topic that comes up, to the form new groups and new alliances and really keep the personalities out of it. And I think that's been the best part of serving on this

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later board. I've seen split boards. I've seen people go to dinner in their own groups and they don't cross-pollinate.

And I just encourage future boards to really try and reach across the aisle even on difficult topics with respect and be friends and, you know, learn about each other and how you farm or what you do in your day job. And let that be the parameter of how this Board works. I think that's just so critical and I really applaud the Board members that serve now in terms of doing that.

I really wish we could meet in person and just get to know each other on a deeper level of what we all do and what we all believe in. That is very difficult to do virtually.

The final thing I want to say, we have often had criticism in terms of the work agenda items that the Board doesn't get to set their work agenda at this point. The program has to approve it. And I'm excited to say that Jenny and I've been talking and we've agreed that I think the Board can find a couple of topics that they can work on that don't go through the formal work agenda

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process per se. That the Board can pick.

And I really hope the Board will pick a couple of topics and only keep it to a couple of topics so we keep our focus and keep the energy on them. But that will help truly in the advancement of organic and continuous improvement that we all talk about. I know the Board in working with materials in the national list, we end up often working on very specific things and not looking at the big picture, how organics can continuously improve.

So with that, you know, I hope the Board can select a couple of topics to work on that are in this bigger picture. We're talking a lot about climate change. I hope it will be one of those -- that will be one of the topics that the Board can philosophize and strategize and work beyond a particular material to how as a system and as a group and as stakeholders that we're all in, how we can move forward on those topics. I don't know that there's any specific answers and I wouldn't expect it, but I think the debate and the discussion could be very important.

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And my hope the Board, as I say, will stay focused so that it energize all of us and gives us a chance to think collectively. And I hope we don't go too wide because that can also burn people out. But I think the program is in support of that at this point. And so the Board does have a chance to develop your own work agenda on at least a couple of specific things. And I'm sure we'll talk more about that, but I think that helps address a little bit of the answer of board independence, but also interaction with National Organic Program.

So use this chance well and I hope to see what the Board and what stakeholders can come up with in terms of the continuous improvement.

We know organics isn't perfect or aren't perfect.

But to me, I'm always willing to accept the warts that we have and say, well, we're not perfect, but we're going to try and make ourselves move in that direction with continuous improvement.

And I think that's something that we all accept and address, and it's one of the things that excites me about being in the organic movement. Just looking at things as a system and

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as a grower. I've so much come to appreciate my farm and all the things that happened to it that I can't see and that I can't control.

And if anything, I've learned over my time as a farmer is to step back and keep my hands out of the system and let it do its own work. And then, when I have to intervene for specific reasons, to try and do that in a very specific way that doesn't mess up the whole rest of the system.

And so in terms of how organics moves forward, I would kind of apply that philosophy. It works so well.

And when we look for continuous improvement to change things, make sure that really doesn't disrupt the programs that we already have and the philosophy we already have, but does move things forward. So that's two cents in my final soap box.

I'll just say, it really has been a pleasure to serve as Chair and be a part of what all of you think about. With that, we will move on. And I'm going to turn the mic back over to Dr. Jenny Tucker to give her program update and

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introduce Marni Karlin and move on with key program updates and questions and answers. So, Jenny, take it away.

DR. TUCKER: So first, Steve, thank you. That was really an amazing, amazing talk and it is such an honor to work with you. So thank you for all you do and for the wonderful person that you are. So thank you. I'm going to turn to some very brief USDA updates here. And I'm going to actually open by introducing Marni Karlin, the new organic policy advisor, and have her say a few words to the Board and our audience today.

Then I'll come back and give a couple of quick updates and then we'll open it up.

So Marni was recently appointed as USDA senior advisor for organic and emerging markets.

With over two decades of experience in the private, non-profit, and government sectors, Marni is passionate about creating a healthier and more sustainable food system using advocacy, strategic planning, law, policy, and communications tools.

She has over 20 years of experience in food, organic, and emerging agricultural markets,

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organizational management, policy, law, and legislative and administrative process.

Marni graduated from the George Washington University with a degree in international economics and received her JD from the University of Chicago Law School. She also earned a certificate in global organic leadership from the International Federation of Organic Agriculture Movement's Organic Leadership Academy.

Her experience in the organic sector runs deep from her service as Vice President of government affairs and general counsel for the Organic Trade Association, to her consulting work with stakeholders across the organic supply chain, from producers to certifiers. So please join me in welcoming Marni. Marni, you want to take the mic?

MS. KARLIN: Happy to. Thank you, Jenny. And are you able to hear me all right? All right. So thanks, Jenny, and hello to everyone. I wish that I could be saying hello to you all in person. My name is Marni Karlin, as

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Jenny said, and I was recently appointed as USDA's senior advisor on organic and emerging markets.

And I'm really happy to be with you guys here today. I'm coming to you from my house in Washington DC, but I've spent half of my life in Louisiana.

So I will bring a little bit of Cajun perspective to the meeting and was really happy to hear that we've got some southeast representation on the Board. So looking forward to the opportunity to meet you, Logan, at some point. Members of the public who are here to participate in the advisory process to ensure that organic remains strong, I want to thank you for your engagement. I have been a member of the public at these meetings before, and that role is critical to keeping organic strong.

And of course to the NOSB members, I want to thank you very much for your service and particularly those of you for whom this will be the last meeting. Very much appreciate your service over the last five years.

Wanted to take just a couple of minutes

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to talk a bit about our vision for ensuring that organic is a critical component of the Biden and Vilsack pledge to build a more resilient, more equitable, and more climate smart food and agriculture system.

So what does this look like? Well, first, and in some ways, perhaps most important, it looks like more meaningful engagement with all stakeholders in the context of meetings like these, and in the context of other opportunities that we can create for us to engage in respectful dialogue with stakeholders from every point along the supply chain, who are diverse in every way, including geography, size, and personal background.

It also looks like continuous improvement of organic standards, enforcement, and market development to ensure that organic is responding to the challenges it faces and the demands of consumers in a way that remains rooted in strong regulations and enforcement. It looks like devoting critical thought and energy to how to support transition to organic in a way that is intentional, transformative, and strengthens the

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resilience of the organic sector as a whole.

And it looks like doing all of these things using the lens of equity, casting our net wide. And as Under Secretary Moffitt said, being sure to not leave any groups behind. One of the really exciting opportunities that I have in this role is to work across the entire department and across the whole of federal government, to ensure that organic is at the table.

So that means making sure that organic is in the conversations with folks at the department who handle research, crop insurance, costs share, conservation, to make sure they're taking into account the organic perspective and the needs of the organic sector.

It also means, as you've heard repeated over and over again today, ensuring that organic is at the table in cross cutting conversations across the entire federal government about things like climate, resilience, competition, and equity.

As our sector has grown, it is critical that our perspective is heard. And I especially want to touch on climate smart agriculture, where so many

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of our organic practices already meet that charge.

On that front, I did want to turn your attention to what I'm sure you've already heard, which is the new climate smart agriculture and forestry partnership initiative that Secretary Vilsack recently announced. There is a public comment period which I know everyone loves, especially on the heels of NOSB comments.

But there's a public comment period open until November 1st, and that comment period will inform the development of a notice of funding availability soliciting project proposals, that encourage the adoption of climate smart practices and promote markets for climate smart commodities.

We'll see an announcement of that funding opportunity hopefully later this year, and project proposals due early next year. And I am really energized to try to ensure that we see a lot of organic stakeholders submitting project proposals to be funded. We have a lot of experience, knowing a lot of tools that will work to build a more climate smart agriculture, and we should absolutely be an active and vibrant part

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of this conversation.

Steve just mentioned actually that he hopes to see the Board leaning in on this topic and I'll just echo that hope. Our work in ensuring that organic is incorporated into the Administration's work on climate smart agriculture will be better if it is informed by the Board and by stakeholders.

So I know you have a packed agenda and I really appreciate you offering me just a couple of minutes to say hello. I wish you a very productive and great meeting and I look forward to continued opportunities to connect with each of you. I am really energized and honored to be doing this work together with you and I look forward to working together.

DR. TUCKER: All right, Marni, thank you so much and we very much appreciate you being here. So welcome to the team. It's great to have you. Okay. I'm going to turn to a couple of National Organic Program updates. So first, there is a full NOP update in the Organic Integrity Learning Center. There's a course in there called

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NOP presentations. And so if you access the NOP presentations in Organic Integrity Learning Center, you will be able to see about a 38 minute long video. So it is voice over slides that gives an update on our goals, priorities, and some recent successes.

I'm not going to repeat all of that here because we would like to be able to open up a dialogue here for the remainder of the hour. And so a very quick reminder, a sort of update on regulatory priorities. I'm going to echo what Jenny Lester Moffitt already told you, but just want to make sure for those kind of keeping their rule making scorecard at home kind of where we are with stuff.

So Origin of Livestock Final Rule. Again, has been written and is in the review process. Strengthening Organic Enforcement Final Rule has been written and again is in the review process. So those have left the program. The Organic Livestock and Poultry standards. So that is also written and we are currently going back-and-forth with the legal team on that rule.

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That's the rule that the Secretary charged us with working on in June. So things are moving along.

We are continuing to investigate the problem of inerts. We have had interesting conversations with EPA that I think will better inform an advanced notice of proposed rule making on that. And then we do continue to move along national list rules as the Board makes recommendations.

So just a high-level reminder of where we are with rule making. And so now I'm going to turn it back to Steve to facilitate any questions, feedback from the Board. And we'll move to a more kind of open discussion between the program and the Board. And Steve, take it away.

MR. ELA: Thanks so much, Jenny. And I appreciate you -- I know it takes a fair amount of time to make the video that you put up there for people to watch, and I'm glad that people can continue to go back and forth to it, not just a one-time issue here. And I know you help highlight other parts of the program. I think that's great to have people see all you do, but also other parts

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of the program that are extremely active and make a difference to the organic community.

So with that, this is a chance for the Board to have some questions and answer interaction with Jenny. And if you would raise your hands if you'd like to ask a question, then please go ahead and do so. I know there are some out there. Wood, go ahead.

MR. TURNER: Thanks, Steve. Jenny, I want to bring up an issue that I've discussed previously and I just want to say I continue to be concerned about these two, biodiversity and the potential impact of organic agricultural on biodiversity and native ecosystems. We're all concerned about this. We've heard Karen Ross, Jenny Lester Moffitt, all talk about this.

We're seeing this every day as climate change becomes a tragic part of how we live. And I'm reminded there's nothing more important than to sequester the atmospheric carbon in the native ecosystems that are in peril around the globe. We're spending tons of blood, sweat, and tears on our farms trying to restore native ecosystems to

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regenerate ecosystem service function.

You know, we shouldn't be simultaneously allowing incentives to exist in organic that pushes growers to destroy what are effectively clean native ecosystems as a means of accelerating their organic transition.

So I just want to understand, you know, before I joined the Board, the NOSB made a recommendation to the NOP in 2018 after spending six meetings on this to remove the incentive loophole to allow organic to play a role in this entity. But nothing's happened in Rule making.

I'm curious what the status of that is, what you're thinking about it, what do we need to do to bring some real urgency to the issue?

Do we need to survey to understand the annual impact that organic is having on threatened landscapes and their biodiversity? If so, when can we see that? And I frankly welcome hearing from any other board members about this issue and help me think about it differently if I'm thinking about it the wrong way because there's really concerns me and I just feel like this is just an

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issue that's sitting out there and not really moving anywhere.

DR. TUCKER: So, Wood, thank you very much for bringing up the issue and the question.

This is an outstanding upward recommendation. And so part of what we have been doing since the new Administration came in, in January is really taking a look across what all the different priorities should be moving forward.

And so the top rulemaking priorities that were selected to move forward right away -- mainly because a lot of them were already in progress, was Origin of Livestock, Strengthening Organic Enforcement and OLPS and the Nationalist Rule. So those are the first line priorities. Once those rules get out of the building, then we are able to take a look at what the next line up of priorities will be. What's the next sequence of rules?

And so those are decisions that we will work very closely with the Administration on to determine where the priorities should be for the program. Now we have staffed up the standard

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division and so I know for a while standards was fairly short-staffed. We weren't writing a lot of rules. And so there is now, as you can see by the progress, a significant emphasis on rule making. The fact that, you know, three rules are currently in clearance right now and they're three significant practice standards are in clearance right now, I think shows the added capacity that has been added.

So then the question becomes, what are the next priorities that we'll take on? And so that's a conversation that we will be having over the next few months with the Administration. And so I think what we're seeing is a lot of folks writing in with their kind of roles of interest, and this is certainly one of them. So this will be one of the options for rule making that is discussed as we set priorities. We've got to get the key priorities that are on the plate now complete and then we can start new rules.

MR. TURNER: Thanks, Jenny. I just want to flag that there's that connection here between this issue and the climate change issues

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that I know we're all concerned about, but I just want to make sure that that's very clear, you're thinking it through. Thank you.

DR. TUCKER: Appreciate that. Yes. And agree.

MR. ELA: Looks like Amy has a question.

MS. BRUCH: Yes. Thank you, Steve. Thank you, Jenny for the updates on the rules. I'm glad to see them advancing. It's really important. I have an issue that's a little bit separate from that. It's an important issue that's on the minds of many Midwest organic producers all the way stretching to the delta. And that's the non-direct contact drift, dicamba, that really volatilizes and vaporizes. The challenge with this is that it can travel over two miles and really hit crops within two weeks of the application.

So really point of source of where this originates is unknown, which creates a lot of challenges for producers because there's no liability policies, no crop insurance, that can

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be accounted for in this process. So the whole costs of impact falls on the shoulders of the organic producer or the specialty crop producer.

At the end of the day, I really truly believe it impacts many many crops. Unfortunately, we can only see it happening on the crops such as legumes, soy beans, and those fruit and veggies in these regions.

I just wanted to see your thoughts on this subject in particular, because it does create a lot of barriers. It's extremely expensive. It's turning people away from even transitioning the organic. Because if they do get impacted, they either have to start the transition process over again, or they might have to sell their current organic crops as conventional. So just wanted to raise the issue and see what your thoughts and guidance are for both inspectors, certifiers, and farmers.

DR. TUCKER: Appreciate your bringing up that topic and we talk often all the rules, and it's so important to remember the challenges that producers and certifiers are facing every single

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day out there. And so this is a very important one. Drift is something that organic farmers very much have to contend with and certifiers have to contend with in terms of working with producers to determine whether a crop has been impacted and what the path forward is on that.

There aren't any easy answers on this, and I wish that I had kind of the silver bullet or the magic bullet. There have been I think, different certifiers and producers -- their communication about buffer zones, about what the dynamics are in the surrounding environment, different kinds of preventative practices that are available, talking to neighbors. There is the suite of communication and management tools.

And I understand that they don't all answer all of these problems when it comes to some very significant chemicals out there. And so again, I'm not going to lie and say there's an easy answer because there isn't. And it's very important that we continue to talk about the problem and share what some of the tools might be.

So I know this is something that certifiers talk

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to each other about, and again, active communication with their producers and vice versa.

Liability question is real.

I have seen times where instead of an operator choosing to withdraw a field, for example, they will actually request that the field be suspended instead of withdrawing it to re-transition. Because if it's a suspension of a field, then they have some kind of document that shows they've been adversely impacted and that gives them kind of better leverage if they want to seek some kind of conversation or damage. But as you mentioned, sometimes it's really hard to know where it came from.

So I think I want to acknowledge that this is a real problem for many, many farmers. We're open to ideas on what the solution may be that are within the program's kind of control or that we can communicate to other parts of the department and the government. And it's a good reminder of just how hard this is for everyone out there every day.

MS. BRUCH: Thank you, Jenny.

Appreciate it.

MR. ELA: Thanks, Amy. Asa.

MR. BRADMAN: Thank you. I just want to comment on an issue related to diversity in membership on the Board. And basically it relates to whether there should be some support for people to participate on the Board that don't have the financial and time resources to devote this time without, you know, from their current work or personal situation. I've talked to a lot of people who I think would be valuable candidates for the Board and could contribute so much to organic policy and rules, and we're kind of leaving them out.

I understand that in OFPA there's, you know, specificity that membership of the Board should be voluntary. But I think there might be a way of developing policies and approaches that would allow some support for people who otherwise cannot participate on the Board. You know, in my situation for example, and others, you know, I have a day job and I can afford to spend my late nights working on this, but I have other support. Losing

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time right now does lose -- me losing income. For many people, that's the case.

So it's a discussion that's kind of emerging in the community. And I think we should all be thinking about how to move forward on that.

Also, very specifically is a way to increase diversity in the board membership.

DR. TUCKER: Yes. That is such a valuable source, a point, and there are lots of folks in the community raising the same question.

We have seen over a time -- we've heard the stories and just numbers applies. It is hard for small farmers to apply -- for any size farmer to apply and successfully serve on the Board because of those challenges. Now, the reality is that the OPFA has a line about shall be reimbursed for travel and such. OPFA does not include a provision for board stipend.

So what are the creative solutions on that one? I don't know is the answer. The answer that we've gotten when we've asked in the past and we have talked to the liaisons office that deals with boards about this problem and we've been told,

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you know, absolutely it is not allowed by your statutes.

So I do think OPFA is real in terms of what it allows for with respect to the Advisory Board. I also do agree there may be other creative solutions out there for reimbursing expenses, time. I know that just the replacement labor needed to be able to attend meetings or subcommittee, those are real. Those are expenses that are involved in board participation.

So I'm very open to considering what the options might be within kind of the legal allowances of the Federal Advisory Committee Act and OPFA itself. And I appreciate that this topic is becoming more prominent in the dialogue by the community and the Board because I completely agree with the desire for diversity. And it comes in many, many, many, many forms, as illustrated by this group. And again, this administration's commitment to equity.

MR. BRADMAN: Thank you.

DR. TUCKER: Thank you.

MR. ELA: I think that's a great

question. I mean, I can highlight that in my own situation in the fall, just hiring replacement trucking alone. We're not talking laborers. A minimum of \$1000 per meeting, just to subsidize that. That's the most obvious bill that we pay, but there certainly many others and we willingly done that.

But I think Asa's point of it does for smaller farmers, as you mentioned Jenny, that have to hire replacement labor. There is a bottom line impact on that. You have to be in the point that you can handle that. So it looks like Carolyn has her hand up.

DR. DIMITRI: Hi. Hi, Jenny. I have two very poorly formed questions and they're related to the Under Secretary's comments about that pot of money for transitioning producers. And something that I learned in my research this past year is that we have a lot of BIPOC farmers who use like certified naturally grown labels instead of organic labels because they just don't see any reason to get engaged with the National Organic Program.

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So I know the NOP is more about rulemaking, but I do know you have a couple of new economists on board. And I just wonder, are you able to use their brains in thinking about these questions or like, how does the NOP fit into like these broader questions of like expanding access to organic to people that are kind of left out at this moment.

DR. TUCKER: That's really where Marni's role comes in and why we wanted Marni to come and talk to the group. So her role is to do that inter-agency coordination on organic issues including, you know, what are the barriers and the programs that are best for transitioning farmers? Or how do we support more local structures that can facilitate conversations?

You know, maybe people don't necessarily want to hear from the National Organic Program on that, but are willing to listen to folks who are in their local geography or have had more similar life experiences, and that can really understand what the barriers and perhaps sell points might be to those populations, better than

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me sitting here in the South Building in Washington DC.

And so I think one of Marni's really important roles is to help coordinate those conversations. We do have ag economists and so our ag economists right now are split between standards, where they do all those cost-benefit analyses that I keep talking about with these kind of pesky costs benefits that we have to do for rulemaking. And they also do a lot of work in our compliance and enforcement division. Doing yield analysis, trade studies to see where organic is growing and therefore we should be going.

So right now that's where our ag economists are focused. I think this is something we can certainly, you know, offer some expertise in. And this is really the policy advisers -- transition is one of the things that Marni is particularly interested and focused on because there are a lot of other USDA agencies very vested in that problem as well. So I think there's an interest in pursuing those kinds of conversations. They don't always live within this

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program specifically.

DR. DIMITRI: Thank you, Jenny.

DR. TUCKER: Thank you. Great question.

MR. ELA: Further questions from the Board? Jenny, I have a quick one. It's in part to update our stakeholders on what was a fairly fiery debate on List 4s, and we've got List 3s coming up. Could you just give us an update on your ANPR and where that is and such?

DR. TUCKER: Yes. I'll give a little bit of kind of a preview on kind of where we are with that at this point. So we have, based on the conversations that we had in past board members and based on my commitment to maintain this as a priority at the program level, we have gone ahead and we've drafted a draft advanced Notice of Proposed Rulemaking. And so I've introduced that as a potential path forward in a previous meeting.

Before we're ready to publish that we wanted to kind of socialize that proposed role with EPA because an awful lot of the Board's recommendations on this in the past have really

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relied on EPA and particularly the Safer Choice Program. And so we have had conversations with senior folks over at EPA that lead both Safer Choice and a different part of that world that deals with lists, like the List 3 and 4. And those have been interesting and enlightening conversations.

I think while Safer Choice sounds like it would be the right place, it may in fact not be. And so I think there have been some community members who've started to say, yes, I'm not sure Safer Choice is where this lives. And I think the message that we're getting from EPA is there is a theory of the program, right? Our theory of our program is that we are a regulatory programs and Safer Choice is not. It's not a regulatory program.

They have a certain criteria and approaches to criteria and approaches to list that are different from something that is codified in the CFR, Code of Federal Regulations, and that's how that program was designed. And they have a very different set right now of focus points in terms of just the types of products that they're

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looking at. They're primarily cleaning focused.

And so there's also the how is EPA approaching lists in general? So what is its philosophy of lists as part of its regulatory framework as an agency?

So I think that those conversations have been useful in helping us understand EPA's perspective on both lists and the different programs it has, but it has left us -- there are no easy answers here. And so I understand there's a lot of interest in the program sort of solving this problem. We will have to solve this problem together and there will be tough trade-offs that will have to be made between how the list making process works. So we are still moving ahead with an ANPR. It is going to summarize the challenges that we have identified so far.

And, Steve, you actively said during the public comment period, which I really appreciated, please come with solutions. And so that's the comment to the public is, please come to solutions. And remember that EPA, while linked to us, is its own independent agency. We can't

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go to EPA and say, you know, do this. That's just not how the government works.

And so we have been very impressed with the EPA folks that we have met. They have all cared a whole lot about this issue. And they also have their regulatory responsibilities and mandates and missions as well that need to be balanced with other agencies' sort of interests and needs.

So that's maybe more data than you wanted, but it's a bit of a preview as to where we are. And I do think it reflects that we are doing a lot of background work on this to make the best ANPR that we can put out there for comment.

This is going to be a long road guys. And I just want to be very honest. I hope that people remember the straight shooter part of Jenny. This is going to be a long road.

MR. ELA: Thanks, Jenny. Yes. And I will again put in the plug to stakeholders that we know the problem. We've identified that. We've heard about it many times. And so this is the chance through the ANPR to help solve the problem, not identify it anymore. And I think it's

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going to -- we talked about the collective stakeholder wisdom, this is a place that we really need it. So when that comes out, put your best thoughts forward to help the program along this path because without that, I don't know that any of us alone can necessarily come up with the best path to solve this problem.

So put your heads together in the collective wisdom and put your thoughts in the public comments on the ANPR because that is needed and very important on this topic. I see Asa's got his hand up.

MR. BRADMAN: I just want to come out a little bit more about that issue. I think that the Safer Choice Program in any way was kind of conceptually a potential model, but not necessarily the ideal regulatory environment for inerts. I really appreciate Steve's comments about input from the community and stakeholders.

And I just want to mention that we've had some excellent comments on this already by stakeholders.

Last spring, I think, Beyond

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Pesticides, National Organic Coalition, OTA, and others have really articulated some clear paths forward and in the planning process on that, you know, I think we should go back and read all those comments and then also makes sure that and I'm sure everyone will make sure, but that that input is incorporated into the program development.

But we do already, I think, have some excellent road maps. And that was the word I use last spring, and I think going forward we actually have some good guideposts to move ahead on that.

DR. TUCKER: One of the challenges is going to be balancing the criteria for decision-making in the workflow with the resources required to implement them. We have x dollars, x staff. How do we balance resources to get the absolute best outcome we can without us, you know, frankly meeting inerts division. And so how do we do that?

And so there's going to be some kind of trade-off between what are the technical choices and the criteria with what are the realistic number of staff members either here or at EPA or anywhere

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else that would need to be funded to work on this problem. You're talking about list that essentially gone away. It's going to take labor to figure out what to do about it.

And so figuring that trade-off of labor versus the technical criteria and what exists that we can use. So we already know about some existing resources. And then what's the delta, the work that would have to be done? Who would need to it?

How many people it is and how much is that going to cost? So they really do become operational management questions as well as technical criteria questions and they have to be considered together.

MR. BRADMAN: yes, and I really appreciate that having worked in state government and now as advisor post-date in other levels. And you know, one argument to kind of perhaps move that ahead a little bit is looking at the scale of the organic market in terms of food production and how research and regulatory dollars are spent. And I think even if organic at its percentage right now is even proportional to that, there would be a lot more resources to help create that regulatory

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framework you're talking about.

MR. ELA: Right. Carolyn.

DR. DIMITRI: I would like to change the topic a little bit. Jenny, I wonder if you could give us a more precise timeline for the Origin of Organic Livestock. I mean, I guess I bring it up as I think about the Northeastern farmers who have lost their buyers. And I think of that as like a huge failure of policy and the regulatory activities. And so I just wonder if you can give us a little bit more information. I mean, I know you personally did not do that. So --

DR. TUCKER: At this point in the game, I can tell you where it is and I can tell you what the next steps are. I get in lots of trouble when I start reading crystal balls that are fundamentally inaccurate, so I can't describe the process. So Origin of Livestock, Strengthening Organic Enforcement final rules are both in legal review right now. And so the next step after legal review is they will go to our agency agriculture marketing service, then to marketing regulatory programs which is where Jenny Lester Moffitt is.

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And then everybody else in USDA gets an opportunity to weigh in on them and then they go to the office of management budget. Office of management budget has 90 days and so I think that the timeline that the Under Secretary shared was Spring 2022 for Origin of Livestock and Strengthening Organic Enforcement just to get through those processes. And it is also side-by-side with Organic Livestock and Poultry Standards. So that's the other major rule.

So you have three major rules, that are going alongside a lot of other rules in different parts of the department into -- so when I start talking about clearance pipelines, this is it folks. This is the clearance pipeline. And that makes it so I can't be more specific about time frames because I don't control once it leaves the program. I think certainly the administration is very, very aware of what is happening with the New England dairy farmers and is very concerned about it and understands the link to Origin of Livestock.

There's also a lot of interest in Strengthening Organic Enforcement for the imports

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oversight, which is part of that broader question of compliance and enforcement. And then certainly the Organic Livestock and Poultry Rule was not even on our list at the beginning of this year. And we're meeting with EPA on inerts and so there's a lot going on.

DR. DIMITRI: Well, maybe there will be some synergies for having like organic things going through together so that there isn't all of that startup thinking for people who don't really live organic.

DR. TUCKER: Yes, I do think that helps. Certainly having a Under Secretary who used to be an organic farmer helps, right? Because she already understands the framework. And the Office of General Counsel has already looked at a lot of these rules before. And so I think that kind of also makes me more optimistic. These are very visible rules within USDA. So even Spring 2022 is kind of fast tracking from a rules perspective. They're three major rules scheduled for only a little bit -- after one year of being in an administration is pretty assertive.

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DR. DIMITRI: Okay. Thank you, Jenny.

DR. TUCKER: No. Thank you. Good question.

MR. ELA: Other questions? I am not seen any more. Jenny, thank you so much for putting yourself on the spot for some pretty difficult questions from the Board. I always look forward to this Q&A question. And also within Ex Comm meetings, I know we have on smaller topics Q&A as well. It's very much appreciated to hear kind of what your world looks like, I guess.

DR. TUCKER: I appreciate the thoughtfulness of the questions. So this dialogue's important to me.

MR. ELA: We've got it looks like 12 minutes remaining. I'm just going to throw it out to the Board. As I mentioned a little bit about kind of bigger topics that the Board might like to work on in terms of continuous improvement. Obviously, I won't be in on this conversation too much. That will be up to the new Board Chair to lead that and the Vice Chair.

But I guess I'd like to just in the

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little bit of remaining time, you know, brainstorm with the Board about what might be potential topics that you-all would like to work on in terms of how continuous improvement would happen. It doesn't mean they will be the topics. But it just opens the discussion a little bit in a very short time to see what's all on your minds of where we need to go as an organic system.

I mean, I've already thrown up climate change as a big one. I think Carolyn's brought that up. It seems logical but maybe there are others out there. So does anybody want to raise their hand and jump into starting a list of what you-all might want to pick from? I was going to say, I know you aren't all shy. Carolyn.

DR. DIMITRI: Speaking to what Asa said earlier, trying to maybe link biodiversity a little bit more explicitly into climate change.

MR. ELA: Mindee.

MS. JEFFREY: I'd like to work on organic seed requirements.

MR. ELA: Brian.

MR. CALDWELL: In the written

comments, one of our stakeholders brought up the issue of all the -- what I consider nasty chemicals that can be in packaging. And I wish I could even remember some of the names of these things, but BPA I think is one. They all have acronyms of different kinds. And some of these forever chemicals that we're concerned with that are related to nonstick surfaces and that sort of thing that seem to be potentially ubiquitous.

I don't really understand what the extent of this, but it makes me quite worried. And I'm sure that there's a history of this with the NOSB that I don't know what it is. And it feels like a big Pandora's box. And yet, I think it's very important and I think that our stakeholders are expecting that they are not going to be encountering toxic materials just in what we might consider contact surfaces or packaging.

So I don't know where we can go with this, but it's something that that written comment brought up and it's been on my mind since.

MR. ELA: Yes. I mean, in terms of this being kind of a brainstorming session that's

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totally fine. Rick.

MR. GREENWOOD: Yes. I'm interested in the sunset review process. It seems like we spent a tremendous amount of time on the sunset reviews, but at the same time it seems very perfunctory.

So it takes a lot of time out of the Board and I'd like to look -- and this is more operational, I guess, but I think we spend a huge amount of time and I don't know what it gets us or the stakeholders after we vote. So I would just like to see if there's a better way to do it or how can we look at it and make it more relevant?

MR. ELA: Sure, I mean in terms of being able to talk about continuous improvement, having more time, and calls to talk about the bigger picture could be important. We might go back to the review all of them in one year and then have three or four years to do other topics.

MR. GREENWOOD: I'm just thinking about Rotenone, which is I think we do it, we spent a lot of time on it. We looked at it and talk about it. And I think everybody pretty much knows where it's going to go. So I would just like to see if

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there's better ways to do those things.

MR. ELA: Yes. Just time management issues. You're right. An hour on each call for each subcommittee goes by pretty fast. So great point. Kyla.

MS. SMITH: Yes. What was coming to my mind, was there's so much prior work of the Board that we keep talking about this backlog and, you know, Jenny was talking about USDA or the program working with the wider USDA about priorities and wondering if there's a way that we can get into that conversation so that we're not just adding to the backlog, but also trying to help like prioritize to clear the backlog. So anyway, just a thought.

MR. ELA: Throwing it out there. Sure. Yes. Jerry.

MR. D'AMORE: Steve, I wasn't going to say anything in this section because I've got a topic that I'm really confused about the timing on the appropriateness of even bringing it up at this point in our history. But I am absolutely convinced that the broad topic of containers,

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hydroponics, and greenhouses is not going to go away. That this movement towards controlled environment agriculture is a juggernaut that will either run us over or we'll grapple with it. And again, where I just can't get my arms around it is when might this become a topic given where things are right now.

MR. ELA: Yes. Fair enough. Sue.

MS. BAIRD: When I first started in organic in 2000, the Department of Ag asked me to develop an organic program and I said I don't even know what that is. But then when I started reading -- they said well, read the proposed standard and I said, Well, this is just another HAZOP. Not a big deal I've done HAZOP, you know.

But then when I really started to understanding what organic was I said, this is the right way. As I've aged significantly since that point, I still feel like this is the right way.

My concern is for future generations. The health of the children, my grandchildren, great-grandchildren is imperative on my mind. The health of our mother Earth is imperative and I'm

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not sure how -- if this is too broad of a subject, but I was just listing to what Brian had to say, and the loops that we're seeing that the Earth is doing somehow organic is the right way.

It's the only answer we have for the health of our children. Because we do recognize the issues with the GMO methods and pesticides and the neurological damages and the autism and all of these things that we're seeing that somehow we as a human race thinks it's okay. You're saying you're asking for a broad picture. That's what we really need to do, is focus on -- I so appreciated your speech, Steve, because you brought the positive. And that's what we got to do.

We hear so many people within our own ranks more than outside our ranks, who knock what we're doing as an organic world, and we're failing on this and we're failing on that. And yes, we do fail. But oh my gosh, what we are doing right is amazing. And let's learn to market ourselves.

That's maybe not a great suggestion, but that's really what I'm seeing.

MR. ELA: Yes. It's important. This

is a brainstorming session to let a future chair figure out how to navigate. Nothing like having a brainstorming session and then going here, it's your ball. I love this. Let's just take a couple more and then we'll break for lunch. So Amy.

MS. BRUCH: Okay. Steve, That's great. Yes. Just a comment. Brainstorm. Just to always keep organic oversight integrity and enforcement in the spot light communally. It's great and tremendous that the SOE is going to be on the docket hopefully here in the spring and we have an agenda item on CACS for modernization of the supply chain transparency.

But just to keep up with the globalization of our industry and the size of our industry and try to be staying ahead of things versus catching up. So just always kind of keeping that as a continuous agenda item, I think is important to our stakeholder community as well.

There was fantastic comments that we received and it's not an easy job by any means to solve all the issues that we face. So --

MR. ELA: Okay. Makes sense.

Mindee, one last one.

MS. JEFFREY: Thank you. I feel very passionate about the excluded methods issue, and I see consumers in and outside the organic landscape also seeking transparency in the marketplace for how and where those technologies are showing up in the food system. And I respect all of the work that has gone on in this community so much and all the relationships of working on that issue.

But I don't think that we have really achieved a level of assistance in democracy for our place in the food system. And I hope that there's some way that we can find a way to achieve transparency in the food system for where excluded methods are coming into the marketplace because we're seeing rapid developments and many new kinds of technology and we struggle to keep up with naming those technologies and finding them in organic systems.

And so for me that's a big issue and I think the community continues to express that as a big issue. And I do see organic as the

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opportunity for regulatory bodies to help achieve transparency in the marketplace. And so however that can work, I hope that we find graceful path forward.

MR. ELA: Great. Well, thank you to everybody for throwing those thoughts out. Like I say, I don't have to try and shepherd them or narrow them, but I think it will be, you know, probably a good debate maybe in the executive committee where various people can chime in.

But as I said before, I would suggest pick one, maybe pick two, throw your backs into it, see what you can get and, you know, if something else comes up that's higher priority, discard one and move on and throw out some discussion documents to the stakeholders for everybody to chime in and then maybe summarize those and go from there.

But I'd love to see stakeholders engaged and our collective thoughts and collective wisdom in something that, like I say, that isn't specifically on our work agendas, but that gives us a chance to have some free will and some free thought. So I'm excited to see what this Board

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comes up with.

With that we are going to take a lunch break. I know I'm hungry. For some of you, maybe a tea break at 2:00 with some scones. So we will come back at the top of the hour in whatever time zone you're in. And then we're going to jump into Policy Development Subcommittee, and then, as I said before, instead going into CACS at the end of the day we're going to go into materials. We swapped places with those two subcommittees for various reasons. So enjoy lunch and we will see your back at the top of the hour.

DR. TUCKER: Thanks for great discussion everyone.

(Whereupon, the above-entitled matter went off the record at 2:03 p.m. and resumed at 3:01 p.m.)

MR. ELA: Well, hello everyone, again.

Top of the hour and the moment you have all been waiting for where we actually jump into the business of the NOSB. Get down to subcommittee reports and proposals and sunsets and votes. I know you've been on the edge of your seats waiting

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for this. So we're going to first jump into the Policy Development Subcommittee. Mindee Jeffrey is the Chairperson and, Mindee, I will turn it over to you to lead this forward.

MS. JEFFREY: Thank you. This was a fun one honestly, talking about virtual and oral comments. Honestly, I'm going to skip right to the questions and just kind of go through some summaries. Steve, you're going to help me if some hands get raised, right?

MR. ELA: I will.

MS. JEFFREY: So question one, should the Board move to an entirely virtual format for oral comments a week before in-person meetings or maintain the pre pandemic format of hearing virtual comments, both virtually and in-person? And I really loved the responses to all of the questions and there's a lot of creative ideas and suggestions for how we can move forward.

People really expressed gratitude for the seamless transition to the virtual format for the meeting and for all the work done on the program side to wade through the details on preparing us

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to do this. And the support was really for both.

The value was expressed for the virtual format especially in accessibility. And I liked the discussions and the people really understanding the importance of in-person comments, but also balancing that with the importance of the virtual format, providing massive amounts of people opportunities to listen in to the meeting and participate in the meeting so access.

And then the other major side of it was that they liked the pre meeting virtual format because it offers the Board an opportunity to digest oral comments before going into the deliberations. And definitely the value of in-person is expressed and people expressed that they want us to retain the in-person oral comment format so really balanced responses on that side.

Does anybody have any other reflections that they wanted to share? Go ahead, Jerry. I'm sorry. We can't hear you, Jerry.

MR. D'AMORE: I really and going to replace Sue, aren't I? I just want to support the comment that you made emphatically that the ability

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to incorporate the oral into our thought process I think is invaluable. I thought the oral comments this time around were very, very enlightening and would hate to be going before the world without the benefit of those.

MS. JEFFREY: Great. Any other reflections on that? Okay. So just looking at the second question. If the meetings moved to a model where all oral comments are heard virtually the week before the meeting, would it reduce the attendance of stakeholders at the Board meeting?

Again, I really enjoyed how people responded to these questions.

You know, definitely folks reflected that it may reduce attendance, but it will most likely increase participation. People are really looking at the carbon footprint of traveling to the meeting. And that access is a really important issue, especially farmers overcoming the barrier of harvest schedules. Sometimes that can be really difficult.

We've heard that a lot and that this provides an opportunity for access, especially to

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farmers. There was a little bit of concern expressed about, you know, what would the impact be if people in larger organizations who could afford to send attendees might have more informal access. But it was really a balanced understanding that that might be true, but that there's value in in-person attendance and that there's value in the virtual in both formats.

So really stakeholders illuminating a lot of great dynamics on both sides of all the perspectives offered back to us in this document.

Actually can't see the hands now on my screen so chime in if you want to reflect on this part of the document.

MR. ELA: I can help you out, Mindee.

I'll chime in if nobody else is. I totally agree with all those comments and I think it's hard to balance all the pluses and minuses because they're all there. We often cite the pineapple growers coming up from down south to testify on their behalf of ethylene. And I have to say it was much more powerful to see them in-person in the meeting, their effort to get there, then it would have been

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on a webinar.

But yet, I totally see the other side of, you know, as a farmer, these are my busiest parts of the year, spring and fall. And to access via virtual webinar and having that be balanced for everybody, I think is really important too say.

I'm not making a statement of one is better than the other, but in my head I see both sides of that coin.

MR. D'AMORE: Mindee. I for one would bet that we won't lose but 10 percent on the in-person. The in-person is special. And those that can do it and value it, I think will be there.

I just think we'd get much greater access to the broader public.

MS. JEFFREY: Thank you.

MR. ELA: Mindee, Kim's got a comment.

MS. JEFFREY: Yes. Go ahead, Kim.

MS. HUSEMAN: Thanks, Steve. So Steve's point, I think we will find people in both segments of this that would find benefit. So I don't know if there's a way to incorporate both potentially in an in-person and also a virtual

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setting. One day a virtual, one day an in-person.

As a stakeholder who also is the majority of us, you know, our 100 percent job and what we do on a daily basis doesn't revolve around the NOSB all the time. Does this allow entities who aren't able to carve out ways of travel to be able to make comment? I guess where I'm going with this is: Is it possible to develop like a SurveyMonkey from all of the commenters in this last round or the last two rounds and just poll them. You know, if this were to be in-person versus virtual, would you have commented?

I don't know if that's feasible or not feasible. I think we're going to get answers on both sides of this regardless. But maybe just to know that of the people that commented last week, would they have or would they not have.

MS. JEFFREY: Yes. I hear you. I think that sort of dovetails into the next question in a way. I think backtracking a little bit, you know, some of the highlights were really that multiple people from organizations can listen in on the meetings when it's virtual and that people

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really appreciate that. And so I do think that the virtual was really spoken to in that it creates a bigger audience and more people can comment orally and that they don't want to lose the in-person.

And they had a lot of creative ideas for how we could incorporate time for in-person, like maybe more expert panels or more specific comment subjects if they happened during the meeting. So some of those ideas are there to, and yes, I really appreciate this community and all the wisdom and perspective that we have here on that.

People weren't really taking a side. They're illuminating all the sides and the importance. And I think that's really going to help us as we look at meetings and meeting agendas going forward to say, Oh, this great idea could apply here and we can structure the agenda like this. So some great creative stuff here.

MR. ELA: I'll just jump in. Since most of you haven't been to in-person meeting unfortunately, but I really believe that the format

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we've used in the past where we did have two webinars that were virtual and then in-person oral comments as well. I think that does satisfy somewhat both sides of the coin.

If you can't travel you're still in the virtual webinar, which we did have two of them.

They didn't always fill up, but it certainly gave -- and when they didn't fill up, I mean, we didn't have a wait-list. Everybody really did have a chance to speak and the oral comments in-person satisfied a different need. I'd have to look back. I would tend to say the bigger organizations would wait until the in-person and on the virtual we got more individuals.

So to make sure we balance those equally, I think is important, but I just want to say we have had a hybrid model in the past for at least all the meetings I've been at. I know it was different before that, but there's three years of precedent before that.

MS. JEFFREY: Yes. Thank you, Steve.

That perspective is important and so strange to be in the pandemic reality. Think about the past

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and what the future will look like. So I do think we see people really liking both in the oral comments. So I'm going to go ahead and look at question three.

Restrictions due to the pandemic aside, would the availability of a live stream meeting discourage in-person attendance? And live stream meetings should be the baseline. It was sort of the preference expressed that some people like Zoom better than a live stream because they see it as more interactive. They value the in-person connection. But they will send more folks to listen in on the meetings if it's available after the pandemic.

And I liked that people reflected that having the virtual format doesn't intrinsically discourage in-person attendance and that they really support the hybrid as a service to the community and the Board.

MR. D'AMORE: Hear, hear.

MS. JEFFREY: Okay. So moving on. Is the practice of scheduling multiple oral comments by a single organization inherently unfair, and

is there a path by which the Board can field multiple areas of expertise from a single organization while balancing the limits of time, fairness, and the importance of receiving a wide range of stakeholder feedback?

Stakeholders really understand that there's a lot of diversity of expertise and folks where many hats in organic landscapes. So the expression that everyone deserves their three minutes to comment, regardless of affiliation was strong in the public comments. Folks see the value of a certifier or a scientist, you know, even if they are working in the same organization, having time to comment.

Subject matter experts is important and happens a lot in the organic landscape. There was some suggestion that perhaps we could construct a more equitable distribution of oral public comment slots. And if we are looking at dividing them. And so if we're going to look at crops, then maybe an organization could comment on crops and maybe they couldn't be allowed a second slot for a crops comment unless those slots didn't fill up

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kind of suggestions.

And then there was some strong support for the possibility of allotting a stable percentage of oral comments slots for farmers. So again, I really appreciate the tenor of this community in that people don't see multiple oral comments by a single organization as inherently unfair, and they understand the value of many experts. Sorry, I lost my train of thought there.

Does anybody want to chime in and I'll see if I can get it back. Go ahead, Rick.

MR. ELA: You know, it's really a tough situation. And I know we've talked about this on some of our crops calls when you go through comments, especially on the written ones but oral too, how do you balance a comment from an organization, say OTA, that has hundreds of members? Does that count as one or 50 when you're trying to figure out the preponderance of evidence for and against a proposal or something else?

And so I really like having more people speak because it seems to balance the playing field a little bit, but it really is a tough situation.

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And also when you have somebody, any organization, you don't know, unless they explicitly say, well, 75 percent of our members are for this and 25 -- it usually comes across as one voice. And so that makes it hard to do too.

It's also the same difficulty we have balancing form letters. You know, if you get a 100 letters that all say the same thing, is that really just one comment or does it really mean a 100 people care about it? So I'm glad we're discussing it, but I find it difficult when I evaluate things.

MS. JEFFREY: Yes, totally. I think the encouraging thing for me in this discussion is that the community sees the difficulty. And I didn't see any reflections from the community that we are way out of bounds or that things are, you know, really negative and that there are some in the weeds solutions potentially that we could do to help elevate some diverse voices and that it's a pretty great dialogue. Wood, did you want to go next?

MR. TURNER: Sure. To Rick's point,

I actually think that that issue, for me at least, could be addressed by organizations that do have that broad representation indicate that. I think we generally know those organizations that have broad membership. So being able to have some organizations simply say this is on behalf of this many entities in this many categories or whatever, we'd sort of capture that.

And I think for me, the weight of those comments are, you know, just as strong in that scenario they would be by stacking a big block of time in the oral comments for one organization.

I think what concerns me is that the repetition that you see sometimes on these multiple comments among organizations.

And I do wonder, Mindee, I don't remember seeing this in the comments, but I do wonder if there was ever any consideration about or any suggestion that if there are larger organizations -- who is to say what the size of membership would be -- but larger organizations, we could block those all together.

So maybe it's not, you know, multiple

three-minute presentations over four or five or six or that many people, but maybe there are ten-minute blocks of time for larger organizations that can come in and really put together a presentation that, you know, maybe all those voices can be heard in say, you know, in that ten minute block at the same time, at the eight minute block at the same time and make sure that the views of the organization are expressed.

But then we don't kind of mix it in with -- it's hard sometimes for me to kind of balance large organization with sort of really short one-off presentations by people that are just speaking for themselves. And so I don't think we heard that in the comments at all, that there might be a way to think about larger organizations with large memberships in a different block in the oral comments. It concerns me.

MS. JEFFREY: Thank you, Wood. I appreciate your perspective on the subject. I saw one suggestion that maybe if an organization signs up, you know, 123 and they get three in a row and they're commenting on the same subject that

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potentially they could sort of be de-escalated to the bottom of the list, and then if there's a slot open. So that suggestion was there are in some ways. But go ahead. I think Sue was next.

MS. BAIRD: See, Jerry, you can't have that role yet. That's still mine. I agree, Mindee, that it was interesting to me that people did not find that large organizations that had several speakers was inherently a conflict. I thought that was great. I did also though find interesting some commenters who expressed concerns that maybe we're losing our farmer voice and maybe we could find a way to just give a certain block of time just for farmers to express their opinions.

And I felt that was a valuable thing.

I hear that a lot of times. I'm in rural Missouri and they'd say, well, you know, I don't, you know, (audio interference) count any way, my voice why should I even try? I don't have to time to get signed up because I don't find out about it and by the time I find out about it, all blocks are already done anyway. So I think that's valuable and something we need to work on, finding a way

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to give rural America their voice. But overall, I felt very positive about the comments and the commenters who felt that we were doing a pretty good job. So --

MS. JEFFREY: Thank you, Sue. I do hope farmers feel encouraged to apply for oral slots. Kyla, go ahead.

MS. SMITH: Yes. I think that, again, it was encouraging to me to see that in large part the stakeholders didn't necessarily feel like there was, you know, a big tip. And so I guess I was trying to think about the amount of like logistic for enforcing of having to like make sure people signed up for the thing or like the props and then what did they changed their mind or whatever. And if it really was worth all the effort to go into this policing if the stakeholders didn't really find it to be that big of a deal.

And then just want to, you know, I certainly want to hear from all different kinds of stakeholders and farmers are large and small and handlers are large and small. And so I think it's really important that we remember that our

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industry is sort of skill neutral in a large aspect, especially within certification.

And I don't know, how can we raise up all the voices in a -- I don't know. I guess I'm just concerned about what percentage for farmers.

What if those are large farmers and smaller handlers at this place or whatever. So just trying to think out loud for everybody.

MS. JEFFREY: Yes. You're right. Logistics are real in that situation. Amy, I think you were next.

MS. BRUCH: Yes. Thank you, Mindee, for leading this conversation. I think the hybrid approach and getting back into being able to meet in addition to the virtual be a great situation.

I love the community's perspective and just having greater farmer participation. I think with both avenues that'll be helpful. But it's almost like the outreach and just making folks aware -- some these small stakeholder groups aware of the opportunity, I think, potentially is a little bit of a bottleneck.

You know, farmers are busy this time

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of year, but you know, now with all the virtual connections we can do there's some multitasking.

I believe some of them even did that this last comment round because several were off camera as they were commenting, working on their farms.

But yes, I just think maybe there's a little bit of a need to just do the outreach because these issues do impact the smaller farmers and larger farmers, and, as Kyla mentioned, small and large handlers as well and their voices are really beneficial. So maybe that scenario we can look at too.

MS. JEFFREY: Thank you.

MR. ELA: Mindee, I'll just do a time check in about ten more minutes. I don't know how many more questions you have. It's great hearing from the Board members.

MS. JEFFREY: So yes, that was our last question. So we're just having discussion now.

I think we'll be fine. Nate, why don't you jump in?

MR. POWELL-PALM: I just wanted to piggy back off what Amy said. That I thought it

was one of the coolest things to get a text after oral comments being like, yes, I was on my tractor the whole time I was commenting. And I think that is exactly like the creative solution we need to help farmers be engaged.

But I also thought it was helpful that I saw some organizations, you know, try to help synthesize for the farmer members what their voice could sound like. Like, what does their commentary -- what impact does that have? And a little bit of coaching on how you get up in front of the NOSB and say your piece. So I'm excited to see that.

One idea though is, I would be really grateful if larger organization members did call out how many members do -- or sorry, larger organizations call how many members they are representing in their calls because, you know, I struggle with that a little bit, and I think Rick's point to how much weight to give to different comments.

It'd be really nice to have the stats on the front end to be able to, you know, accurately

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weigh how many farmers are speaking to this unified voice, and to the good democracy that a lot of these organizations have, they are member approved policies and positions.

MS. JEFFREY: Yes. I did hear sort of some cautionary statements to the Board in comments that our stakeholders worry that in-person comments have more weight than an oral, virtual, or maybe even a written comment. So I did take that to heart and I do think about holding myself accountable for equal weight across stakeholders. So appreciate those comments. Amy.

MS. BRUCH: Yes, Mindee. Had one additional thought. A comment that stood out to me, and I know this is a discussion document, so a little bit exploratory, was maybe extending the time frame in which written comments can be delivered. Or, you know, there was some comments on the sign up period.

But anyway, written comments because these larger groups that aggregate farmer voices or multi-stakeholder voices, you know, it does take time for them to reach out to their communities

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and summarize that information. So I thought that that was a good comment that was raised by stakeholders is just to maybe look at the time frame in which we're asking for this information.

MS. JEFFREY: Yes. Agreed. I loved the depth of sincerity and the amount of work that goes in on all sides. As a new Board member, I was really struggling with the time frame of receiving the written comments. And then I realized how hard everyone out there is working to send us written comments so I appreciate that on all sides. Sue, did you have one more?

MR. ELA: I'll go ahead and count that out for Sue.

MS. JEFFREY: Okay.

MS. BAIRD: Follow-up to what Amy said because one of the commenters actually made that point of putting too much emphasis on the limited comments received during the 30 day period might be dangerous because it says not in the best interest sometimes. Maybe the only organizations or the only people who had the staff and the time to actually comment. And so I thought that was

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an interesting comment. And just a follow up to Amy's comment.

MS. JEFFREY: Thank you. And I think, Steve, you're going to wrap this up if nobody else feels -- Oh, we got Jerry. So --

MR. ELA: Yes, that's why I don't need to wrap this up. But I guess on two things -- I've always valued the written comments a little more than the oral comments just because -- I mean, I value both. I don't want to give the impression I don't value one, but because the written comments people have time to write them and then go back and look at what they said and edit and run it by a couple of other people.

So I've always felt maybe they were a little more just thought out. I'm really on dangerous ground here because I think oral commenters think things out too, but just, you know, edited, I guess, and, you know, for real intent. Some people just get nervous in front of the camera on an oral comment. Yes. I don't want their nervousness to come across as not being as focused or whatever.

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So I think balancing both is, you know, necessary and the oral comments do have a little bit more time for people to consider. But Amy's point would be great to give people more time. I'm sure all the organizations would love that.

But you have to look on the backside. You went 15 days earlier to have everything in and what does that mean for the Board in terms of the Board having time to think about things too.

So it's this real challenge of enough time for our stakeholders to comment and get enough time for us to, you know, really look into proposals and such. And we have had times where I think they were only 25 or 20 day comment periods and that was ugly. We really heard about that. So the 30 days is really critical and more would be nice, but it has a trade-off.

The other thing that I would really like to see and I think would be valuable, especially during oral comments, but even written is that we have, you know, identify your name and affiliation, you know, as people are introducing themselves, but consultants are a real tough one because often

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consultants won't identify who is paying them for their consulting. And they can often come across as individuals when in fact they're actually representing another organization.

And I think that it would be so nice for the Board that know that because it changes to me the tenor of how you take those comments.

And so I'd really like to see more identification of who you're working for or if it's truly an independent comment.

MS. JEFFREY: Thank you, Steve, I appreciate that. Jerry.

MR. D'AMORE: Do we have two minutes, Steve, or I can yield it back. How are we doing?

MR. ELA: Go for it, Jerry. You're fine. We'll cut it off after you.

MR. D'AMORE: Okay. Thank you. In terms of giving voice to the various categories of stakeholders, I think there's one thing to consider, then another thing that's within our power to do. Just harkening back to the oral period that we just went through, comment period that we just went through, I think what's on our

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agenda as hot items would drive a lot of that.

So this time, I thought, weight to the farming community was rather extraordinary, but it made sense to me because of what we were talking about as hot items. And I think the other thing too which was done really well by our team is, you give broader voice when you ask a question. And we did do that and we did give broader voice to particularly this time, again in terms of hot topics, to the farming community to really express themselves, I thought. Thank you.

MS. JEFFREY: Thank you. Appreciate everybody's passion on this subject. It was fun synthesizing for perspectives and writing the documents and I really enjoyed hearing the integrity of the organic community come through in this document. So thanks, everybody and I look forward to some more digesting when we go back to subcommittee. Thank you, Steve.

MR. ELA: Thank you, Mindee. I think that was a great job and something the Board has kind of debated and I too was a little surprised by some of the -- I thought there might be more

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in favor of limiting comments. And it was great to see that maybe we're doing pretty well. It's not always like that. So thanks for your work on it, Mindee, it was great. We're going to jump into the Livestock Subcommittee. And Kim, you are the Chair, So taken away.

MS. HUSEMAN: Right. Good afternoon.

I think it's the safest thing to say for everybody now it's 1:30 Mountain Time at least. So we are going to start off with our sunset review process with activated charcoal. Reference 205603A6 activated charcoal must be used from vegetative sources. And this sunset review item belongs to Brian.

MR. CALDWELL: Thanks, Kim, and thanks for reading that in. I was getting ready to do that. So I think this is a benign substance that seemed to come through in the discussions and the TR. Activated charcoal is used to treat poisoning of animals and is pretty much the treatment of choice for that.

So I think I can make this pretty quick.

Only a small amount of it is used. And there was

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a little bit of a question as to disposal of it in manure, but it seems to me that having some activated charcoal in the manure was neutral at worse and it actually could be positive in terms of binding up toxins and that sort of thing. So I think it's good.

There were about 11 comments in the written comments and none of them were opposed.

And as I said, there was only one that considered an annotation for the handling of manure with activated charcoal. But I personally don't see that as an important issue and that could be brought up separately later, but we can't change the annotations now.

And finally, I just wanted to read the second part of the discussion that's in the proposal and it says, Comments on activated charcoal received for the Spring meeting -- just to reiterate that one too -- were strongly in favor of continued listing as an approved synthetic substance for use in livestock care. It is used infrequently in relatively small amounts. It has little environmental impact.

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Furthermore, its use can reduce or prevent livestock distress and death. So I think that's it for my summary and it's back to you, Kim.

MS. HUSEMAN: All right. Thank you. Brian.

MR. ELA: Are there any questions? I don't see anything. So we can move to the vote on it. First vote. So the motion is for activated charcoal. Just a reminder to the Board that a yes vote is to de-list it. A no vote is to keep it on the list. It is a reverse of what it seems like. I even had to pause to think about it myself.

So if you want it off the list, vote yes. If you want it to remain on the list, vote no. We're going to go in alphabetical order here. Mindee, are you ready for vote counting? Okay. So we're going to start with Sue.

MS. BAIRD: No.

MR. ELA: Asa?

MR. BRADMAN: No.

MR. ELA: Amy?

MS. BRUCH: No.

MR. ELA: Brian?

MR. CALDWELL: No.

MR. ELA: Jerry?

MR. D'AMORE: No.

MR. ELA: Carolyn?

DR. DIMITRI: No.

MR. ELA: Rick?

MR. GREENWOOD: No.

MR. ELA: Kim?

MS. HUSEMAN: No.

MR. ELA: Mindee?

MS. JEFFREY: No.

MR. ELA: Logan?

MS. PETREY: No.

MR. ELA: Nate?

MR. POWELL-PALM: No.

MR. ELA: Kyla?

MS. SMITH: No.

MR. ELA: Wood?

MR. TURNER: No.

MR. ELA: The Chair votes no.

MS. JEFFREY: We are unanimous.

MR. ELA: Why don't you read in the
actual vote count for the record?

MS. JEFFREY: Zero yes. Fourteen no. Zero abstentions. Zero recusals and zero absent. The motion to remove fails.

MR. ELA: Good job, Mindee. Good language. Okay, Kim. Next.

MS. HUSEMAN: Next we'll be moving to calcium borogluconate. Reference 205603A7. Treatment of milk fever only. And the substance belongs to Mindee.

MS. JEFFREY: Wow, you guys are keeping me busy today. So a high-level of support from stakeholders seeking to relist this substance. There was a note that it might be redundant given the electrolyte listing, but that redundancy isn't problematic. A stakeholder put a little pressure on the use of boron and suggested that future Boards might consider annotating for a withdrawal period after use.

Another stakeholder noted that future Boards should pay attention to whether there is a commercially available form of calcium borogluconate formulated with a fermentation step that could involve a genetically modified form

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of -- I cannot say the name of that bacteria so I apologize. Either which way, strong support for the necessary use of this substance as a treatment for milk fever.

MR. ELA: Any questions? Sue has one for you. Guess what, Sue?

MS. BAIRD: I don't know why I do that every time. This was a comment from OPA and I felt it very pertinent both for the calcium borogluconate and calcium propionate. And they made the point that these materials are not redundant. Each of them have its own mode of action and each of them may work for different sites specifics including in different regions of the country.

So I thought that was a great observation. And something that we need to remember is that we are an international organization and we need to really think about those things. That was a comment from OPA that I thought pertinent.

MS. JEFFREY: Yes. I totally agree with you, Sue. The overall tenor was that we're

addressing milk fever well, and that all of the substances on the list are necessary as they can treat differently in different times.

MR. ELA: Other questions? All right. We'll move to the vote on calcium borogluconate. First off will be Asa.

MR. BRADMAN: No

MR. ELA: Amy?

MS. BRUCH: No.

MR. ELA: Brian?

MR. CALDWELL: No.

MR. ELA: Jerry? Jerry, we didn't hear you.

MR. D'AMORE: That's a no, sir.

MR. ELA: Carolyn?

DR. DIMITRI: No.

MR. ELA: Rick?

MR. GREENWOOD: No.

MR. ELA: Kim?

MS. HUSEMAN: No.

MR. ELA: Mindee?

MS. JEFFREY: No.

MR. ELA: Logan?

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MS. PETREY: No.

MR. ELA: Nate?

MR POWELL-PALM: No.

MR. ELA: Kyla?

MS. SMITH: No.

MR. ELA: Wood?

MR. TURNER: No.

MR. ELA: Sue?

MS. BAIRD: No.

MR. ELA: Chair votes no.

MS. HUSEMAN: Okay. I'll wait for
Mindee.

MS. JEFFREY: Again. Zero yes.
Fourteen no. Zero abstentions. Zero recusals.
Zero absent. The motion to remove fails.

MS. HUSEMAN: The next sunset review
we have is calcium propionate. Reference
205603A8. For treatment of milk fever. And this
substance is Sue's.

MS. BAIRD: Yes. Calcium propionate
is a synthetic material. It is produced by
reacting propionic acid with a solution of calcium
hydroxide. Again, it is an electrolyte. We did

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have a few commenters who said it was redundant, but then we had those compelling arguments that they're not redundant, we have to look at site-specific conditions and the different modes of action.

It treats milk fever. The point is if you don't treat it, you're usually going to lose your cow. And that's not what we want at all. We treat our animals humanely. So same comments basically as the calcium borogluconate.

MR. ELA: Any questions? I'm not seeing any. So we will move to the vote on calcium propionate.

MS. BAIRD: Could I make one more point?

MR. ELA: Sure.

MS. BAIRD: Just as an aside. But I love it when the different organizations quantify how many in their -- farmers that are using them, you know -- CCOF did it, PCO did it, OPA did it.

I have these many farmers using the product and that's very helpful to us as we read those comments.

MR. ELA: Fair enough. All right.

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We're going to move to the vote and we're going to start with Amy this time.

MS. BRUCH: No.

MR. ELA: Brian?

MR. CALDWELL: No.

MR. ELA: Jerry?

MR. D'AMORE: No.

MR. ELA: Carolyn?

DR. DIMITRI: No.

MR. ELA: Rick?

MR. GREENWOOD: No.

MR. ELA: Kim?

MS. HUSEMAN: No.

MR. ELA: Mindee?

MS. JEFFREY: No.

MR. ELA: Logan?

MS. PETREY: No.

MR. ELA: Nate?

MR. POWELL-PALM: No.

MR. ELA: Kyla?

MS. SMITH: No.

MR. ELA: Wood?

MR. TURNER: No.

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MR. ELA: Sue?

MS. BAIRD: No.

MR. ELA: Asa?

MR. BRADMAN: No.

MR. ELA: Chair votes no.

MS. JEFFREY: Again. Zero yes.

Fourteen no. Zero abstentions, recusals or absences and the motion to remove fails.

MS. HUSEMAN: Okay. Next up is chlorine materials including calcium hypochlorite, chlorine dioxide, hypochlorous acid generated from electrolyzed water, and sodium hypochlorite. Reference 205603A10. Chlorine materials disinfecting and sanitizing facilities and equipment. And this belongs to Nate.

MR. POWELL-PALM: Thank you, Kim. The comments were fairly consistent in both saying that these are needed materials, that they're really an integral part of a good sanitation program. I think folks highlighted that as it's ongoing discussion on the Board figuring out how we have a well-rounded sanitation program that doesn't rely on any one material too much and really

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understand sanitation kind of from a microbiological-ecological point of view, is the direction that the organic community should be moving. But overall, folks were feeling pretty good about keeping these on the list.

MR. ELA: Questions? Asa.

MR. BRADMAN: Yes. I have a lot of thoughts with respect to chlorine sanitizers and that applies to, you know, the whole list and not all of them -- some of this have been coming up when we talked about research priorities. But in general, I think sanitizers, you know, have raised concerns among a lot of folks given they're probably the most serious conventional type pesticide that we use in the organic sector.

And yet they're also essential for complying with FSMA and other safety standards.

So I really like the idea of, you know, a comprehensive review these compounds and at risk of repeating myself because we have these compounds covered several days this week. You know, again, I said earlier about public comments. There's been some excellent public comments on sanitizers

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and their use and how to evaluate them.

I think especially that was a highlight to me are from NOC and from OTA. And about how we should be thinking of these, how they're listed.

In particular I think both comments last spring from NOC. And also I encourage everyone to kind of reread the OTA comments, the additional comments on chlorine materials on page 6 of comments from last spring.

Because I think that really outlines and puts into a thought perspectives from a lot of members of the stakeholder community in looking at different ways of listing materials. Have a section that's dedicated to specifically sanitizers given that that's a, you know, important pesticides that we used in organic. And that within that listing, we kind of distinguish between what has food contact and all the contexts which they're used and have a real -- my image is kind of a table that lists with a check off, you know, what they're being used for.

And also I think it links also into a general understanding of materials that are used,

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you know, with and without a rinse. There's some materials of course, that don't have to be listed if there is a rinse, so I think there's a work agenda item here going forward that is important for the NOP and the Board to work on.

And again, I encourage people to go back and review these comments. I think the ones from last spring were especially comprehensive on these issues. At the same time, these materials are essential and I certainly wouldn't vote to remove them. But I think more work needs to be done on these. And also just clarify our understanding of how they're used.

MR. POWELL-PALM: Thank you for that.

Yes, absolutely agree. And I think that's a theme even since the SAM Hazard panel last fall. Growing awareness and kind of coming up with a strategy as a group for how we deal with not just individual materials as they come up, but sanitizers as entire work agenda item. So thank you.

MR. BRADMAN: And also just reminder, we have two new materials that are under petition right now.

MR. ELA: All right. Anything else? We're going to spin through these. I had made the executive decision that we would vote on each one separately. Just to be very clear on the record that we're in favor of them all, but it means we're going to spin through some votes here. So the motion is to remove calcium hypochlorite from the national list. Help me out here, Michelle.

MS. ARSENAULT: Brian.

MR. ELA: Yes, but I'm actually trying to get the right one that we're voting on first here.

MR. BRADMAN: Chlorine dioxide.

MR. ELA: Okay. Chlorine dioxide. We'll start with Brian.

MS. SMITH: Sorry, I think calcium hypochlorite is at the top of the slide.

MR. ELA: Okay. Thanks. Motion to remove calcium hypochlorite. Thank you, Kyla. So we'll start with Brian.

MS. ARSENAULT: Sorry, Steve, can I just interrupt for one second because I don't think we verbalized it for the record. Who brought the

motion and who seconded it? It's on the screen so hopefully the transcriptionist is capturing it but --

MR. ELA: No. You're totally correct on that. So the motion was by Kim and seconded by Nate. And we'll move to the vote on calcium hypochlorite and we'll start with Brian.

MR. CALDWELL: So I'm voting no somewhat reluctantly. I really strongly echo what Asa said.

MR. ELA: Okay. Jerry?

MR. D'AMORE: No.

MR. ELA: Carolyn?

DR. DIMITRI: No.

MR. ELA: Rick?

MR. GREENWOOD: No.

MR. ELA: Kim?

MS. HUSEMAN: No.

MR. ELA: Mindee?

MS. JEFFREY: No.

MR. ELA: Logan?

MS. PETREY: No.

MR. ELA: Nate?

MR. POWELL-PALM: No.

MR. ELA: Kyla?

MS. SMITH: No.

MR. ELA: Wood?

MR. TURNER: No.

MR. ELA: Sue?

MS. BAIRD: No.

MR. ELA: Asa?

MR. BRADMAN: No.

MR. ELA: Amy?

MS. BRUCH: No.

MR. ELA: Chair votes no.

MS. JEFFREY: Zero yes. Fourteen no.

Zero abstentions, recusals, or absences. The motion to remove fails.

MR. ELA: Okay. We're going to move next to the motion to remove chlorine dioxide from the list. Again, motioned by Kim, seconded by Nate. We will start with Jerry.

MR. D'AMORE: It's a no.

MR. ELA: Carolyn?

DR. DIMITRI: No.

MR. ELA: Rick?

MR. GREENWOOD: No.

MR. ELA: Kim?

MS. HUSEMAN: No.

MR. ELA: Mindee?

MS. JEFFREY: No.

MR. ELA: Logan?

MS. PETREY: No.

MR. ELA: Nate?

MR. POWELL-PALM: No.

MR. ELA: Kyla?

MS. SMITH: No.

MR. ELA: Wood?

MR. TURNER: No.

MR. ELA: Sue?

MS. BAIRD: No.

MR. ELA: Asa?

MR. BRADMAN: No.

MR. ELA: Amy?

MS. BRUCH: No.

MR. ELA: Brian?

MR. CALDWELL: No.

MR. ELA: Chair votes no.

MS. JEFFREY: Zero yes. Fourteen no.

Zero abstentions, recusals, or absences. Motion to remove fails.

MR. ELA: Okay. We're going to move onto the motion to remove hypochlorous acid. Motion by Kim, second by Nate. And we are going to start with Carolyn.

DR. DIMITRI: No.

MR. ELA: Rick?

MR. GREENWOOD: No.

MR. ELA: Kim?

MS. HUSEMAN: No.

MR. ELA: Mindee?

MS. JEFFREY: No.

MR. ELA: Logan?

MS. PETREY: No.

MR. ELA: Nate?

MR. POWELL-PALM: No.

MR. ELA: Kyla?

MS. SMITH: No.

MR. ELA: Wood?

MR. TURNER: No.

MR. ELA: Sue?

MS. BAIRD: No.

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MR. ELA: Asa?

MR. BRADMAN: No.

MR. ELA: Amy?

MS. BRUCH: No.

MR. ELA: Brian?

MR. CALDWELL: No.

MR. ELA: Jerry?

MR. D'AMORE: No.

MR. ELA: Chair votes no.

MS. JEFFREY: Zero yes. Fourteen no.

Zero abstentions, recusals, or absence. Motion to remove fails.

MR. ELA: Okay. We're going to move to the last one of chlorine materials. Motion to remove sodium hypochlorite from the national list. Motion by Kim, second by Nate. And we are going to start with Rick.

MR. GREENWOOD: No.

MR. ELA: Kim?

MS. HUSEMAN: No.

MR. ELA: Mindee?

MS. JEFFREY: No.

MR. ELA: Logan?

MS. PETREY: No.

MR. ELA: Nate?

MR. POWELL-PALM: No.

MR. ELA: Kyla?

MS. SMITH: No.

MR. ELA: Wood?

MR. TURNER: No.

MR. ELA: Sue?

MS. BAIRD: No.

MR. ELA: Asa?

MR. BRADMAN: No.

MR. ELA: Amy?

MS. BRUCH: No.

MR. ELA: Brian?

MR. CALDWELL: No.

MR. ELA: Jerry?

MR. D'AMORE: No.

MR. ELA: Carolyn?

DR. DIMITRI: No.

MR. ELA: And Rick?

MS. JEFFREY: No. It's you.

MR. ELA: Yes. I'm sorry. Chair

votes no. Put a check mark in the wrong spot.

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MS. JEFFREY: Zero yes. Fourteen no. Zero abstentions, recusals, or absences. Motion to remove fails.

MR. ELA: Right. I think that gets us through the chlorine materials. So thank you, Kim.

MS. HUSEMAN: Awesome. Thank you, Steve. Okay. So next up is kaolin pectin. Reference 205603A17. As a disinfectant -- sorry, I was looking in the wrong spot here. So kaolin pectin for use as an absorbent, anti-diarrheal, and gut protectant. This particular substance is mine.

At the time of voting out of subcommittee, we were still waiting on the TR. Since we voted it out of subcommittee, the TR had been deemed to be sufficient. So kaolin pectin is another tool in the toolbox for livestock production or sorry for producers as an absorbent anti-diarrheal and again I'll just reiterate, a gut protectant. So just yet another way that we can combat acute issues.

There were a few comments very similar

to the screen meeting overwhelmingly in support for relisting kaolin pectin. To note, both kaolin and pectin on their own are already also on the national list. Kaolin was reviewed last year as my first year on the Board, and pectin will be up for sunset review for the 2024 sunset process. So the only alternatives I guess that were listed on the TR that were brought about, were mostly listed as preventative care as feed additives and then other products that we're already currently utilizing that are listed on the national list.

But in addition to what Sue had said, PCO specifically notated that there are 23 operators that have approved kaolin pectin in their operating plan. Of all of the sunset review items that I have that was overwhelmingly one of the more prominent ones to consider. Other certifying bodies also listed the number of members that they had.

You know, one comment was made that pectin if used one form is non synthetic. If that's the only form of pectin that's utilized, kaolin pectin can be considered non synthetic and

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would not be listed at 205603, but to me that's just not an item up for debate today. I think that would be more along the pectin review process before we'd be able to circle back to that. So that's really the summary of my review today.

MR. ELA: Questions. I don't see any.

So we're going to move to the vote on kaolin pectin. The motion was made by Sue, it was seconded by Mindee. And we're going to start with Rick.

MR. GREENWOOD: No.

MR. ELA: Kim?

MS. HUSEMAN: No.

MR. ELA: Mindee?

MS. JEFFREY: No.

MR. ELA: Logan?

MS. PETREY: No.

MR. ELA: Nate?

MR. POWELL-PALM: No.

MR. ELA: Kyla?

MS. SMITH: No.

MR. ELA: Wood?

MR. TURNER: No.

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MR. ELA: Sue?

MS. BAIRD: No.

MR. ELA: Asa?

MR. BRADMAN: No.

MR. ELA: Amy?

MS. BRUCH: No.

MR. ELA: Brian?

MR. CALDWELL: No.

MR. ELA: Jerry?

MR. D'AMORE: No.

MR. ELA: Carolyn?

DR. DIMITRI: No.

MR. ELA: And the Chair votes no.

MS. JEFFREY: Zero yes. Fourteen no.

Zero abstentions, recusals or absences. The motion to remove fails.

MS. HUSEMAN: Moving forward. Mineral oil. Reference 205603A20. For treatment of intestinal compaction, prohibited for use as a dust suppressant. This is Sue.

MS. BAIRD: Hi. Mineral oil is used as an internal lubricant in the case of impaction of the omasum and the third stomach, the abomasum.

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Many times suspicion frame the cow as eating a lot of grasses that comes impacted. There were comments stating that -- well, we asked for a limited TR. We got one back again between our spraying and we got one in -- it was due late February.

So we did get a new TR. The TR didn't shed any real, new, significant difference. It did point out some preventative measures that could be used, such as instead of a seed, a lot of fibers that perhaps it would -- when they're over -- pregnant be, it would prevent that impaction. And they made the comment that producers using local quality roughage should augment the ration with grain to meet those energy and protein requirements, and that might prevent the impactions.

It's also used for bloat. It's commonly used for bloat. And again, that occurs in animals after grazing that lush spring pasture.

The real crux of the matter is if you don't treat either that impaction or that bloat, you're going to lose your animal.

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And one livestock veterinarian, Dr. Hugh Karreman said that mineral oil has the property of not being absorbed by the gut. Because also they said that we could use different types of oils. And he said that did not work because it'll just get passed through. So he said that is the only one that's not absorbed by the gut and thus can coat the gut so there's no absorption or possible re-absorption downstream for toxins. It can be used for frothy bloat.

It is indispensable to me as a practitioner. Can quickly reverse digestive upsets. That's pretty powerful. And so, end on that note.

MR. ELA: Questions? Right. We will move to the vote on mineral oil. It was motioned by Kim, seconded by Brian. And we are going to start -- as soon as I get my page turned here -- sorry about that.

MS. HUSEMAN: With me, Kim.

MR. ELA: With Kim.

MS. HUSEMAN: No.

MR. ELA: Mindee?

MS. JEFFREY: No.

MR. ELA: Logan?

MS. PETREY: No.

MR. ELA: Nate?

MR. POWELL-PALM: No.

MR. ELA: Kyla?

MS. SMITH: No.

MR. ELA: Wood?

MR. TURNER: No.

MR. ELA: Sue?

MS. BAIRD: No.

MR. ELA: Asa?

MR. BRADMAN: No.

MR. ELA: Amy?

MS. BRUCH: No.

MR. ELA: Brian?

MR. CALDWELL: No.

MR. ELA: Jerry? Jerry, you must be
on mute.

MR. D'AMORE: No.

MR. ELA: Carolyn?

DR. DIMITRI: No.

MR. ELA: Oh, sorry. Rick?

MR. GREENWOOD: No.

MR. ELA: Chair votes no.

MS. JEFFREY: Zero yes. Fourteen no.

Zero abstentions, recusals, or absences. Motion to remove fails.

MS. HUSEMAN: All right. We will be moving forward to nutritive supplements. Reference 205603A21. Injectable supplements of trace minerals per paragraph D2 of this section. Vitamins per paragraph D3, and electrolytes per paragraph A11 with excipients per paragraph F in accordance with FDA and restricted to use by or on the order of a licensed veterinarian. This is for Nate.

MR. POWELL-PALM: Thank you, Kim. I really enjoyed this random semester on Livestock Committee because we got to talk about materials that highlight the really focused efforts by organic farmers to maintain good animal welfare. And I think nutritive supplements very much fall into that category. It's one of the limited numbers of tools that producers have to treat acute illness, but also to help boost immunity and

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ultimately make for a more resilient and robust animal health and welfare program.

Very consistent comments from the community. Nutritive supplements are a critical toolbox and no one is really looking for them to go away. I think that there was no further clarification and emphasis on the fact that with injectable nutritive supplements, they really are a last ditch effort to help an animal that's sick when they're at the point of refusing feed. So it seems like, across the Board, critical and well received comments on keeping these on the list.

MR. ELA: Questions? All right. We'll move to the vote for nutritive supplements.

Motioned by Nate, seconded by Brian. And we get to start with Mindee.

MS. JEFFREY: No.

MR. ELA: Logan?

MS. PETREY: No.

MR. ELA: Nate?

MR. POWELL-PALM: No.

MR. ELA: Kyla?

MS. SMITH: No.

MR. ELA: Wood?

MR. TURNER: No.

MR. ELA: Sue?

MS. BAIRD: No.

MR. ELA: Asa?

MR. BRADMAN: No.

MR. ELA: Amy?

MS. BRUCH: No.

MR. ELA: Brian?

MR. CALDWELL: No.

MR. ELA: Jerry?

MR. D'AMORE: No.

MR. ELA: Carolyn?

DR. DIMITRI: No.

MR. ELA: Rick?

MR. GREENWOOD: No.

MR. ELA: Kim?

MS. HUSEMAN: No.

MR. ELA: Chair votes no.

MS. JEFFREY: Zero yes. Fourteen no.

Zero abstentions, recusals, or absences. Motion to remove fails.

MS. HUSEMAN: Okay. We'll move

forward to propylene glycol. Reference 205603A27. Only for treatment of ketosis in ruminants. Mindee, you're up.

MS. JEFFREY: Thank you. Stakeholders see the substance as essential for the treatment of ketosis. There's good discussion on prevention by proper nutrition is the best practice for avoiding the need for propylene glycol. And I appreciated the stakeholders eliminating other methods for ketosis recovery that they've tried, and that the emphasis really is that the alternatives are not always as effective in all situations and that this material is essential.

MR. ELA: Questions? All right. We will move to the vote for propylene glycol. Motioned by a Mindee, seconded by Nate. And we are going to start with Logan.

MS. PETREY: No.

MR. ELA: Nate?

MR. POWELL-PALM: No.

MR. ELA: Kyla?

MS. SMITH: No.

MR. ELA: Wood?
MR. TURNER: No.
MR. ELA: Sue?
MS. BAIRD: No.
MR. ELA: Asa?
MR. BRADMAN: No.
MR. ELA: Amy?
MS. BRUCH: No.
MR. ELA: Brian?
MR. CALDWELL: No.
MR. ELA: Jerry?
MR. D'AMORE: No.
MR. ELA: Carolyn?
DR. DIMITRI: No.
MR. ELA: Rick?
MR. GREENWOOD: No.
MR. ELA: Kim?
MS. HUSEMAN: No.
MR. ELA: Mindee?
MS. JEFFREY: No.
MR. ELA: Chair votes no.
MS. JEFFREY: Zero yes. Fourteen no.

Zero abstentions, recusals, or absences. Motion

to remove fails.

MS. HUSEMAN: Okay. Thank you. Mindee. Moving forward. Next on the list, we have sodium chlorite acidified. This is in two different references. We'll start with reference 205603A28. Allowed for use on organic livestock as a teat dip treatment only. Do you want me to read in B as well or should we review A, discuss it, and go to B? They're very similar.

MR. ELA: You can go for both.

MS. HUSEMAN: Okay. Also for review is 205603B10. Allowed for use on organic livestock as a teat dip treatment only. So these are very similarly written. But the delineation between the two is one is as a pre-teat dip. and the other is as a host teat dip. And so one from an infection standpoint, I guess, and one as a sanitation standpoint.

So there were a few comments very similar to the spring. There are operations who utilize ASC in their program. They consider the solutions as superior anti-microbial activity against E. coli and a preventative measure for

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infections, especially mastitis. It's highly effective and according to, you know, Crop Cop, environmentally friendly as it breaks down in water, citric acid, and salt.

I would say of the individuals that did comment the one mention of -- I think as Asa pointed out earlier -- utilizing chlorine materials and just encouraging the community to take a harder look at chlorine materials in general. Just trying to become as chlorine-free as possible. This can fall under that particular realm as well.

But as it stands today, by removing ASC or acidified sodium chlorite would prevent some operations from having this tool and could impact milk quality. That's the conclusion of my summary.

MR. ELA: Questions? Right. Motion to remove sodium chlorite acidified was made by Kim and seconded by Nate. And with everyone's permission, we will vote on these as a group. Does anybody object to that? Okay. We will start with Nate.

MR. POWELL-PALM: No.

MR. ELA: Kyla?
MS. SMITH: No.
MR. ELA: Wood?
MR. TURNER: No.
MR. ELA: Sue?
MS. BAIRD: No.
MR. ELA: Asa?
MR. BRADMAN: No.
MR. ELA: Amy?
MS. BRUCH: No.
MR. ELA: Brian?
MR. CALDWELL: No.
MR. ELA: Jerry?
MR. D'AMORE: No.
MR. ELA: Carolyn?
DR. DIMITRI: No.
MR. ELA: Rick?
MR. GREENWOOD: No.
MR. ELA: Kim?
MS. HUSEMAN: No.
MR. ELA: Mindee?
MS. JEFFREY: No.
MR. ELA: Logan?

MS. PETREY: No.

MR. ELA: Chair votes no.

MS. JEFFREY: Zero yes. Fourteen no.

Zero abstentions, recusals, or absences. Motion to remove fails.

MS. HUSEMAN: We're ahead of schedule.

And we will finish the Livestock Subcommittee with zinc sulfate. Reference 205603B12. For use in hoof and foot treatments only. Brian, this is your substance.

MR. CALDWELL: Thanks, Kim. This is a little bit more problematic than some of the -- certainly the activated charcoal that I also worked on just because it's manufacturers creates more toxic byproducts and things like, you know, aspects like that. Zinc is a micro nutrient, but it also can build up in the soil. So of the 11 comments that we got in the written comment period, none were for de-listing zinc sulfate.

There were a couple of comments that it should be used in rotation. Soil should be monitored for zinc levels after use to make sure that they're not going up. And that's similar to

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what's done with copper sulfate which is also used for the same purpose. And also one said that it should be used only after all other alternatives had failed.

So the pluses for zinc sulfate are that it's less toxic or tends to have less impact on the soil than copper sulfate, which is probably the number one product that's used for this for foot rot in ruminants. So it is probably a more positive alternative. Formaldehyde is also used.

I don't think it's allowed in organic production.

So there are a few other possibilities as alternatives. But as far as I could tell from the TR and from other reading, none of those has really strongly come out as a good treatment.

So on balance, to me it's a positive material that should be relisted again. And I think we should in the future think about possible annotations for monitoring soil zinc levels.

MR. ELA: Questions? All right. We will move to the vote. The vote is on zinc sulfate.

Motion by Brian, seconded by Kim. And we will start with Kyla.

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MS. SMITH: No.
MR. ELA: Wood?
MR. TURNER: No.
MR. ELA: Sue?
MS. BAIRD: No.
MR. ELA: Asa?
MR. BRADMAN: No.
MR. ELA: Amy?
MS. BRUCH: No.
MR. ELA: Brian?
MR. CALDWELL: No.
MR. ELA: Jerry?
MR. D'AMORE: No.
MR. ELA: Carolyn?
DR. DIMITRI: No.
MR. ELA: Rick?
MR. GREENWOOD: No.
MR. ELA: Kim?
MS. HUSEMAN: No.
MR. ELA: Mindee?
MS. JEFFREY: No.
MR. ELA: Logan?
MS. PETREY: No.

MR. ELA: Nate?

MR. POWELL-PALM: No.

MR. ELA: Chair votes no.

MS. JEFFREY: Zero yes. Fourteen no.
Zero abstentions, recusals, or absences. Motion fails.

MR. ELA: Do you have any last words, Kim?

MS. HUSEMAN: Just quickly, I guess. Yes. Just real quick since we have some time. I'll give most of it back though. I do agree with Nate. I think the sunset review process for the livestock end of things this time around did have a lot of meat substances that are very critical for the continued support in this industry.

And as Sue mentioned, not only do we need to think about this on a national level, but there's a significant amount of USDA or NOP certified facilities outside of the U.S. too. And from an international scale it's always good to see that. We're taking that into account. At that, I will turn it back over to you, Steve.

MR. ELA: I was worried that by noting

that Livestock was ahead of time that you would completely jinx it and zinc sulfate would turn into an hour long discussions so I'm very relieved. Thanks, Kim. Good job. Thanks to the Livestock Subcommittee.

As I mentioned at the start of the day today, we are for various reasons, we have swapped the Materials Subcommittee with Compliance Accreditation and Certification Subcommittee. So CACS is going to go at the end of the day on Thursday and we are going to move on to the Materials Subcommittee today. So, Wood, you are Chair of the Materials Subcommittee, so it is yours to take away.

MR. TURNER: I am indeed, Steve. Thank you. We have a short agenda. I think a couple of things to discuss today. One is our research priorities and then another is a body of work that I'm excited to have Mindee Jeffrey share on excluded methods. I just want to say, you know, that I really enjoyed this year getting into the role of Chair of this subcommittee. I inherited it out of the blue when Dave Mortensen left the

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Board at the end of last fall and I had no idea what it was or what I was getting myself into.

And so, you know, it's been a nice year to kind of figure out what needs research priorities and some of the things that this committee does, you know, what this workflow really is. So I appreciate all of your patience as I stumble through this at times.

But it's been a learning experience and I think, you know, as we've had presentations over the course of year from NIFA about the way they use the research priorities to kind of stimulate real thinking, real big thing, real strategic thinking throughout for organic in advancing some ideas that are both designed to help us understand challenges, understand problems, but also really think bigger about the positive impacts that organic does and can have on a lot of large, sort of localized and even global challenges that we're facing as a society.

So really, really have enjoyed kind of thinking about that more broadly. Definitely reminded of the role that -- as a first step I'll

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move sort of explicitly into the research priorities document and proposal. I'm reminded of the role that research priorities, this document, every year plays in driving continuous improvement and sort of addressing some of the bigger issues facing organic. It's really interesting to think about how many of these topics sort of seem to get relegated to the research priorities.

We had a discussion with the program earlier about what are the big issues that we want to be talking about beyond just what our typical workflow is. And I found myself thinking this morning as we were talking about that, that a lot of those topics really live in the research priorities.

And it's interesting to think about the role that we might play or how we might play hearing some of you speak today about thinking broadly about some of these topics that are in the research priorities document beyond just sending them over to sort of fund and solicit research proposals on the variety of topics, but more sort of how can

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we talk about and think about these issues more as a work product for us.

So when I say they seem to get relegated to research priorities, maybe a lot of these are best to be part of our work agenda more effectively.

We vote on research priorities recommendation every year. But a lot of these topics are just sort of ongoing topics. They continue to be important and then we continue to need to elevate these issues and bring them forward and make sure the community has an opportunity to continue to weigh in on the relative value and to seek research on these topics.

I will say that I do think -- and this is something for us to think about -- I do think that in many ways the feedback loops on some of these topics are simply not there. I would love to be able to be a lot clearer in some ways about sort of -- we're voting on this document and saying, let's go get some research done on these topics.

And to create a clearer way or a clearer process for becoming more aware of sort of how and where the research priorities are getting

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addressed in advance so that we really know how to really directly use them in the context of what we're trying to do. So I just want to say that.

I also want to say that this document this year did include -- we did keep a question section in the document on a variety of topics.

And I know a lot of the commenters talked about this. We did keep a question section in the document because there are a number of topics that really seemed to be -- that the community as a whole is very split on in some way.

Some people in the community -- a lot of the topics in the question section of the document are topics that at various points in our process since last fall, different voices in the community have shown a lot of interest in some of those topics, or next to zero interest in those topics.

And so that's why we chose to put them in the question section, because I really believe they really weren't ready to sort of be fully voted on or vetted in this document, but are going to be things that I really take to heart -- the

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comments that I heard from the community on those questions because I really want them to be front and center if you are subcommittees workflow moving forward.

So we're going to take those, all your comments, I just want to say -- we're going to take all your comments about items that were in the question section of this document proposal and really move them into sort of active discussion in our subcommittee to make sure that we're not leaving these out in the report. And I am going to be trying to figure out some way to figure out whether we can -- some kind of consensus emerges about whether to include them in the next cycle and sort of what the implications are about not having consensus on some of these topics.

Should we be seeking research on some of these topics when the community is split on them?

You know, I could argue both ways on that. I think in some ways, you know, as an advisory committee or advisory Board, we have to make that decision about whether or not consensus is really necessary.

So I just wanted to send that signal to the entire

community that I'm not presenting a edit to the document as it was shared with the community or the proposal was shared with community.

But I do take all of your comments to heart on the questions section. I really believe we're going to bring this forward in the committee.

So I'll quickly summarize some of the comments that we've received. I will say there was one high-level comment that I think was an unintentional aspect of the executive summary of this proposal.

Just to clarify, there is a longer -- those of you who were scrambling to make comments on all of our workflow this time, there was a longer document on this that articulated a lot more detail on each of the items that were in the executive summary. And one of the topics that came up often in comments was that somehow research into copper based materials was excluded from this document. That is not in fact the case.

And if you look at item 5 under the crops section of the document, the bulk of the disease management section of the document is really

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focused on copper research. So I just want to make sure that everyone's aware of that. That's still in the there. Many of you commented on it and it is intended to be there and if there's anything necessary to clarify that even by -- I don't know, Steve, informing the executive summary so that some of that content from the deeper document are clearly included the executive summary. We can certainly discuss that. So I just want to flag that first and foremost.

Got a lot of support across the community -- certifiers, farmers, retailers, organizations, about strong support for these priorities in general. There tend to be a lot of agreement on these priorities. And I feel gratified by that in some ways. Also, as I mentioned though, really eager to sort of figure out, are we as we continue to sort of push these priorities forward, is there a proper feedback loop to make sure we're making progress on some of these things.

I did want to point out that a theme that kept coming up in some of the priorities

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was -- you know, there were several organizations that mentioned the need to include deeper research on social equity and inclusion in organic. And that's very much consistent with some of the themes we've been talking about today already. I think the impact on water quality and water quality issues related to organic came up quite a bit in the comments.

There were other comments ranging from anything from nanotechnology to continue to do research into solar power alternatives, research into heavy metals, a range of issues that kept coming up over and over again. There were a couple of comments -- a couple of commenters really got into great detail on the questions section, as I mentioned, and really wanted to make sure that we had some meat to sink our teeth into on some of those potential items that might show up in a future research priorities document.

So I'm excited about how the subcommittee is going to get involved in that review moving forward. So again, generally very positive support from the community as a whole for

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those who took the time to comment on research priorities. And with that I'll ask if anyone has any questions of their own related to some of the research priorities that are part of the proposal.

MR. ELA: Looks like Jerry has a question for you.

MR. D'AMORE: Not a question. Actually, it's a comment. Under the broad category that we're responsible for continuous improvement. I don't know where we'd even start without this list of research priorities and the ability to tease up some of the issues in a deeper sense. So I like the work and will be on record that without research priorities, some of what I do would be a more heavy lift. Thank you.

MR. ELA: Carolyn.

DR. DIMITRI: I also have more of a comment than a question and part of it has to do with just how research funds are disseminated, usually through competitive grant processes. And so somehow I feel like if we have a list, we need to find a way to make a link to universities so that people take this up and then submit grant

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proposals to NIFA to get funding for these type -- for whatever the research priorities happen to be.

And I think just having sat on panels, I'd give out money. And also as an applicant, I know one of the weakest links in many proposals is like the link to actually farmers who want this kind of work to be done. So I mean, I don't really know the right answer to this, but I wonder if there is some way to use the networks of farmers to help them make links to researchers. So that really useful research projects can be developed and submitted to USDA. I mean, I don't have the magic answer for how to make that happen, but I think that that could actually make the feedback loop a little bit more effective.

MR. TURNER: Great. Thank you.

MR. ELA: Amy.

MS. BRUCH: Yes. Thank you, Steve.

And yes, just to echo a little bit more what Carolyn said and Wood. You mentioned this is -- I just think there's so much importance here. We have a great list of research priorities and to just

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reconcile that with the actual activities to provide more meaning to our subcommittees and to drive some of these issues that we're faced with to a finite level that would be excellent. So some investigation on the process, I think would be really important. Thank you.

MR. ELA: Asa.

MR. BRADMAN: I just wanted to comment on three things and cut me off if I go a little long. One, I just wanted to call out the Organic Center recommendation to look at inadvertent contamination a little bit and full disclosure, I'm advising on that a little bit. But I think that's an important issue and in the earlier comment this morning about dicamba and that registration, to me the issues around dicamba kind of highlight the potential for drift.

And I think it underscores that depending on the physical and chemical properties of a given conventional pesticide, they move. They move into other people's fields. And in my experience when we tested house dust and things like that in agricultural areas, you know, 100

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percent of homes have at least some residues of agricultural pesticides in their home.

So to me the dicamba issue in particular really highlights the concerns about drift and inadvertent contamination. I actually tried to find data on drift contamination events and haven't found any good databases. I was told that Purdue, there were -- or some other states had resources and I still haven't found anything that really compiles nationwide information on drift events.

There was a comment in the verbal comments this week that I thought was really quite useful -- I'm sorry, last week -- on the idea of more support for food science and that's supportive of organic. That came up in the context of comments about carrageenan, but I think it's a really interesting concept and something that, you know, even though I was heavily involved in handling, hadn't really thought about.

And I think there's some ideas going forward to think about what kind of support can be done for food science departments that can support handling and processing in a way that's

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consistent with organic principles and OFPA.

And then I also want to talk more about research priorities for chlorine compounds. I really appreciate the in-depth comments by the OPWC and always really appreciate your input. You guys do fantastic work. And I actually agree with their comments that we kind of limited -- some of our comments in handling to chlorine compounds. And I think that's in part because those are some of the most toxic of sanitizing compounds we use. But all of these sanitizers raise issues.

And for example, we look at peracetic acid and we know that breaks down to acetic acid, which we think of often as vinegar. But if you can take a huff of pure vinegar, it's not going to be good for your breathing. So I think that raises some important points. I want to respond to one thing, not being critical, but just very common in public health research, anecdotal information is used to define research priorities and hypotheses and studies to initiate. And so I would not devalue the importance of anecdotal information as a basis for planning future

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research.

And, you know, for example, I've reviewed cases where chlorine materials were used in seafood processing environments and people there were having long-term damage their lungs.

Especially their lungs and also ocular and dermal injuries because of how serious and powerful oxidizing agents these materials are. And to me that just kind of underscores the importance of occupational and other kinds of studies so we understand exposures both to the consumer but also in our occupational environments.

I know the comment that a lot of our focus on chlorine or perhaps other occupational exposures are not necessarily organic specific.

And I think that's true, but that shouldn't necessarily mean we shouldn't prioritize that kind of research. When I've evaluated chlorine exposures in occupational food processing environments, I'm shocked in general by the lack of research and published data on exposures. You know, we do have guidelines.

I've been in food processing

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environments where chlorine materials were used and I felt comfortable, but I also hear many reports of illness and impact. And, you know, I have my experience with reviewing the seafood case, but now I'm in my new region of Merced County in California with their huge poultry processing facilities.

And I have students in my classes who worked in those facilities, and they also complained bitterly about chlorine and other chemical exposures that they've experienced when they're working on the lines. And these facilities produce both conventional and organic poultry products. So, you know, we have to think about all the environments where these places occurring.

I really appreciate the pictures that were included by OPWC in their comments and I think they kind of underscored kind of my concerns. There's kind of the small, simple packing situations within the highly industrialized facilities for large-scale fruit packing. And I was particularly interested in the occupational

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environments for the kind of large-scale meat processing.

And then the pictures below that where we look at sanitizing food handling equipment facilities, now we see pictures of workers they're wearing gloves and they're wearing rubber suits and boots, but they don't have any respiratory protection and yet they're using sanitizers on a large scale. Maybe those exposures are acceptable. And in a facility like that there's probably good industrial hygiene compliance with rules.

But still we know very little about what the exposures are in those environments. And so I think, you know, to me those pictures underscored the need for more research, especially on the occupational front of chlorine sanitizers, and I agree also other sanitizers. Maybe in the organic world, we can do better than the overall food processing industry and making sure we're protecting workers.

There were pictures also of the salad washing and packing is another intriguing picture

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to me and I visited lines like that in the Salinas Valley in those situations of course we are -- those lettuce leaves are getting washed off in bleach or other solutions. And I think it's important for people to realize when they're buying like that fresh cut or bagged food, that it's really a processed product. It's not like buying a head of lettuce at farmer's market.

And there should be some background knowledge and continuous evaluation of use of those materials and intentional exposures. And again, I understand the need for these and the necessity to comply with FSMA. So again, I think that research priorities in handling and sanitizing are important. We have great comments.

I also want to call out -- I should've mentioned earlier the Ohio Ecological Farming Association also had excellent comments about policies around sanitizers and many others have to, but those are the ones that have stood out to me. So I don't want to take up too much more time, but I look forward to any discussion.

MR. TURNER: Thanks, Asa. I always

appreciate your comments, and I'm going to miss you on the Board. I do appreciate you calling out those organizations by name. I didn't mean to exclude folks. There's so many folks to list here and I just didn't. I appreciate you mentioning those. I also want to say I did have in my notes to mention the research suggestion about chemical exposure to workers and I overlooked it when I was presenting. Forgive me. But thank you.

MR. ELA: Thanks, Asa. Always, your perspective is much broader than many of ours in terms of these items. So appreciate hearing about it. Brian.

MR. CALDWELL: I want to thank Asa too. I'm always in awe of, Asa, your knowledge and I really appreciate all that wisdom. A couple of quick comments. One is that we get technical reviews for our civic materials and that sort of thing, which is almost like a literature review. And I think that for some of these questions, maybe we can get some help from the program.

I know there's been discussions about different ways that the program could help the NOSB

in its work. But getting some specific literature reviews in considerable depth and detail on some of these research topics so that we would know, we would really be up-to-date on where the current knowledge is at on some of these things. Certainly, it's a huge list, we couldn't get everything but maybe one or two per year.

If we could get some of those it might really inform us and there may be more that's already been done than we realize on some of these topics. So I want to throw that out.

And the second point was that -- again, this is probably passing the buck a little bit to the NOP or to the USDA. But if there was a specific section of some of the grant programs that was targeted at answering some of these questions that would make sure that it actually got done. And some of these questions have been on this list -- and I remember talking about parasiticides in livestock in 1985 when we wrote for New York organic standards. So these things always need more work.

And so anyways, those are the two

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comments. One is just getting some literature reviews targeted on some of these questions. And the second one, it would be great if there could actually be -- it doesn't have to be big -- but a research corridor of grants that was targeted specifically at some of these questions.

MR. TURNER: Thanks, Brian.

MR. ELA: Yes. Thanks, Brian. I think that's a great idea especially on the literature reviews and in some cases we'd gotten those like biodegradable mulch as part of the sunset process. We've gotten reviews and that certainly informed our discussion on that. So I think that's a great point. Sue. Guess what, Sue.

MS. BAIRD: Just a general comment on should following items be considered. Research into the economics of organic livestock. I think that's not really the NOSB's job to look into the economics of organic, but these challenges I have to point out are not just organic. Any local rural area are having challenges for access to meat processing. Meat processors are limited mainly to the large stakeholder people. We can't find

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many local meat processors. Price premiums. Disparity between price. We're getting less than \$2 for our beef, per pound. And you go to the grocery store and they're getting \$12 for beef per pound. So it's there.

The high cost of feed is absolutely there both for -- the price of corn and soy beans certainly haven't come down. Amy, you're doing great. I'm not doing so great as a beef producer right now. I don't think that that's apropos for our research is where I'm getting at. Thank you.

MR. TURNER: Thank you, Sue.

MR. ELA: All right. Rick.

MR. GREENWOOD: Yes. Just kind of a quick comment about the sanitizers and chlorine in particular. My perspective obviously is from organic, but as I mentioned in my opening statement, I was in charge of disease control for Orange County, California. Population of a couple of million people.

And I've seen the downside of infected produce. So I've been on epidemiologic investigations where we've had people die from E.

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coli 0157 and salmonella. And I think that we have to be very careful when we look at sanitizers because we need that level of terminal disinfection, I'll call it, to protect the population.

We've seen a number of growers go out of business when there's been outbreaks and deaths because of the negative public publicity. So it's just a comment, we need to be very careful. And I know Asa looks at this from occupational exposure, which is important. Occupation -- and I was an EH&S director for a number of years -- can be controlled at the site.

So that's one way to do it. And maybe we need to look at better ways to protect employees from occupational exposure, but we have to be careful with the industry. And I'm sure many of you remember lots of articles not so long ago about how organic was more dangerous to eat because it was natural and you had the potential of getting infected. So I think we really need a very thorough and balanced review of all of this. I don't think we want to destroy some of these

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safeguards.

MR. TURNER: Thanks, Rick. Anybody? I'm going to let Kyla and Nate do their questions and then we move on to the next topic; if that's okay?

MR. ELA: Yes. That works great. So go ahead, Kyla.

MS. SMITH: Thanks Wood. Yes. Just quick, I wanted to just double down on the comments related to the lack of priorities in coming out of the Handling Subcommittee and the gap of priorities focused on food science. There was a comment somewhere in the written comments that wasn't -- I don't remember who it was from and I don't believe it was specifically in reference to the research priorities, but about more broadly applying the commercial availability so it could cause a search to items on 605A.

There's already some substances that are indicated that way and there are several more that come up in public comment about wanting to push in that direction. But I do think that that would be hard without having some more research

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into the possibility and the commercial availability of those items. Again, this often comes up at sunset review, which we can't annotate then anyway. And so just a more comprehensive look and tie to that idea which I thought was interesting, could help us, you know, move in that direction if we chose to do that as a Board.

MR. TURNER: Thanks.

MR. ELA: Nate, you want to finish up?

MR. POWELL-PALM: Yes. I just wanted to real quick piggyback on Sue's statement about sort of our role in looking at the econ of things like livestock production. I think one thing I would add to what Sue said though, is that in our material considerations on NOSB, we do have a pretty direct impact the relationship between livestock and crop farmland and whether or not we want to contribute to the divorce of livestock from crop production or encourage the re-integration of livestock.

And so when we look at materials that are maybe related to livestock, thinking about and using this research questions as a lens through

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which to evaluate those materials I think can be really impactful.

MR. TURNER: Steve, I think that's it for comments I think. I would be to remind everyone that the subcommittee has made a motion to accept the NOSB Research Priorities proposal.

MR. ELA: Yes, thanks. Thanks, Wood. That is exactly right. So there's no further discussion. We will act on the motion to accept our Research Priorities. And that was made by Wood and it was seconded by myself, Steve. And we are going to begin the voting with Wood.

MR. TURNER: What do you know? Yes.

MR. ELA: Sue?

MS. BAIRD: Yes.

MR. ELA: Asa?

MR. BRADMAN: Yes.

MR. ELA: Amy?

MS. BRUCH: Yes.

MR. ELA: Brian?

MR. CALDWELL: Yes.

MR. ELA: Jerry?

MR. D'AMORE: Yes.

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MR. ELA: Carolyn?

DR. DIMITRI: Yes.

MS. HUSEMAN: Yes.

MR. ELA: Rick?

MR. GREENWOOD: Yes.

MR. ELA: Kim?

MS. HUSEMAN: I might have said yes out of turn. Sorry about that.

MR. ELA: I thought it was just an echo. We know you were warming up, Kim. It's okay. Mindee?

MS. JEFFREY: I'm sorry, just clarify. Carolyn, you did say yes?

MR. ELA: She did.

MS. HUSEMAN: I did. Yes.

MS. JEFFREY: Thank you. Mindee, yes.

MR. ELA: Logan?

MS. PETREY: Yes.

MR. ELA: Nate?

MR. POWELL-PALM: Yes.

MR. ELA: Kyla?

MS. SMITH: Yes.

MR. ELA: Chair votes yes.

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MS. JEFFREY: Fourteen yes. Zero no. Zero abstentions, recusals, or absences. The motion passes.

MR. ELA: Great.

MR. TURNER: Great. Thanks everybody. So now we'll move on to the next topic.

A really impressive piece of work and just a lot of initiative by Mindee Jeffrey to really advance this subcommittee and the Board's work on excluded methods. I've just been impressed so much over the last period of time to see Mindee kind of take this issue by the horns and really should bring it far forward again, and make sure it's something that the community is getting a chance to weigh in on and that we're getting a chance to deliberate on in a way. So with that, I'll turn it over to Mindee to lead us in a discussion of that work to date.

MS. JEFFREY: Thank you, Wood. I will say this is a humbling subject. So thanks for all the support from the Board and the community. I really appreciate the stakeholders taking the time to illuminate all of the background in these

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discussions. And so I'm going to start there with my reflections on the written comments.

Many of the public comments took the time to really background the discussion and emphasize the urgent need for the Board to make determinations on the remaining TBD list terms and to put the framework in place that the NOSB of the fall of 2016 and ask that that be formally adopted by the NOP and codified as guidance.

Additionally, the requests included that the 11 methods that have been determined to be excluded, and the four methods that have been determined as not excluded, and the criteria developed to determine excluded methods all be codified in a guidance document by the NOP. So thank you to all the stakeholders for tracking as many years of this work and emphasizing pathways by which we can achieve consistency and transparency in organic systems on the excluded methods front.

I really appreciate the creative suggestion that including an evaluation question and technical reports that explore where and when

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genetic engineering may be used in the production of national list inputs. It could be a creative solution to being able to track how and where excluded methods are showing up in organic supply chains, as accredited certifiers and material review organizations are carrying out a lot of the work to examine our supply chain. It's case-by-case basis and the technical report could be very helpful as a resource for folks to be able to understand where we might be seeing excluded methods showing up in supply chains.

So that said, our first question asked the community: If we need additional criteria to make determinations on the TBD list techniques.

And the stakeholders expressed overwhelming support for the criteria developed as they stand.

The feedback noted that the development of additional criteria would impede the progress of determination and potentially cause re-evaluation of methods already listed as excluded or not.

So the list as it stands, is supported for being evaluated by the criteria already developed. A former Board member noted that there

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haven't been compelling problems in the interim that would cause this to rise to the top of the NOP work plan. Thank you for the history. And yes, that we have the criteria, they're working for us, and please move forward with making the rest of the TBD list determinations. So that's question one. I'm going to stop there and see if anyone wants to have any further reflections on criteria?

MR. ELA: Are there thoughts for Mindee? Brian has one for you, Mindee.

MR. CALDWELL: Hi, Mindee. I want to thank you very much for all this work. This is amazing to sort through all this stuff. There were some comments and maybe you were going to get to them -- that the wording of the first criterion, and in particular that the genome is respected as an individual invisible entity.

A lot of people objected to that. And I do too. I just think that there were some alternative wordings that were proposed that I think would be a lot better and I don't think they would change the meaning of these criteria at all.

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But just that when I first read that, it just sort of tripped me up right away. I thought, wow, that's not right. So anyways, just my thought.

MS. JEFFREY: Yes. Thank you for bringing that forward, Brian. I do think it's important. I think process wise, I may have de-emphasized it's importance because I think that we can make those suggestions when we have a guidance package that we asked for from the program.

So moving through the TBD list terms and then being able to have a package for that request will then provide us with the opportunity for those sort of updates in the language there.

So thank you for bringing it up. And I do think there's a path by which we can do that.

MR. ELA: Anybody else? I don't see anything else. Mindee, why don't you go ahead.

MS. JEFFREY: Okay. Question 2. Just taking a look at the policy memo and the TBD list and getting clarity on the functionality and consistency there. And is policy memo complete and applied consistently and organic systems? Do

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cell and protoplast fusion need to remain on the TBD list or they can maybe move to the excluded methods section with the notes that allowances made for these techniques when employed within taxonomic families?

Strong support, nearly unanimous, for the dynamics established by the policy memo was expressed by Steve Coulter on this question. Seed Organization reflected that it's clearly written and that the excluded methods list should remain aligned with this document. I like that I got some clarity historically that at the time that the memo came out, the NOSB was just starting to work on excluded methods.

So I don't think that the intention was to move forward without the Board, but that that time and place was the context for the necessity for the policy memo and that subsequent work by the Board has come down in agreement with the policy memo. And the certifiers and material review organizations seemed to be functioning well inside the parameters clarified by the policy memo.

So seems like we have agreement that

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this cell and protoplast fusion are excluded except for when employed within the taxonomic plant families and that the policy's memo is clear and effective for certification enforcement and material review. Anybody have reflections on that part?

MR. ELA: I'm not seeing any at this point, Mindee.

MS. JEFFREY: Great. Thank you. So looking at question 3. As the NOSB makes excluded methods determinations on the remaining TBD list techniques, should this organic system include allowance for historical use and time frames for phasing out excluded uses?

Feedback really is case-by-case. So as we go through making these determinations for the remaining TBD list, that consideration of historical allowance and phase out periods is really important and that really understanding as much as we can about each particular method and where and how it could affect organic systems is really important. I didn't really see much more in that. If anybody else did, I'd be happy to hear

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it.

MR. ELA: Anybody. Again, don't see any comments. Mindee, go ahead.

MS. JEFFREY: Yes. Thank you. Let's see. I think that it's important to note that we, looking forward, I will expect to propose that the cell and protoplast fusion be closed subjects perhaps in the next semester and that we can move them into the tables with some clarity.

I do think it's important to know, you know, the IFOAM position in that these two technologies aren't ideal for organic systems but that they're so present in the history of seed development that the taxonomic family line is something of a compromise and that it's been in use historically for so long that it could be detection and replacement is potentially complex and might not even be possible.

And so I think that while ideologically there could be some discomfort with the use of the techniques, I think it's a practical compromise and that's where I sit at this point on these two and look forward to seeing how this subject plays

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into looking at the next terms on the TBD list.

And that's, you know, my way of looking at the subject in the moment. And I'm happy to hear other sides.

MR. ELA: It looks like Brian and then Kyla.

MR. CALDWELL: Yes. Thanks, Mindee. And Mindee certainly knows that I struggled with this. I basically have come down in the same place that she just elucidated there. It's a little bit of expediency in some of the reasoning, I think in policy memo 13-1, I wasn't very comfortable with, but I think that overall what Mindee just said is correct and the best way forward.

MR. ELA: Kyla.

MS. SMITH: Yes. So I guess thanks so much for this very comprehensive and great work.

And I was really glad to see so much alignment on the questions from stakeholders. That's always validating. It makes me feel good and probably you do too about moving in the right direction.

So I guess I'm just -- thanks for sort of the heads up, at least in the short-term, about moving some

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items from the TBD list.

And I guess because I haven't been as close to this topic and I don't serve on the Materials Subcommittee, I guess my question is just about what do we need to do or what up with the other items? Like what more information do we need? I don't know if you can talk about that here. Maybe it's a big question, but --

MS. JEFFREY: Yes, it's a big question. I think it's important to look at the issues concurrently with organic seed requirements. And I think the stakeholders are giving us similar feedback. And so that's an interesting point of continuous improvement and potential work agenda items that could be interesting to organize in between materials and crops. But I'm interested in exploring that.

I think for me what was really most helpful was reading the IFOAM and the FiBL papers on plant breeding techniques and really hearing how they look at them helped me really kind of get the techniques more solidified in my head. And then we're really going to have to rely on

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stakeholders because all the decisions that are left on this list are very complicated and potentially really difficult to track in organic plant breeding.

So that will be an exercise in trusting our stakeholders and seeking a lot of information and being really careful. I've really heard people say, you know, us looking at these in as narrow a scope as we can so that we can move forward with a lot of agreement is really important. So I'm happy that we have clarity on these two substances and can move forward with that list.

And then, you know, I'm hoping for a plant breeder for our new nomination.

MS. SMITH: I can't remember. I mean, I didn't come into these meetings for a long time and sometimes they just all melt together. But has there been a technical panel on this topic and could that be helpful?

MS. JEFFREY: There's a couple of great documents a couple of years ago and that's where backtracking into the previous Boards' work on this subject and looking towards organic seed is going

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to be important part of our work. And we are engaged, and Materials has been engaged with plant breeders this semester on this subject.

MR. ELA: Anything else?

MR. TURNER: Mindee, do you have anything else you want to bring forward in this discussion? I just want to say really quickly here, you know, maybe it goes without saying, but I think the thrust of this work is fundamentally about ensuring that one of the principles that organic stands for is keeping GMOs out of organic. That organic is fundamentally non GMO.

And so I just want to point that out, that that's really where this work comes from or the clarification that you're trying to bring to some of these issues for everyone, what it's all about. So I didn't want to get in the way of anything else you wanted to share, but I just want to make sure that that point is clear, and just the level of expertise that's involved in sort of understanding these issues and being mentally able to lead our committee on this work, but also, you know, be the point person for the Board is not a

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small thing. So I appreciate it very much.

MS. JEFFREY: Thank you. I definitely think about it a lot and tried to find practical paths forward on this work. And I think the work that has been done here by this community is so extraordinary over so many years. And I don't know that I think the understanding is out there -- the level of work that is going on to make sure organic systems are protected.

And I think getting help in the sense of a fair and competitive marketplace on the transgression of GMO as an organic system is really -- you know, what are the creative solutions there? I don't know at the moment, but as we see developments in synthetic biology, you know, we're going to see inputs in organic supply chains everywhere and in surprising places because of that process.

And looking at, you know, are we going to see GMO mosquitoes released in California? And I don't think they're going to tell us what counties they're going to be released in if they do. And are we going to see sprays in the fields and how

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can we protect organic system for that kind of transgression, I think. I really think that our parent regulators are, you know, we need our place in democracy and we need to be advocated for in our corner.

And I hope that we find partnerships that can help us do that because I do believe that organic being seen by the consumer as the place they can trust to live into their food choices without genetic transgressions it's immensely important for the organic marketplace's development.

MR. TURNER: Hear, hear. Mindee, you're acknowledging speakers. There's another, Steve. Looks like Steve's frozen. Okay. I'll go ahead and say, Sue, acknowledge you for comment.

MS. BAIRD: Thanks, Wood. I just want echo my admiration for the work that's been done, both in the past Boards and for Mindee's work. And back to my broad statement I said earlier I echo the NOSB -- the organic prohibition against genetic engineering is the crux of organic in my mind. I've heard so many experts talk about the

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link of genetic engineered crops and foods to the health of our children, neurological damages, and developmental damage. And if we don't hold the line against genetic engineering, then we've lost Organic in my mind.

MR. TURNER: Thanks, Sue.

MR. ELA: Anybody else?

MR. TURNER: Steve, that's our agenda unless Mindee has anything else she was to say. I think that's our agenda for the Materials Subcommittee.

MR. ELA: Great. Well, I will echo Wood's words to Mindee. I am so glad you've taken this topic on. I think every Board has had somebody a point person on that and this is yes, so hard and honestly, because we've talked one-on-one, this is a topic that makes my head spin. But I also know it's incredibly important. So I'm glad you have the passion and the understanding to do it.

And Brian as well, I hear you chiming in and having read these things and I applaud both of you. So thanks for taking the dive. I totally

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agree with your comments that this is going to permeate our society or has permeated at. And I think for organics to come out ahead of it, or to stay ahead of it, or even catch up is going to be a huge challenge. And so you all taking this on -- there's only one way to take on the challenge and that's to start on it. So thank you.

Does anybody else have anything for this afternoon before we adjourn? Well, thank you to the stakeholders, to the Board, for today. It was a great day to hear from some of our national leaders. Hopefully it's inspiring. And also great to hear from the Board.

So this will be the conclusion of our first day on Tuesday. We will recess until tomorrow, Wednesday at noon Eastern Time. And tomorrow it's going to be crops all day, all the time. And I suspect we may have a few controversial topics. But thanks again for today and we will see you all tomorrow at noon Central Time. All right. Take care.

(Whereupon, the above-entitled matter went off the record at 5:08 p.m.)

UNITED STATES OF AMERICA
DEPARTMENT OF AGRICULTURE

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NATIONAL ORGANIC STANDARDS BOARD

+ + + + +

WEDNESDAY
OCTOBER 20, 2021

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The Board met via Videoconference, at
12:00 p.m. EDT, Steve Ela, Chair, presiding.

MEMBERS PRESENT

STEVE ELA, Chair
NATHAN POWELL-PALM, Vice Chair
MINDEE JEFFREY, Secretary
SUE BAIRD
ASA BRADMAN
AMY BRUCH
BRIAN CALDWELL
CAROLYN DIMITRI
RICK GREENWOOD
GERARD D'AMORE
KIMBERLY HUSEMAN
LOGAN PETREY
KYL A SMITH
WOOD TURNER

ALSO PRESENT

JENNIFER TUCKER, Deputy Administrator, National
Organic Program, USDA; Designated Federal
Official
MICHELLE ARSENAULT, Advisory Board Specialist,
USDA
JARED CLARK, National List Manager, Standards
Division
ANDREA HOLM, Materials Specialist

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DAVID GLASGOW, Associate Deputy Administrator,
National Organic Program
ERIN HEALY, Director, Standards Division

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C-O-N-T-E-N-T-S

Crops Subcommittee (CS)

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P-R-O-C-E-E-D-I-N-G-S

(12:01 p.m.)

MS. ARSENAULT: Okay, folks, I have the top of the hour, 12:00 East Coast Time, so I think we're going to get started.

Just a couple housekeeping issues, and then I'll turn it back over to Steve to resume the meeting. If you're online with us -- so attendees are in listen only mode, so we can't see you and your mics are not live, so don't worry that you think you're on camera, you're not. If you're on your computer, you should be able to adjust what you see on your screen.

We have a gallery view so you'll be able to see all the board members, and we are projecting slides, and if you look, there's a borderline between those two things, slides and the -- so you can adjust the size of the gallery view and shrink the slides if you want, and play around with that, and you'll also on your screen have a chat button.

The board is not taking questions during this portion of the meeting, but feel free to chat into yourselves, say hello to each other,

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and such. There was a little chat going on yesterday, which was nice to read.

And we'll also put in any information, so I did chat in the phone numbers in case you're having audio issues and you want to dial into the meeting instead of listening on your computer. The numbers are available. You can do that, as well.

Other than that, I think we're going to go ahead and get started, so Steve?

MR. ELA: All right. Thank you very much, Michelle. And I guess first I'll ask the program, Jenny, do you have anything to say before we jump into the fray again today?

DR. TUCKER: Hi everybody. I just want to say thank you for a great day yesterday.

I thought it was a wonderful day of engagement and thoughtful discussion, and so I thank all of you, and thank all of you for coming back for day two.

MR. ELA: Great, and it looks like the recording just started, so I would agree.

Thanks everybody for the Livestock and

Materials yesterday. Just some great presentations and discussions, and so very much appreciate that.

So we'll officially call the meeting back to order here and reconvene on Wednesday, at whatever time zone you're in. And today, just to note, today is crops all day. Crops has a bunch of proposals and sunsets, so agenda-wise we just decided it was going to be easier to put it all day and not try and shoehorn, I guess.

I always mess up my analogies and cliches, so not try and force it into a small peg and -- okay, we're not even going down to -- no.

MR. GREENWOOD: Enough, Steve.

MR. TURNER: Quit while you're ahead.

MR. GREENWOOD: Yeah.

MR. ELA: We're just going to do crops all day today.

So with that, unless Michelle has anything else to say, we will turn it over to Rick as chair of the Crop Subcommittee and start down the crops agenda.

MR. GREENWOOD: Okay. Well thanks

very much, Steve, for that terrific introduction.

I appreciate it.

So, as people take a look at the agenda, we really covered a lot of territory in the last months, and I certainly want to thank the subcommittee members because we really did a tremendous amount of work, as you can see, on the total list of proposals and the sunset reviews.

So I think I'll just go ahead and get started with it. It turns out I actually have the first proposal, which was chitosan for plant disease control, and that's been petitioned for organic crop production to the National List under 205.601(j)(4) for plant disease control.

And it's an interesting compound. It's been approved before as an adhesive adjuvant.

I like a lot of it because it's a way to get something out of a commercial waste stream.

Chitosan is made from chitin, and it's from waste, shrimp, and prawns, crab shell waste, and it has some interesting characteristics, and it has antimicrobial activity, and it also seems to be a plant growth enhancer and plant defense

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booster.

And so, it has a lot of positive things going for it.

In going through the written comments, there's tremendous support for it being added to the National List, as people say another tool in the tool box.

I think where we had issues with it as a subcommittee was the fact that, do we really want to add another synthetic to the National List because there are alternatives for using chitosan, and it was interesting if you talk about the subcommittees, interesting that we split on this as a subcommittee where we had four voting yes to add it to the National List, and we had four saying that we didn't need it on the National List.

I point to this as showing that the subcommittees really do have robust debate. Nothing is a given, and I think that's one of the good things.

I think people really feel that they can speak their mind and it's always been in a very collegial manner. So, what I'd like to do is turn

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it over to the group for discussion, and get some opinions.

Obviously, we have some people from the subcommittee that voted they don't want it on the National List.

It's basically a non-toxic compound, but there are, you know, other items on the National List that do the same thing already.

So why don't I just stop there, and open it up for discussion?

MR. ELA: All right. Are there hands raised for discussion?

(No audible response.)

MR. ELA: Well, I'll raise my hand myself.

MR. GREENWOOD: I wasn't that clear, was I?

MR. ELA: Yeah, I'll just say, I struggle with this one for two reasons. It's not the only one I'm struggling with today, but I agree with the comments that, you know, it's good to have another tool in the tool box. We can always use those.

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I'm a little unclear as to efficacy because we certainly have tools in the tool box that I will never use because they just aren't showing to be effective, and, you know, I don't want to spend money on something that's not going to help me, and time.

But, and this kind of falls in that, that I'm not completely convinced that it would be one that I would use, even if it's available. And, you know, there were some arguments that, well, if we put this on, it might be a reasoning to remove sulfur in particular, and I guess I don't really see that happening, but, you know, I value the comments of trade-offs.

So I'm very conflicted about adding one more thing to the list, even though it could be widely used, perhaps, but if it's not effective, I don't see adding it to the list.

So I guess I'm just stating that this, among other things today, is -- I'm very conflicted on.

But, so Wood and then Logan.

MR. TURNER: Thanks. I was going to

say, Rick, as a member of the subcommittee, I was heartened to see some, you know, some of the public comments that suggested, oh, you know, it could be interesting. This could be an interesting material. Maybe this is worth considering. That was helpful for me to kind of sort of gauge that.

But, on the other hand, I think I'm leaning toward, you know, not approving the petition because I'm concerned about the black box that is the production process of the material and I get concerned whenever we're dealing with sort of a proprietary, you know, production process that just feels like I can't get my head around sort of what really is going on here, what the impacts are.

So, you know, I'm heartened, but I'm not motivated to move forward, frankly.

MR. ELA: Logan, and then Brian.

MS. PETREY: So, as a (audio interference) this is supposed to kind of trigger maybe the boom, or of like, microbes that will eat chitosan, right, which is also the cell walls of,

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or the membranes of, what, fungi, and maybe insects, and things like that?

Isn't that kind of the mechanism of action, so it is really stimulating that biology, that microbiology going on?

MR. GREENWOOD: Yeah. That seems to be the case. There's a huge amount of literature about things that stimulate plants to protect themselves, but I don't know how important that really is in a functional sense.

You know, when you spray it on your field, does the chitosan work, or is it really making your plants more resistant? And I don't think -- at least that wasn't completely clear to me on what the mechanism is.

MS. PETREY: Sure, because I think it also can trigger -- like you said, plant defense mechanisms that they can sense, or that they know that chitosan is present, then they will turn on those genes that will produce, you know, those structural defenses, things like that, to protect it against things.

So I mean, I really like the mechanisms

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and think that it is more of a holistic approach as far as a pest control mechanism, so. Thank you.

MR. ELA: We've got Brian, then Amy.

MR. CALDWELL: I think I second what Logan just said, and I'm in a consumer and public interest seat, but I'm also an apple and pear and chestnut grower, and I think this seems like a very benign material and it's derived from a large, you know, store of natural, you know, material that it's derived from.

So, to me, I think that this is the kind of -- if we're going to be allowing synthetics for use in pest management, which I think we are, this is really kind of the direction that we want to go in.

MR. ELA: All right. Amy?

MS. BRUCH: Sure. Thank you, Steve, thank you, Rick. I just had a question.

There was a written comment actually that said the petition use was as a production aid, but they explain that as a fungicide/nematicide, so there's a little bit of a conflicting statement then on this, but in addition to that, I think I

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definitely can see some of the challenges of just not having strict definitions regarding this substance for use rate, formulation, crop-specific recommendations.

I do support tools in the tool boxes for farmers, however, I think there needs to be a lot more clarity with this tool.

MR. GREENWOOD: Thank you.

MS. BRUCH: Thank you.

MR. GREENWOOD: Yeah, I think that was one of the confusing aspects.

I mean, I like the fact that it comes out of a waste stream, but back to Wood's comment, and mainly we don't need to look at this, but we are talking about global warming. It takes energy and some fairly toxic chemicals, sodium hydroxide and things, to produce it.

So it may be benign in the field but I don't if the manufacturing itself if we create a market is going to have a bigger carbon footprint along the way.

MR. ELA: All right, Asa had his hand up initially, and then we're going to go to Sue

and then to Logan.

MR. BRADMAN: Yeah, I mean, I'm conflicted about this, too. I think I'm right in the middle between those two votes for and against, but in the written comments, there were concerns about, you know, replacing sulfur, that sulfur would somehow be eliminated.

You know, just to underscore, you know, sulfur has some hazards associated with it, it's not benign, and there's a long history of, especially occupational and farmworker exposure and illness related to sulfur, and perhaps even community, as well.

And, you know, it may not make sulfur go away, but if it does reduce sulfur use, I think that's a benefit, and so that's why I'm kind of leaning towards supporting it, and also because of its derivation from, you know, natural materials. But, you know, I'm kind of on the fence with this vote, as well.

MR. ELA: Sue, and then Logan.

MS. BAIRD: Yes -- actually no, I'm not on the Crops Committee, so I've not heard all the

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long discussion on it, so I'm going by what I'm reading plus public comment, but I grow a lot of tomatoes, and one of the tools that we use for early blight and late blight is a copper product.

I hate it, but I have to say, in my damp, hot weather, you have to do something a lot of times for those disease.

So if this could replace some of that, it would be incredible to be able to replace copper sulfates with this kind of a product.

I'm confused by what Kim said, and again, I haven't read it all, but it does say it's already listed as a plant disease product, so if it's already listed, why does it not have the rates and everything already defined?

And I'm asking the question, I don't know.

MR. GREENWOOD: Yeah, I can't answer that one either.

MS. BAIRD: Okay. I just wondered if I was missing something because it's very possible I would be.

MR. ELA: Logan?

MS. PETREY: Okay.

So we use like a crab flake or crab powder that really has the same principles as the chitosan and, you know, there's chitin in crab shells, and so broken down, we add it to the plant to get that microbial, you know, production going on that will inherently I guess feed on or fight against the fungi diseases that can get on.

And so, the person who I buy it from, they use it on their strawberries, and there has been -- I want to say he's taken leaves and sent them off, but he's shown me the results and it's six times more populated with bacteria species on the plants that have been treated with the crab flake product.

So it does feed that flora, and he's also pulled out copper out of his (audio interference) program, and we're talking to somebody in South Florida or Plant City area, organic, again in Florida, with strawberries.

So, I do think that the use of it, getting it in, keeping it on, keeping it coated, keeping feeding those microbes can absolutely

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reduce the sulfur and the copper use.

We've also reduced our copper use out here by having that in our tank mix.

MR. GREENWOOD: So, a question for you.

If you already have this crab shell powder, is there an advantage to adding another thing, if you already have something that's available?

I mean, that was one of the crux of the questions, do we need another product if there's already things available?

MS. PETREY: Sure.

Well that, as far as whether this would provide another benefit, I hate to speculate something with this product -- it hasn't been proven -- however, we do hand weed, and go in the fields, and we've had multiple instances where we've had workers swell, and I didn't know if there was maybe an allergen to the shellfish, you know, that that is a potential.

So I'm just going to say it has happened on more than one occasion, you know, a rash on some people who will be hand weeding or pruning, or anything like that.

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Not sure that this new product would have that, but, so.

MR. ELA: Okay. Brian?

MR. CALDWELL: I have sort of more questions for Logan.

I'm very intrigued by what you're saying, but so is that a spray product, or is that just like something that is like, locally available in your spot?

I've never heard of this sort of thing, so I'm just curious how you use it, and sort of along Rick's line, would this be just sort of a substitute for the chitosan product that we're reviewing?

Setting aside the possible, you know, sort of allergic reaction.

MS. PETREY: Sure. And I don't know the potentials of production, but it comes in a very fine powder. I guess it depends.

You can have the flaking, you can add it to the soil, and then you can have the, like I said, the very fine powder that you add to the tank mix itself.

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We are, you know, surrounded by coastline. Whether it is a regional thing, I'm not certain.

I have heard that, you know, the northern, like Northeastern area would produce it and actually produce good chitosan because they have thicker shells, so I think that actually might be a production area for that.

So to answer your question whether, you know, there's enough providers or whether we need to add to it, I don't know if I answered your question, but.

MR. ELA: So Logan, maybe you can answer this, or anybody else.

In the tree fruit world, there have been a number of materials that have put out there as biodefense stimulators that are on the market, and I could say there's a number of them.

When you look at the data, it's pretty inconclusive.

I won't say for all of them, but at least in my experience, many of them that -- yeah, they, you know, in controlled situations, yes they do,

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but in actual orchard situations, it's not worth your money.

So I guess coming from that, I have a bit of skepticism about those claims.

I think theoretically, it makes a ton of sense and I get really excited about it, and practically, you know, from data, it hasn't made as much sense.

Do any of you on the board have any sense or data that, yes, this elucidation of plant biodefense mechanisms actually leads to greater resistance to disease or insects?

And Nate's got his hand up.

MR. POWELL-PALM: Yeah, I don't have an answer to that. I just want to get in the queue.

MR. ELA: So, I'll come back to you, but does anybody have a sense of -- Brian?

MR. CALDWELL: Yeah, well, quite a few growers around here use Regalia, which is an extract from Japanese knotweed, and they think that it helps sort of stimulate plant defenses, and I'm not really up on it, but I thought that there was research that showed that it did improve efficacy,

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like when it mixes with other materials.

Again, I'm not 100 percent sure of that, but I do know people are using it.

MR. ELA: Yeah, I would say, in our area, it's exactly the opposite, but that's why I guess I'm curious about data because it's so easy to have people use something for a good reason, but not for good results.

MR. CALDWELL: Yeah.

MR. ELA: But, anybody else have any thoughts on that?

It's one of those things that it's so -- there's so many products that are snake oil and but yet, the concept of doing it makes so much sense, and so I get very conflicted.

Go ahead, Nate, with what you have.

MR. POWELL-PALM: Just a similar tack onto that line, Steve.

I think in our cropping systems in Montana, as well as the grain productions systems that I've seen around the country as an inspector, there's always a new sort of biological out there that seems to be very -- a very loose relationship

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to actual tested efficacy.

And I wanted to pose a question to Logan, just like when you guys are considering a new product, what's the bar that a product has to get over for proving efficacy to be worthy of your purchase?

If I might ask that, or any of the other crop producers.

Where I'm on this is just that there's not a real clear call for this is a critically needed product, nor a really clearly effective product, so that's just where I'd like -- I follow everyone's note that it's benign, but I think, you know, kind of having a higher bar for when we bring something in, for those two criteria.

So I'd be really interested in Logan's or Amy's thoughts on that.

MS. PETREY: Sure. It's hard because, you know, a lot of these things are really dependent on weather, the climate's conducive for disease, so getting efficacy trials is very difficult. And so that is really hard to do. It's much easier to do it in a conventional setting, which, you know,

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I've actually done some fungicide trials.

Those are kind of easy to see, since you rely so much on the holistic approach with organics.

It's hard to replicate that, you know, in trials and try to get those differences. I mean, we have the universities that try to do those kind of trials for us.

Kind of the rule of thumb is we apply, and until it got where it didn't work, you know, I drop it, but until unproven, you know, it proves itself wrong, I will use the product.

That is not a very good answer for you, Nate, but that is a very difficult -- evaluation of fungicide efficacies in organics to me is very complicated.

MR. POWELL-PALM: And if I may apologize -- one thing on that.

Is there like something that someone has to show you, a salesman has to show you, to get that first spray?

Like you want to see, kind of like you were saying, you know, six times as many microbes

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present. Things like that, any sort of threshold?

MS. PETREY: Yeah, so that thing absolutely was helpful. If they can explain to me -- I don't really like, just get the jug, you know, and not knowing what they presume that the mechanism is, you know?

Because, you know, studied biology and plant pathology, and so, like Steve said, theoretically if it makes sense, you know, we're willing to attempt it, so if I can understand how the product like the chitosan product, if I can understand how it's going to work, that way I know how I need to apply it.

Number one, the conditions I need to apply it.

There's certain types of products that need humidity, there's certain types of products that need it to be arid, need it to be dry, and so as long as I can understand the product.

But yes, if they were to approach me with, hey, we've had these results and these trial based from these universities, then yeah, give it a shot. Thank you.

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MR. ELA: And I just want to say, in bringing up that question, I'm asking the question, and the lack of question I accept, you know, what's out there and what we know.

Not trying to derail it, it's more my own curiosity.

So, Amy? And why don't we do Amy, and then if there's nothing else, we maybe should move on, so.

(No audible response.)

MR. ELA: Amy?

MR. GREENWOOD: Amy, I think you're muted.

MS. BRUCH: Okay, hopefully that's the only time I do that today.

So, thank you, Rick. Yeah, Logan, thank you for your answers. Those are really great.

I mean, it is tough in farming in general, you know, just to have that repeatability in those same conditions that you could mimic year after year to get that trial information, so efficacy trials and that repeatability is

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challenging.

Just on our farm, you know, I don't know if there's always a magic bullet out there, either.

You really have to look at, you know, with our soils, the physical, chemical, and biological components of your soil, so if you don't have physical or chemical, right, you know, introducing additional microbes into your environment probably isn't necessarily going to be the best solution always, so you know, it's just a multi-faceted type approach that needs to be done.

MR. ELA: Very quickly, Mindee, and then we're going to go to the vote.

MS. JEFFREY: So, just to clarify. Did I hear Logan and Brian both say that there are natural allowed substances that perform similarly, so they can use shellfish and it performs like chitosan does, and we're considering the synthetic version?

MS. PETREY: So, I stated that there is a product with the shells and its mode of action

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is because it has chitin in it, and that is a natural product, whether it works as well or similarly as a syn product, I don't know, but we do have a product with chitin in it.

MS. JEFFREY: Thank you, and then just for clarity, in the second motion, we're motioning for I, 601 I, for plant disease control, and that's a minor typo that we're fine with because we're 100 percent clear that's what we're motioning for?

MR. ELA: I'll just jump in on that and say, on any of these things, it is the program and the rulemakers and the listmakers that decide exactly where to put it, and so I wouldn't get too hung up on exact lettering or spots.

Again, I think it comes back to the intent that we have, and let the program decide exactly where it's on the list.

So, while I respect what you're saying, Mindee, I also think that shouldn't be a reason not to pass a proposal. But it's good that you brought it up.

MS. JEFFREY: Thank you.

MR. ELA: All right --

(Simultaneous speaking.)

MR. CALDWELL: And just to answer Mindee, I think Mindee also asked me, and I was completely unaware of the material that Logan talks about, and I am not sure whether it is widely available.

MR. ELA: Thanks, Brian. Rick, is it okay to move to the vote?

MR. GREENWOOD: I think it is, if those are all the question. So, Steve, do we do the classification motion vote first?

MR. ELA: That is correct. So, I can go ahead and read it.

So, there is a motion to classify chitosan as synthetic. It was motioned by Rick. It was seconded by Brian, and we will go to the vote, and we're starting with Sue, I believe.

And so, this is the motion to classify as synthetic. So, Sue?

MS. BAIRD: Yes.

MR. ELA: Asa?

MR. BRADMAN: Yes.

MR. ELA: Amy?

MS. BRUCH: Yes.

MR. ELA: Brian?

MR. CALDWELL: Yes.

MR. ELA: Jerry?

MR. D'AMORE: Yes.

MR. ELA: Carolyn?

DR. DIMITRI: Yes.

MR. ELA: Rick?

MR. GREENWOOD: Yes.

MR. ELA: Kim?

MS. HUSEMAN: Yes.

MR. ELA: Mindee?

MS. JEFFREY: Yes.

MR. ELA: Logan?

MS. PETREY: Yes.

MR. ELA: Nate?

MR. POWELL-PALM: Yes.

MR. ELA: Kyla?

MS. SMITH: Yes.

MR. ELA: Wood?

MR. TURNER: Yes.

MR. ELA: The Chair votes yes.

MS. JEFFREY: So we are 14 yes, zero

no, zero abstentions, recusals, or absences. The motion passes.

MR. ELA: Okay. So, we will next go to the National List motion, and the motion is to add chitosan to the National List at 205601 J4 for plant disease control.

The motion was made by Rick Greenwood, it was seconded by Steve Ela. We will start with Asa.

MR. BRADMAN: I'm going to vote yes.

MR. ELA: Amy?

MS. BRUCH: I'm going to vote no.

MR. ELA: Brian?

MR. CALDWELL: Yes.

MR. ELA: Jerry?

MR. D'AMORE: No.

MR. ELA: Carolyn?

DR. DIMITRI: No.

MR. ELA: Rick?

MR. GREENWOOD: No.

MR. ELA: Kim?

MS. HUSEMAN: Yes.

MR. ELA: Mindee?

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MS. JEFFREY: No.

MR. ELA: Logan?

MS. PETREY: Yes.

MR. ELA: Nate?

MR. POWELL-PALM: No.

MR. ELA: Kyla?

MS. SMITH: Yes.

MR. ELA: Wood?

MR. TURNER: No.

MR. ELA: Sue?

MS. BAIRD: Yes.

MR. ELA: And the Chair votes yes. Now we're going to make you work, Mindee.

MS. JEFFREY: Yeah, you are.

MR. ELA: And take your time, there's no rush.

MS. JEFFREY: I have seven to seven.

MR. ELA: Nate, or anybody else, is that what you --

MR. POWELL-PALM: That's what I got, as well.

MR. ELA: Okay. So, that motion fails because we need a ten person vote to pass it. So,

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the National List motion to add chitosan fails.

Okay, Rick, I will turn it back to you for you to make the proposal.

MR. GREENWOOD: Okay, thank you, Steve. So the next proposal is Wood's, and that's for biochar. So, Wood, take it away.

MR. TURNER: Thanks, Rick.

So, we have in front of us a proposal to change the annotation at 205602 for non-synthetic substances prohibited in organic crop production to change the listing for ash from manure burning to include the language, unless derived as part of the production of biochar from pyrolysis of cow manure.

So, we've been referring to this as CMDB throughout our discussions over the last couple of years.

I got very interested in this petition only frankly because of the interest I had in trying to understand whether thinking more broadly about this material and some of the nuances here about production might help create a climate solution for us here.

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You know, we've been all talking about climate change at every step in the process of our meeting this week, and so that was absolutely my motivation, to kind of understand this more.

I certainly know the history on this, and I know you've all had a chance to read it and understand it, but, you know, ash from manure burning has long been sort of very explicitly prohibited under OFPA since 1995.

There have been attempts to petition its use at various points that have all been denied.

You know, most recently, there was another effort in 2017 by the board to sort of articulate its ongoing position that ash from manure burning is incompatible with organic production, and burning of these materials is not an appropriate method to use to recycle organic waste.

I think for me, what I wanted to understand more fully is sort of whether we truly are considering pyrolysis, you know, which is a process that uses no oxygen.

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I think it's an anaerobic context where heat is applied to a material and it breaks down into, you know, whatever form.

In this case, a biochar product that can be used in a fairly stable form to support soil health and sequester carbon in the soil.

So, you know, I think that what's before us today to consider, without going into a long-winded discussion -- I've already been long-winded -- is whether or not we consider burning and pyrolysis one and the same.

Is burning, you know, in the presence of oxygen, which clearly produces ash, which I would never -- I agree with all the decisions of the prior boards and the program to kind of, you know, avoid the use of ash in organic.

But I think we're talking about something different here.

As someone described to me, you know, we're talking about almost the roasting of the material in some ways, and not the burning of the material.

We're talking about a material here

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that can stabilize -- you know, biochar of all forms, but certainly biochar of this form, is a way to ensure that there's a stably sequestered carbon for a very, very long period of time.

I know there's been a lot of concern about whether fuel sources that go into producing the biochar ultimately mean that we're going to have an impact on climate change, not a solution to climate change.

I think I'm persuaded by what I've been able to understand about the material that ultimately, we're talking about a net negative carbon emission context for a variety of reasons, but one being that, you know, we're talking about taking a material that is, like manure that's going to decompose, you know, with some speed and slow that decomposition.

So, I'm thinking about this as a means of stabilizing what in many case, what in large volumes, you know, we know can have an impact on the environment in a variety of ways.

So, you know, I also want to point out that I share the concern that organic -- you know,

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the question that I think we ask philosophically often whether organic should be a means by which large confined animal operations can neutralize their impact.

I think that's a very meaningful question. I certainly share those concerns.

At the same time, I think we all know that there's a lot of manure that's used in organic already, and I think I might be beyond the scope of this question, at least from my perspective.

Let's see.

You know, there's a lot of things we've learned about the material that suggests that it leads to a less dense soil structure, and that it promotes root growth, water retention, lots of benefits, including improved microbial health, microbial growth.

I'm interested on that CAFO question about sort of whether or not the material can hold and sequester materials that we're concerned about.

So, what we read in the TR -- and by the way, we did request a TR on this and had some

additional questions on the TR, I should have said that at the beginning -- that it can sequester some of the materials that might be a concern coming off of some of those livestock operations, including pesticides, herbicides, antibiotics, and pharmaceuticals.

So I think that's an interesting point from me.

I did want to say, you know, we got a lot of feedback from the community on this, or a fair amount of feedback from the community on this.

There were a lot of sort of full-throated support for the material and the benefits that it can have to crop production.

There's also, you know, some opposition to it, and I will point out that the point I made about this distinction between burning and pyrolysis was certainly on the minds of organizations like NOC and Beyond Pesticides, concerns about CAFOs, neutralizing the impact of CAFO operations, certainly a big issue.

Other organizations question whether

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there was enough evidence to suggest that there was a, you know, a net carbon benefit, and then I will say, you know, OPWC had some really interesting comments on this and urged us to consider looking at an annotation on this related to the temperature at which the biochar is produced.

So, there's some suggestion in the TR that at higher temperatures, when biochar is produced at higher temperatures, it can contain a contaminant that can be shown to bioaccumulate in food crops.

I will say that my understanding is that CMDB is produced at lower temperatures.

We're talking about a lower temperature product here that one could argue that higher temperature issue where -- that I think it OPWC was flagging may not be a relevant point.

So I just wanted to point that out, that I think it was a suggestion about that annotation.

I haven't suggested it here as a continued work for the subcommittee because I think

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we're talking about a material that typically is produced at lower temperatures.

So, Rick, I think that's where I want to leave it at the moment, and let discussion ensue.

MR. ELA: All right. Carolyn has a question or a comment.

And I should be clear that this is our time to deliberate.

It can be a comment, it doesn't have to be a question, so this is different than the oral comments, so it's a chance for board members to state their views, ask question of other board members, go back and forth, and everything, so this is our time.

So Carolyn, go ahead.

DR. DIMITRI: Thank you. Thank you, Wood, for that very elaborate discussion.

So the question that I have is, does anyone know the difference between this process and like anaerobic digestion?

MR. TURNER: No, I'll let Brian take that since his hand went up. Rick or Steve.

MR. ELA: Go ahead, Brian, you may have

your own comment, but I personally don't have an answer to that.

MR. CALDWELL: Yeah, well, I mean, very briefly to Carolyn's question, I mean, pyrolysis occurs at much, much higher temperatures than anaerobic digestion, and the anaerobic digestion is a biological process whereas, you know, the pyrolysis is pretty much just the physical process of, you know, very high temperatures, you know, and what it drives off of sort of the carbon skeletons there, and it sounds like maybe Asa's going to talk more about this, so that's fine, but I wanted to just make a comment, and that was that the way I understand it, we're not making a decision about biochar and pyrolysis in general, it's specifically about the biochar derived from cow manure. And I think that's really important because in my mind, I'm all for biochar.

I think it is a very, you know, climate friendly practice, but manure is an important source of nutrients, including nitrogen, and I'm not convinced that a lot of nitrogen is not lost in the pyrolysis of cow manure, and from that

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standpoint I'm really leaning against this.

MR. ELA: Asa?

MR. BRADMAN: I had a couple comments.

I think Brian just kind of echoed it, and I can't really speak directly to the question though about, you know, anaerobic versus, you know, pyrolysis, but I think Brian's point that the pyrolysis is a physical process, where we're kind of like essentially purifying the carbon, and then versus anaerobic digestion.

It's basically an anaerobic method to break down carbon and derive nutrients and energy from that, and I know of course we get some human gases and things like that that are more persistent, but, you know, very different.

But I want to get back to, you know, my concern about this as a method to kind of recycle CAFO waste, and, you know, I think this is coming up with ammonium extract, where, you know, a lot of organic is recycling nutrient streams from conventional agriculture.

And that's not necessarily a bad thing, but I'm concerned that this creates, you know,

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another market for cow manure from a very large production facilities, and that, you know, that to me is a little bit of a red flag.

I was also concerned about comments about pHs.

There's good comments in public comment from several stakeholders that raised concerns about pHs.

I was a little concerned about the comments from someone representing this petition and the talk about how we can crack the pHs and, you know, basically recondense it as a syngas or produce a syngas from it, and that could be a potential benefit.

I'm just concerned that what's kind of being proposed there is a hazardous waste treatment approach for something quite serious. I mean, pHs are benzo(a)pyrene is a carcinogen, and if you look at toxic equivalency factors for other pHs, there's a lot of concerns about these materials, and granted that maybe they're not produced at the lower temperatures, but there's nothing here that would prevent it being made at

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higher temperatures.

So I'm just concerned that this is a method that could produce, you know, as a bioproduct a toxic material that requires additional treatment, and that's concerning to me.

So, I'm tending to lean against this material.

MR. ELA: Okay. Sue, then Nate, and then Kyla.

MS. BAIRD: I've been torn back and forth on biochar.

I've heard a lot of good presentations on the benefits of biochar, specifically some of them Dr. Bob Rose, who was with the ARS for many, many years, research, who's now the professor at University of Missouri.

Biochar is not supposed to add nitrogen into the soil.

Its role is to provide a carbon house, per se, that microbes and other things are housed into, and there's been a lot of research done, at least in Missouri, on the benefits of biochar and

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it does seem to at least enhance the ability of the crop to produce and increases soil fertility.

So, for that reason, it's very tempting to vote yes.

The concerns for the pHs is truly referent, but pragmatically, we're not going to reduce CAFOs by allowing this product.

CAFOs are here. They're in the conventional world, they're going to be here, and to say well, if we allow this, we're just going to give them a new market and increase CAFOs. Not going to happen.

I'm sorry, it's just, well, they're here.

MR. ELA: Nate, and then Kyla.

MR. POWELL-PALM: Super appreciate what Sue just said.

I think there's a lot of growing consensus that biochar is an important tool, but highlighting the fact that there's a lot of other materials out of which we can make biochar.

We don't have to make it out of manure, and I think further facilitating that divorce

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between cropping systems and livestock systems is a move away from the intent and the, you know, 205203 of OFPA that we want to be using these materials, especially manure, for building soil and providing nutrients, and I think that there is enough here to say that we should encourage biochar, but from other materials, and skip manure.

MR. ELA: All right. Kyla?

MS. SMITH: I just have a clarifying question, and that is around the specificity of pyrolysis of cow manure.

Am I understanding correctly is that because that was specifically how it was petitioned?

I think that that was like how it was specifically petitioned versus like pyrolysis of other types of manures from other species? So I just wanted to ask --

MR. BRADMAN: It's cow manure, yes.

MS. SMITH: If I was correct on that. Yeah. Okay, thanks.

MR. ELA: I'll jump in and say I know this board and I agree with Asa.

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We've struggled on any number of topics with the CAFO uses of manures, and while I agree with that organic shouldn't be the disposal system, I also know that as others have noted, we don't -- I'm sure I've used chicken pellets that came out of CAFOs on my own farm, and I've moved away from them because that drove me nuts, but there was no restriction on that, so I will caution the board on -- well, I think it all drives us nuts, but I also don't want us to be inconsistent in making a decision on one thing where we don't make a decision on another.

I think it's unfortunate, but it is the way organics works at this point, so.

Other questions and comments from the board?

(No audible response.)

MR. ELA: Wood, do you have anything else to add?

MR. TURNER: You know, I don't -- well maybe I do.

You know, I'm interested in these comments about manure because I think ultimately

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for me what I'm most interested about this is it's just another means of stabilizing the impacts of manure.

If I thought that every pound of manure, every ounce of manure being produced in this country, in this world, on large livestock operations was being used to support crop production, I'd be thrilled, but I don't think that's what's going on.

I think we have a lot of material out there that we need to find means of stabilizing, and whether this is -- it's more than this opportunity can do, that's a debate we can have, but for me, I'm motivated by I certainly agree that manure has value to so many farms and is absolutely critical in crop production, but I think there's a lot of manure out there.

So that's all I want to say.

MR. ELA: Amy?

MS. BRUCH: Yeah, and good point, Wood.

Manure is definitely really important to operations.

In terms of this type, though, cattle

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manure, it is, I would classify it as pretty stabilized because of the form that the nitrogen is in.

It's more in the organic form, not necessarily the ammonia form like that you can get in the chicken litter, so it's pretty stabilized, I would say.

Do you know by any chance what the nutritional content of the final product is? Was that ever disclosed or did you discover that?

MR. TURNER: I don't know that answer, Amy. I know there is some nutritional value in the final product, but I don't know the actual --

MS. BRUCH: Okay.

MR. ELA: All right. Are we ready to move to the vote? Any last comments?

MR. GREENWOOD: No, Steve, I think we're ready.

MR. ELA: Okay. Then we have a classification motion to classify cow manure derived biochar, parenthesis CMDB, as non-synthetic.

The motion was made by Wood -- and I

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have to flip my pages here -- seconded by myself Steve, and we're going to start with Amy on the vote. So, Amy?

MR. TURNER: Oh, Steve, that's not true. Rick seconded the motion.

MR. GREENWOOD: No, the --

MR. ELA: I read the wrong one.

MR. GREENWOOD: Yeah, the classification is different.

MR. ELA: Yep, thank you for that catch. So motion by Wood, seconded by Rick. I looked too quickly there. So we are going to start with Amy.

MS. BRUCH: Yes.

MR. ELA: Brian?

MR. CALDWELL: Yes.

MR. ELA: Jerry?

MR. D'AMORE: Yes.

MR. ELA: Carolyn?

DR. DIMITRI: Yes.

MR. ELA: Rick?

MR. GREENWOOD: Yes.

MR. ELA: Kim?

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MS. HUSEMAN: Yes.

MR. ELA: Mindee?

MS. JEFFREY: Yes.

MR. ELA: Logan?

MS. PETREY: Yes.

MR. ELA: Nate?

MR. POWELL-PALM: Yes.

MR. ELA: Kyla?

MS. SMITH: Yes.

MR. ELA: Wood?

MR. TURNER: Yes.

MR. ELA: Sue?

MS. BAIRD: Yes.

MR. ELA: Asa?

MR. BRADMAN: Yes.

MR. ELA: And the Chair's going to vote
no just to be contrary.

(Laughter.)

MS. BAIRD: Shame on you.

MS. JEFFREY: Okay. Thirteen yes, one
no, zero abstains, recusals, or absences, so motion
passes.

MR. ELA: Great. All right, back to

you, Rick, for the next proposal.

MR. GREENWOOD: No --

(Simultaneous speaking.)

MR. ELA: Oh, gosh I'm so sorry. Okay.
More coffee.

(Simultaneous speaking.)

MR. ELA: I would have changed my vote,
too.

MS. JEFFREY: Wait --

MR. TURNER: Yeah, do you really want
to vote against the classification?

MR. ELA: No, but that's all right.
It doesn't matter.

MR. TURNER: Yeah.

MR. ELA: Okay. Eighteen lashes for
the Chair. It won't matter.

But, you know, for the future record,
you know, Steve wasn't totally paying attention.

But let's move on to the National List motion.

Motion to annotate the listing of ash
from manure burning at 205602, to read and let me
-- I've got my screen over here -- ash from manure
burning, unless derived as part of the production

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of biochar from pyrolysis of cow manure.

Motion by Wood, it was seconded by Steve, and we'll try and keep my head in the game here.

Sorry about that. Okay. So we are going to start with Brian.

MR. CALDWELL: No.

MR. ELA: Jerry?

MR. D'AMORE: Yes.

MR. ELA: Carolyn?

DR. DIMITRI: No.

MR. ELA: Rick?

MR. GREENWOOD: No.

MR. ELA: Kim?

MS. HUSEMAN: No.

MR. ELA: Mindee?

MS. JEFFREY: No.

MR. ELA: Logan?

MS. PETREY: Yes.

MR. ELA: Nate?

MR. POWELL-PALM: No.

MR. ELA: Kyla?

MS. SMITH: No.

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MR. ELA: Wood?

MR. TURNER: Yes.

MR. ELA: Sue?

MS. BAIRD: I'm going to say yes.

MR. ELA: Asa?

MR. BRADMAN: I'll say no.

MR. ELA: Amy?

MS. BRUCH: No.

MR. ELA: And by gosh, I bet you can guess how the Chair is going to vote. No.

MS. JEFFREY: I have four yes and ten no. The motion fails.

MR. ELA: All right --

MS. JEFFREY: You got my numbers, Nate?

MR. POWELL-PALM: Correct, yes. I'm still just in awe how you're able to do this by hand. I'm using the spreadsheet and it tallies it for me, so, nothing but props to you.

MR. ELA: Okay. Rick, it goes back to you now for the next proposal.

MR. GREENWOOD: Okay, and so since we're skipping ammonia extract right now, the next proposal is kasugamycin, and it turns out that's

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mine also.

I don't know how all this happened to me, but anyhow, kasugamycin is an antibiotics that inhibits bacteria protein synthesis.

It's listed by the EPA for control of plant disease, especially fire blight, which is *Erwinia amylovora* on apples and pears. It's been petitioned to add to the National List.

The problem that I see is number one, the whole organic movement really doesn't want antibiotics in our food chain, and that was very clear in the comments from the written comments where the vast majority say, please don't add an antibiotic.

The issue with kasugamycin and all the antibiotics is that eventually, I think the literature's pretty clear when it gets into the soil, it changes the soil flora and fauna, basically, by developing resistance, and that's been shown in a number of real life situations where it's been used, and if you read the material, some of field resistance where it's been used in Japan for years, rice blast disease developed

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resistance.

When it's used in the field and it's sprayed, apparently a lot of it ends up off of the leaves of trees and down into the soil.

Now we had, I think it was Harold who mentioned that they use micro sprayers, but I can't believe that the kasugamycin doesn't also, even if it's very regulated, end up in soil causing resistance.

Obviously it's a synthetic. Even with EPA use and where it's used in conventional agriculture, you need a resistance plan when you're using it.

And I think when we discussed it in the subcommittee, it seemed pretty clear that, number one, I don't think our organic stakeholders want an antibiotic added to it, and also that it doesn't seem like it's compatible with the OFPA criteria.

That being said, and Steven can obviously opine on this because he's an apple and pear grower, there are methods apparently using conventional agriculture and other tools that can help with fire blight.

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Obviously it's not as efficient as being able to spray something because there's timing issues where kasugamycin can be utilized, but it's one of those areas where we talk about it a lot, where it's another tool in the tool box, and I was thinking about that.

We say that a lot, and I think maybe when we talk about work agendas and a new work agenda item, I think we really have to look at that because that becomes a catch phrase for so many things that we talk about.

Well, we need another tool in the tool box and farmers need another -- now, I'm a farmer.

I realize I'd love to have some other things, but I think we have to be careful with that statement.

So, basically subcommittee seem to be unanimous in not adding it to the National List, but I'd like to open it open for discussion now.

MR. ELA: I am not seeing questions, and since you put it directly at me, I think the folks up in Washington, you know, noted that they

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didn't want to go down the path of arguing for this because the writing was on the wall, but I do want to say for the record, as a pome fruit grower, fire blight is a nemesis that has been with us for a very long time.

I remember cutting it out as a kid, and it was just a terrible job.

You have to sterilize your pruning shears between each cut, so you were carrying a can of alcohol at that point to sterilize the shears.

It's just painful. And, you know, it's a career breaker for people because you can study it, and people have their whole careers, and still not solved the problem.

Organically now, we do have a more integrated approach to approaching it between using yeast to exclude the niche or fill the niche before the bacteria can fill it in the blossoms, and reducing the bacteria in the orchard in general using coppers and lime sulfur, both of which are things that the board and the organic community has pushed against.

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So, you know, we and others have lost -- I got block of trees that we probably lost 30 percent of the trees to fire blight.

So it's a real difficult one because it would be very useful. I would love to have that approach, and the integrated approach can be very dicey in terms of timing.

But, you know, the board has certainly spoken and stakeholders have certainly spoken about the use of antibiotics.

I really do hate to see system disruptive materials, and, you know, so I'm probably going to vote no, but it is with angst of this being a material that I'm sure I would use.

But I agree with Rick, having another tool in the tool box is not always the reason to add a synthetic to the National List, and in general, I think Rick's comments are very apropos, the board in the past has said it's so hard to get a material off the list once we add it.

We need to be very judicious in what we add because it will be there for a very long

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time, so like I say, I'll probably vote no, but, you know, this is definitely a material that I could use, so I think, you know, the ecological ecosystem approach to organic agriculture makes me vote no on this, even though as a single material, it would be very useful.

Nate?

MR. POWELL-PALM: Just want to say thank you to both you and Rick for being the orchard folks, bringing a lot of information and light on this to us row crop and field crop growers.

I really, really appreciate how Rick has framed this, though, in looking at, you know, one, hearing stakeholders, and that it's a pretty strong consensus that we don't want antibiotics in organics, but I think also in a way, organics has sort of undersold the lack of antibiotics, I feel.

That when we look at superbugs, we look at disruption to soil microbe biomes, when we look at how do we ultimately keep antibiotics useful, I think, you know, moving them further and further away from routine agriculture use is such a strong

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asset of the organic system, and I think Rick's description of this material only plays into that.

And so, I'm excited to speak with a strong voice on this.

MR. ELA: All right, are there other comments?

(No audible response.)

MR. ELA: You ready to go to the vote, Rick?

MR. GREENWOOD: Yeah. And I'd just like to echo what Nate said.

For literally decades, people have talked about overuse of antibiotics in agriculture and how it changes the resistance patterns, so I think this is just another step in trying to prevent that.

I mean, it's been a problem for decades, even many years ago when I was a young microbiologist. Maybe decades and decades ago, I first heard about it, and it never seems to have changed, so I'm pleased at least that we have an opportunity to review this and come up with our

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comments.

So, yeah Steve, if you can read the classification motion. Can you do that?

MR. ELA: I'll put my glasses on and do my very best. Classification motion. The motion to classify kasugamycin as synthetic.

It was motioned by Rick, seconded by Steve, and we are going to start with --

(Simultaneous speaking.)

MS. JEFFREY: Jerry.

MR. ELA: My previous -- just a second.

MS. JEFFREY: Jerry.

MR. ELA: My alphabetical order here.

Yep. We'll start with Jerry. And so, Jerry?

MR. D'AMORE: I vote yes.

MR. ELA: Okay. Carolyn?

DR. DIMITRI: Yes.

MR. ELA: Rick?

MR. GREENWOOD: Yes.

MR. ELA: Kim?

MS. HUSEMAN: Yes.

MR. ELA: Mindee?

MS. JEFFREY: Yes.

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MR. ELA: Logan?

MS. PETREY: Yes.

MR. ELA: Nate?

MR. POWELL-PALM: Yes.

MR. ELA: Kyla?

MS. SMITH: Yes.

MR. ELA: Wood?

MR. TURNER: Yes.

MR. ELA: Sue?

MS. BAIRD: Yes.

MR. ELA: Asa?

MR. BRADMAN: Yes.

MR. ELA: Amy?

MS. BRUCH: Yes.

MR. ELA: Brian?

MR. CALDWELL: Yes.

MR. ELA: And the Chair will not be contrary this time, the Chair will vote yes, as well.

MS. JEFFREY: Fourteen yes, zero no, zero abstains, recusals, or absences. The motion to classify passes.

MR. ELA: Okay. We're going to move

on to the National List motion. The motion to add kasugamycin to the National List at 205601 J4 for plant disease control.

The motion was made by Rick and seconded by Amy, and we will start with Carolyn.

DR. DIMITRI: No.

MR. ELA: Rick?

MR. GREENWOOD: No.

MR. ELA: Kim?

MS. HUSEMAN: No.

MR. ELA: Mindee?

MS. JEFFREY: No.

MR. ELA: Logan?

MS. PETREY: No.

MR. ELA: Nate?

MR. POWELL-PALM: No.

MR. ELA: Kyla?

MS. SMITH: No.

MR. ELA: Wood?

MR. TURNER: No.

MR. ELA: Sue?

MS. BAIRD: No.

MR. ELA: Asa?

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MR. BRADMAN: No.

MR. ELA: Amy?

MS. BRUCH: No.

MR. ELA: Brian?

MR. CALDWELL: No.

MR. ELA: Jerry?

MR. D'AMORE: No.

MR. ELA: Chair votes no.

MS. JEFFREY: So, zero yes, 14 no,
motion fails.

MR. ELA: All right. So we will turn
it back to Rick to move on to the next proposal.

MR. GREENWOOD: Okay. How did this
happen?

So I also have the next proposal,
hydronium, and hydronium is being petitioned as
a processing aid for pH adjustment below 5.0 as
a stabilizer in the production of animal manures,
and it would be used to reduce malodorous
properties of manures.

And basically hydronium is a mixture
of sulfuric acid and calcium hydroxide. Sulfur
dioxide's collected from pollution control

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scrubbers and it's obviously a manufactured compound.

The issue is we looked at this and we just didn't find a need for this.

This looks like -- at least to our initial discussion, it is a compound looking for a product, and we really didn't see any use for it.

It doesn't really fit into the OFPA criteria for improving soil health, and the company had also put it into the EPA as a biocide at one point, and that part had never been approved, so it just seems like it's incompatible with a system of sustainable agriculture.

Sort of a simple review. I looked at the hydronium and the only public comments were to not approve it for addition to the National List, so that's a very short introduction, but I don't know how much is there based on what the product is, and we didn't find anybody that was sort of looking for something like that.

So, Steve, why don't you go ahead and open it up for comment?

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MR. ELA: Comments? Nate and then Kyla.

MR. POWELL-PALM: Real quick. I think that we should remember that manure is a pretty honest material, and that when it stinks, something's going wrong.

And so, when we look at controlling for that, we're not really acknowledging that I have been on dozens, if not hundreds, of chicken farms that smell just great.

They smell great and it's because they've got the right balance of nutrients to land application, and it's not being aggregated and compiled ineffectively.

And so, I think when we talked about reducing malodorous properties, we are missing out on the chance to remember that good, balanced farms smell good.

MR. ELA: Kyla?

MS. SMITH: Yeah, I just was going to comment that in reading the public comments, it seemed like there was a lot of confusion as to what was actually being petitioned, and so anyway,

contradictory things -- anyway, all over the place, really.

And so, definitions and clear, like, you know, clarity for what compounds we're talking about is really important in the material review process, so that was like a big sort of red flag for me from the certifier and sort of MRO perspective is not having that clarity based on what was actually being petitioned.

MR. ELA: And I think that's a great comment, Kyla. If you look at the actual petition, it's not very complete.

I can vouch for Rick trying to pull a proposal out of it that was difficult at best.

MR. GREENWOOD: Yeah.

MR. ELA: So --

MR. GREENWOOD: Of the ones that I've done, it was just very light and very hard to even come up with sort of a document.

MR. ELA: Yep. Your comments are exactly right, Kyla, and it's very hard to deal with the petition that doesn't really give us things that we need to have. So, Logan?

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MS. PETREY: Hi, thanks. Just a comment on the manure.

On Nate's comment, the smell, maybe we get used to the smells or so if we're on the farm, but we use a lot of chicken litter, and I don't know how honest it is or anything, but you go jump in the back of a chicken litter truck full of litter, you're not going to be welcomed around the community inside and stuff, so I don't know where to go with that, but no, I don't think that we need to make applications.

Now, I do have neighbors around. We order a lot of chicken litter in because we do use a lot of chicken litter, and, you know, we do turn it to try and get it, you know, heat treated so that the weed seed's killed.

There is volatilization, you know, that goes on with these types of things, and neighbors do get a little disgruntled, and so in fact, that's part of being around an organic farm, but you know, even if you're doing it right, you know, it's still going to be kind of smelly, especially on a foggy day when the wind doesn't blow it out of here.

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So, I live right on the farm and so I'm surrounded by it a lot. Certain times of the year can be pretty rough, but that is part of organics.

MR. ELA: Sue?

MS. BAIRD: Yeah, I agree, Logan. Litter on your ground smells, chicken litter smells, but I will say that I have to back up Nate.

I've done a lot of inspections on humane standards, certified chicken houses, and when there's enough outdoor access and they've got their stocking rate right, you can go in those houses and you're not overwhelmed with ammonia, but chicken litter smells on the fields. You're right.

MR. ELA: Anybody else?

MS. PETREY: Yeah, just a comment. I have heard when you do heat the chicken litter up -- like when we heat it, we stack it, we run a turn through it, and I've had people say it smells like chocolate.

So when it goes through a certain process, and even my husband, who didn't grow up

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in chicken houses or anything, he says, it smells like Hershey's, so (audio interference) the smells, but.

MS. BAIRD: No, I will say that, you know, my degree is Master's in Poultry Science. You can get used to the houses' smell, even conventional that's not balanced out, and kind of burn those olfactory whatever, but yeah, no, you can't disguise poultry litter when it goes on the ground. It's just there.

MR. ELA: Boy, I'm not a lover of chocolate to start with, and that just reminded me.

(Laughter.)

MS. BRUCH: It's true. I can't resist not jumping into here, but yeah, that is a comment by some of the folks on our team, too, Logan, so yeah.

I've heard that before and I doubted it, but it is true.

I do believe what Nate said. You know, if the practices are being done at the barns correctly, there's quite a difference between the

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product you receive.

Our experience in Florida, handling the litter there, my goodness, I think I can still smell it versus some of the product we have access to around here, so it's not a one size fits all smell, so anyway.

MS. BAIRD: They always told me it smelled like money. I don't know.

MR. ELA: That I've heard. All right. Rick, shall we go ahead and move to the vote?

MR. GREENWOOD: Yeah. No, this is more interesting than the product, so.

DR. DIMITRI: I love the farmer humor. It's so interesting to me in my urban lifestyle.

MR. GREENWOOD: I use chicken manure too and I'm in a more urban setting, and it has not made me the most popular neighbor.

(Simultaneous speaking.)

MS. PETREY: I disagree. You're probably the most popular, it's just not the fame that you want.

MR. GREENWOOD: Yeah, okay. Okay, Steve, so do you want to do the classification

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motion?

MR. ELA: I do, and I will say as a fruit grower, and we're talking about fire blight, one of the practices to slow it down is the use of lime sulfur when we're trying to thin, and lime sulfur and fish oil and a manure application, so you put rotten eggs on top of apparently a chocolate smell, it becomes quite interesting. So.

MS. PETREY: Wow.

MR. ELA: So, well the motion is to classify hydronium as synthetic. It was motioned by Rick, seconded by Amy, and we will start with Rick.

MR. GREENWOOD: Yes.

MR. ELA: Kim?

MS. HUSEMAN: Yes.

MR. ELA: Mindee?

MS. JEFFREY: Yes.

MR. ELA: Logan?

MS. PETREY: Yes.

MR. ELA: Nate?

MR. POWELL-PALM: Yes.

MR. ELA: Kyla?

MS. SMITH: Yes.

MR. ELA: Wood?

MR. TURNER: Yes.

MR. ELA: Sue?

MS. BAIRD: Yes.

MR. ELA: Asa?

MR. BRADMAN: Yes.

MR. ELA: Amy?

MS. BRUCH: Yes.

MR. ELA: Brian?

MR. CALDWELL: Yes.

MR. ELA: Jerry?

MR. D'AMORE: Yes.

MR. ELA: Carolyn?

DR. DIMITRI: Yes.

MR. ELA: And the Chair votes yes.

MS. JEFFREY: Fourteen yes, zero no,
zero absence -- ARA. None of them. The motion
to classify --

(Simultaneous speaking.)

MR. ELA: -- did it again. These
motion classifications cannot fit in my head today,
but so we'll move to the National List motion.

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The motion to add hydronium to the National List at 205601 J7 as an organic processing aid, I think.

I keep having my screen overlapped there. So the motion by Rick Greenwood, seconded by Steve Ela, and we will start with Kim.

MS. HUSEMAN: No.

MR. ELA: Mindee?

MS. JEFFREY: No.

MR. ELA: Logan?

MS. PETREY: No.

MR. ELA: Nate?

MR. POWELL-PALM: No.

MR. ELA: Kyla?

MS. SMITH: No.

MR. ELA: Wood?

MR. TURNER: No.

MR. ELA: Sue?

MS. BAIRD: No.

MR. ELA: Asa?

MR. BRADMAN: No.

MR. ELA: Amy?

MS. BRUCH: No.

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MR. ELA: Brian?

MR. CALDWELL: No.

MR. ELA: Jerry?

MR. D'AMORE: No.

MR. ELA: Carolyn?

DR. DIMITRI: No.

MR. ELA: Rick?

MR. GREENWOOD: No.

MR. ELA: And the Chair votes no.

MS. JEFFREY: Zero yes, 14 no, zero

ARAs. The motion fails.

MR. ELA: Rick, back to you for the next one.

MR. GREENWOOD: Okay. At least I don't have this one. So the next one is a carbon dioxide proposal and petition, and that is Logan.

MS. PETREY: Thank you. Okay, so for the carbon dioxide, and the petition is for both algicide, a disinfectant sanitizer, including irrigation systems, cleaning systems, and plant soil amendment.

So, in the subcommittee discussions that we had going over the human health, it's very

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low. We all are aware of carbon dioxide.

I think the concern immediately would be for climate change purposes. In the petition mentioned the recycled carbon dioxide.

Also noting in the comments the request for this motion to be carbon dioxide as a byproduct, that way there's not another production to get carbon dioxide to add to it, so we're just trying to, you know, at least eliminate some of it going into the atmosphere or whatever, so trying to keep that from building up.

As far as it is a synthetic, the process that we're trying to capture here, the non-synthetic comes from fermentation, and due to the logistics of it and being feasible as far as applying it is we're not able to do that with the non-synthetic sources, so that's why we're requesting the synthetic there.

As far as for algicide, and a pH reducer in the irrigation systems, we did see commenters, you know, farmers that are using this.

I'm not sure if they're on drip, or what type of irrigation sources, but it's mostly for

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the drip lines and needing it to clean out the emitters.

They do get the algae that's thrown into the emitters and will really mess up the distribution of water on these fields, and then also the carbon buildups and trying to get those things clean.

But, as far as the other alternatives, we have sulfurs, and there's been some comments from the stakeholders saying that this would be an easier, safer method of use to draw the pH in the water.

Any questions?

(No audible response.)

MS. PETREY: And I do need to add that as far as the motion that I have listed, the motion to add carbon dioxide, I do not have it broken down to the two -- let's see -- to the two -- let's see -- I guess that would be 205.601(a), the algicide disinfectants, and also as 205.601(j), as a plant or soil.

So I will need, before I make the motion just in the subcommittee, to get these things

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ironed out, I do want to open it up to discussion for any questions.

MR. ELA: All right. Wood?

MR. TURNER: Thanks, Logan. Do you have any idea -- I just think about this in the context of chlorine materials and other sanitizers in the context of crop production, and I'm just curious if you have any thoughts about whether a material like this, if available and widely used, could actually have benefits to helping reduce the need for chlorine materials and other sanitizers in crop production?

I'm just trying to weigh those issues because I know there's other sanitizer questions, particularly chlorine materials --

MS. PETREY: Sure.

(Simultaneous speaking.)

MR. TURNER: -- the community?

MS. PETREY: Yeah, I would say that it would.

If they are going for, you know, whatever is listed under the control for the carbon dioxide, that algicide part, yes, I would say it

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would.

MR. ELA: Anybody else on this? Asa.

MR. BRADMAN: I have a question about this was -- I think I was the one absent person during what was discussed in the subcommittee, so I have an excuse, but I'm a little concerned about that we're kind of voting one vote on two issues here.

One is as the, you know, disinfection, you know, irrigation system, and then the other is as, you know, a plant amendment. I wouldn't call it the soil.

And this is mainly oriented towards greenhouse production, and I guess my question is should we be voting on these separately?

MS. PETREY: Yes. Oh yes, and so that too.

So, needing to go back to be specified because it isn't specified for either of those two, and it was also requested in the comments.

I do agree with you to separate those into two different motions.

MR. BRADMAN: Okay, so just, yeah. I

mean, you mentioned that, but just to verify then,
it sounds like ---

MS. PETREY: That's right.

MR. BRADMAN: We'll make a proposal to
send this back to subcommittee?

MS. PETREY: Correct, yes sir. And in
that subcommittee, I mean, we'll go through and
make that as two separate motions instead of one.

MR. ELA: Yeah, but I would personally
tend to agree with -- the board has shied away from
just blanket allowances of carbon dioxide in all
ways, and I feel like this without the annotations
is probably too broad, so I'm going to suggest we
send it back to subcommittee just to get the
annotations put on, and it should be fairly simple
for the subcommittee to do, but I would feel much
more comfortable with the annotations on it.

I saw Nate with his hand up. Nate, did
you have anything?

MR. POWELL-PALM: Oh, I was just
getting ready to motion to send it back to
subcommittee, but I'm not meaning to jump the gun.

MR. ELA: Mindee, did you have

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something?

MS. JEFFREY: Similar.

MR. ELA: Well, I would accept a motion to send it back to subcommittee.

MS. JEFFREY: I'll move that we send it back to subcommittee.

MR. ELA: Is there a second?

MR. POWELL-PALM: Nate seconds.

MR. ELA: Okay, we have a motion by Mindee, a second by Nate, to send this proposal back to subcommittee.

And just to note, this is a simple majority vote, not a super majority. So, we'll start with Mindee.

MS. JEFFREY: Yes.

MR. ELA: Logan?

MS. PETREY: Yes.

MR. ELA: Nate?

MR. POWELL-PALM: Yes.

MR. ELA: Kyla?

MS. SMITH: Yes.

MR. ELA: Wood?

MR. TURNER: Yes.

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MR. ELA: Sue?

MS. BAIRD: Yes.

MR. ELA: Asa?

MR. BRADMAN: Yes.

MR. ELA: Amy?

MS. BRUCH: Yes.

MR. ELA: Brian?

MR. CALDWELL: Yes.

MR. ELA: Jerry?

MR. D'AMORE: Yes.

MR. ELA: Carolyn?

DR. DIMITRI: Yes.

MR. ELA: Rick?

MR. GREENWOOD: Yes.

MR. ELA: Kim?

MS. HUSEMAN: Yes.

MR. ELA: And the Chair votes yes.

MS. JEFFREY: Fourteen yes, zero no, zero ARAs. The motion to go back to subcommittee passes.

MR. ELA: All right. So, the Crop Subcommittee will work on that, and hopefully bring it back up in the spring.

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All right, Rick, back to you again.

MR. GREENWOOD: Okay. So the next one is a proposal on lithothamnion, and that's Brian.

MR. CALDWELL: All right, thanks Rick. Yeah, lithothamnion.

The proposal's a little bit unusual because the National Organic Program requested that the NOSB basically clarify the classification of this, of lithothamnion.

And just as a little bit of a quick background, lithothamnion species are a type of red algae that on part of its growth, it calcifies, and the calcified material turns into these sort of balls of high calcium material that is dead, and they are shed from the plant, and where it's harvested, they tend to be swept by currents and concentrated into areas that are not in the same place where the lithothamnion algae actually is growing.

And then it's dredged from the ocean floor and harvested that way.

So, it's a little bit complicated. Basically, the decision in the subcommittee was

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to classify lithothamnion as a non-agricultural substance, and second, that it was not a wild crop and is not eligible to be certified organic because of that.

And we went through the decision tree to come to the conclusion that it was a non-agricultural substance, and the wild crop criteria in particular, the key one is that it's not harvested from a plant that is rooted in a certain place, so it doesn't qualify as a wild crop.

So I think that's it. I think we were pretty clear on those decisions, but I'd be glad to have questions.

MR. ELA: Okay. Let's go to questions. Asa has one.

MR. BRADMAN: I have a comment more. I just want to call out the comments from Beyond Pesticides and NOC on this material, and, you know, impacts on the environment.

I know several of us, when we looked at this, we kind of read about it and there's kind of an "ew" factor in terms of, you know, potential impacts on the environment with dredging and

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harvesting and things like that, and, you know, we just really in this review addressed the question we were asked to address, but, you know, I agree that those issues raised in comment and that we even considered, you know, perhaps not fully conscious, but -- well, it did come up, but we didn't address it programmatically, that, you know, I have concerns about this.

And some, you know, argue other comments that the environmental impacts are minimal, but I think this is something that needs to be looked at.

It's another situation where extracting, you know, nutrients from one environment and putting it in the organic agricultural environment, and I hope there's future discussion on this.

MR. CALDWELL: Thanks, Asa. Yes, I should have mentioned that. I totally agree with you. The comments were pretty interesting because there were none that disagreed with our classifications, and there were a couple from who appeared to be producers of lithothamnion, calcium

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products, who were saying, oh, the harvest is non-destructive and one of them said that it's harvested with gentle vacuuming.

And, but this seemed to be beyond the scope of the questions that we answered, or that we're trying to answer, and I think that we should revisit this in the future and decide whether this can be allowed at all in an organic product.

But we were trying to stick with the specific questions that the NOP asked for us. But yeah, a great point, and I totally agree.

I do think that it would need a lot more digging to really suss out all the aspects of the harvest and other aspects of the harvest and other aspects of this material.

MR. BRADMAN: Thanks.

MS. BAIRD: Digging or dredging?

MR. CALDWELL: I'm sorry Sue, what?

MS. BAIRD: I said, is that digging or dredging? I'm sorry.

MR. CALDWELL: Well ---

MS. BAIRD: You said digging, and they had said that it was dredged out of the bottom and

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so I was just -- sorry.

MR. CALDWELL: Oh, okay. Well, yeah, dredging or gentle vacuuming.

MS. BAIRD: Gentle vacuuming, right.

MR. CALDWELL: Right.

MR. ELA: Yeah, I get in trouble. Gentle vacuuming at home doesn't work so well. But any other comments, questions?

I did see a little bit of pushback by a couple people, and I think you mentioned it, Brian, about, yeah, the environmental effects and, you know, well, just the whole question of whether they were moved and not and such, but, you know, I went through the decision tree with you and I completely agree with your findings, and so, you know, I'm in favor of the motion, but I did see a couple comments that had a little bit of pushback on the way we went through the decision tree. But, Nate?

MR. POWELL-PALM: I was just hoping to make sure folks felt we were consistent with the lithothamnion as being dead when harvested.

I noted in the written comments from

Garth Kahl that they're saying the dead bark of the Quillaja saponaria, or Chilean soap bark tree, is currently harvested as part of a certified organic wild crop project.

So just making sure we are consistent with that rooted question. I think that the overall point is good, but don't want to be just procedurally erring in the idea that it can't be wild crop because it's not rooted. It's not from a single plant.

MR. CALDWELL: Yeah, thanks Nate, and I think that that is correct.

When I read that comment, I thought, oh well, they're coming to the same conclusion that the discussion came to through probably a better means by, you know, specifically pointing to the fact that it's not harvested from a plant that's rooted in a specific place.

And so, that probably is a better line of reasoning that probably should've been in the discussion.

It came to the same conclusion, so I don't know if we really need to go back and change

that or not, and I guess I would defer to Steve or other folks on that particular one.

MR. ELA: I guess maybe I misread it.

I thought it came to a different conclusion because the -- and I could have misread it.

MR. CALDWELL: No, they said that it was not a wild crop because it wasn't, you know, harvested from a plant rooted in a specific place, and they said that what I wrote in the discussion was not really correct because they did have at least one example of a dead part of a plant that was considered a crop.

MR. ELA: I think --

MR. CALDWELL: Nate, is that how you read it?

(Simultaneous speaking.)

MR. POWELL-PALM: Yeah, the -- oh, sorry, go ahead, Steve.

MR. ELA: No, go ahead, Nate.

MR. POWELL-PALM: I was just going to say, it's just in conclusion, they say it would be impossible to define the area from which the algae originally grew, thereby not able to fulfill

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those two crucial requirements in the OSB for wild crop harvest.

I think it's just purely that there is another one. It's a terrestrial, though. It's not a marine material.

So when it's not rooted or not on the plant, it's just going to be on the ground, so it is possible to make that distinction, I think they were just highlighting that in that area, to be wild crafted, it doesn't necessarily have to be rooted on a plant, but it still fails the criteria because it could move with tides, and therefore not be distinguishable for us to where it was grown and how it was impacted.

MR. ELA: Yeah, and I --

MR. CALDWELL: I think just for everybody's just consideration, what it seemed to me, I mean, was kind of tricky to navigate through all this, but the product of lithothamnion seemed to be more analogous to peat moss than, you know, to soybeans or something like that.

So that's kind of what I was trying to get at, but the wild crop issue I think was

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clarified best via the issue of not being harvested from a plant that's rooted in a specific place, or in the same place as the plant is rooted.

MR. ELA: Yeah, I also think this board has recognized and struggled, the difference between terrestrial and marine environments and our jurisdiction and how we look at things.

Certainly the marine materials document that Emily put out a year ago, and Asa's got fish oil, and any number of these things. The marine environment is certainly much different for us to look at than terrestrial environments, so I think that is an important distinction. I'm not saying it's a good distinction, but it is important, so.

All right, are we ready to move to the vote on this one? Nate's got one more comment.

MR. POWELL-PALM: I don't mean to be the person who jumps on this, but I would say that it is an easy enough fix to just remove the dead parts, rather than pass it with that inconsistency, with it not -- with it -- us having an example of something that is from wild craft that is not rooted

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to the plant, then I would motion to send it back to subcommittee, fix that little bit, and then bring it back in the spring. I think it's a very easy fix, it won't take a lot of time.

MR. ELA: So, well, motion on the floor. Is there a second? I am not hearing a second.

(Simultaneous speaking.)

MR. ELA: So the motion fails. And I'm trying to figure out, Nate, I'm sorry, where -- because in the motion itself, it does not say anything about dead. So you're just referring to the write-up?

MR. POWELL-PALM: Yeah.

MR. ELA: Okay. But it is dead, so I guess I'm not entirely ---

MR. POWELL-PALM: I think following the wild crafted, that it's not locatable.

You can't understand the origin, is where we should rest on it, rather than the fact that it's not tethered to its originating organism.

MR. ELA: Okay. Fair enough. Kyla, did I see a comment there?

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MS. SMITH: I just was going to wonder if, again, the intent could be made a bit more clear in the cover sheet?

MR. ELA: Yep.

MS. SMITH: Something along those lines.

MR. ELA: Yep. I was going to say that same thing.

So Brian, maybe you could touch base with Nate when you write the cover sheet on this just to address those concerns in terms of the intent.

I guess would anybody on the board object to that intent?

Yeah, so get with Nate, Brian, on the write-up on that and you can help reflect the intent of the board in terms of that quote unquote dead.

All right.

MR. CALDWELL: Yeah, I will.

I agree with that totally, and the only question would be in my mind, along with Nate's comments, whether it sort of sets a bad precedent to have the actual wording of the discussion kind

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of not reflect the final place where we landed.

Again, I'm kind of new at this so I'm not sure how important that is.

MR. ELA: Carolyn's got a comment.

DR. DIMITRI: Yeah, I think it's okay, Brian, because you do have, and is not fixed to a defined location, so you have the language in there. That's my take on it.

MR. ELA: Good. I was going to agree with that.

I think this doesn't inherently change the write-up of the proposal, it just clarifies it, so if it were to really change the proposal itself, then maybe, but this is more a clarification than a big change.

So Kyla, you nodded your head, but ---

MS. SMITH: I was going to say the same thing, that like, if there was like, yeah, like if this was going to alter the outcome, like certainly, it's like, we should be sending it back, but this isn't really altering anything --

(Simultaneous speaking.)

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MR. GREENWOOD: Yeah, and Steve, I think both the motion to classify and the other one -- does not meet wild crop criteria are very clean and short, so I mean, we can change the write-up, but the motion I think is very specific.

MR. ELA: Yeah, agreed. So, shall we move to the motions, Rick?

MR. GREENWOOD: Yes, we shall.

MR. ELA: Okay. I'll have another chance to get things right here as well.

So the motion is to classify lithothamnion as a non-agricultural substance. It was made by Brian and seconded by Amy, and we are going to start with Logan.

MS. PETREY: Sorry, couldn't find unmute. Yes.

MR. ELA: Okay. Nate?

MR. POWELL-PALM: Yes.

MR. ELA: Kyla?

MS. SMITH: Yes.

MR. ELA: Wood?

MR. TURNER: Yes.

MR. ELA: Sue?

MS. BAIRD: Yes.

MR. ELA: Asa?

MR. BRADMAN: Yes.

MR. ELA: Amy?

MS. BRUCH: Yes.

MR. ELA: Brian?

MR. CALDWELL: Yes.

MR. ELA: Jerry?

MR. D'AMORE: Yes.

MR. ELA: Carolyn?

DR. DIMITRI: Yes.

MR. ELA: Rick?

MR. GREENWOOD: Yes.

MR. ELA: Kim?

MS. HUSEMAN: Yes.

MR. ELA: Mindee?

MS. JEFFREY: Yes.

MR. ELA: Chair votes yes.

MS. JEFFREY: Fourteen yes, zero no,
zero ARA, motion passes.

MR. ELA: All right. We are going to
move on to the motion that lithothamnion does not

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meet wild crop criteria and is not eligible to be certified to the wild crop standard.

The motion was made by Brian, it was seconded by Steve, and we are going to start with Nate.

MR. POWELL-PALM: Yes.

MR. ELA: Kyla?

MS. SMITH: Yes.

MR. ELA: Wood?

MR. TURNER: Yes.

MR. ELA: Sue?

MS. BAIRD: Yes.

MR. ELA: Asa?

MR. BRADMAN: Yes.

MR. ELA: Amy?

MS. BRUCH: Yes.

MR. ELA: Brian?

MR. CALDWELL: Yes.

MR. ELA: Jerry?

MR. D'AMORE: Yes.

MR. ELA: Carolyn?

DR. DIMITRI: Yes.

MR. ELA: Rick?

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MR. GREENWOOD: Yes.

MR. ELA: Kim?

MS. HUSEMAN: Yes.

MR. ELA: Mindee?

MS. JEFFREY: Yes.

MR. ELA: Logan?

MS. PETREY: Yes.

MR. ELA: And the Chair votes yes.

MS. JEFFREY: Fourteen yes, zero no,
zero ARAs. Motion passes.

MR. ELA: All right. Back to you,
Rick.

MR. GREENWOOD: Okay, a question for
you, the next one is Asa and the biodegradable
biobased mulch.

I'm just wondering if we should break
15 minutes early, come back 15 minutes early,
rather than starting that discussion, which I think
is probably going to take more than 15 minutes.

MR. ELA: Just looking down the list.
Sunsets should be fairly quick.

Sure. Why don't we do that? I was
trying to decide myself, Rick, where to make the

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break. So let's go ahead and take a break for lunch for an hour, and Rick noted we'll come back at 15 minutes to the hour, whatever time zone you are in, and we'll just say enjoy your lunch.

MR. GREENWOOD: Okay. I think it'll make for a smoother transition.

MR. ELA: Agreed. No, I was trying to decide that myself, so appreciate it, Rick.

MR. GREENWOOD: I'm here to help.

MR. ELA: That you are and you do.

(Whereupon, the above-entitled matter went off the record at 1:47 p.m. and resumed at 2:47 p.m.)

MR. ELA: Well, it's quarter 'til or a little bit after. Why don't we go ahead and start again.

MR. GREENWOOD: Okay.

MR. ELA: So, why don't you let go of your avocado picture, Rick, and we'll turn it back to you for the next topic.

MR. GREENWOOD: Yeah. Sometimes I actually wear that downtown as a sandwich board. But that, that's for another day.

MR. D'AMORE: I heard you keep it under your pillow, actually.

MR. GREENWOOD: Anyhow, whatever the case.

And we're going to do -- Asa has a biodegradable biobased mulch film annotation change as a proposal. So, Asa, take it away.

MR. BRADMAN: Thank you. I have a real feeling of deja vu here. And so I just want to kind of give an overview and move forward to the discussion.

As everyone knows, biodegradable mulch has been on the national list for a long time. It was changed, there was a limitation put on it to make it 100 percent biobased. And the issue with that is that there are no products out there that are 100 percent biobased. And biobased means derived from plant materials as the primary source of carbon.

Apparently, right now the best film that's out there is 60 percent biobased. And it sounds like it is possible to increase that.

But the mulch film, as everyone knows,

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you know, there's kind of a love affair with plastic and there, again, it's starting to turn. And the mulch films are used extensively, and especially also other vegetable and food production as well.

And the primary films used are the polyethylene films.

And I, you know, have concerns about that. I actually would like to see them taken off the national list, the polyethylene films. That could put a lot of people out of business, ranging from, you know, real organic programs started by people to more large-scale producers. You know, the polyethylene films are widely used in the organic sector.

I see the biodegradable mulch as an alternative to that, that we may have material here that, in contrast to polyethylene that is degradable in the soil, and not being removed and sent to a landfill. Virtually all the polyethylene plastics deals with soil contact, are not recycled, and they're landfilled.

There are some proposals to perhaps use pyrolysis, which has been about to recondense it

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and make fuels out of it. But currently the most, the vast majority of polyethylene films are just thrown away.

A significant portion of polyethylene films gets left in the field or the environment.

There's not great data on that. And kind of the review submitted by the folks at Washington State and others, there's one study that estimated that it's 5 to 10 percent of polyethylene can be left in the field. Some of those studies may be from China where they're using a thinner material, so it's harder to remove.

But I just know from personal experience spending time in Monterey and Santa Cruz Counties, you know, you see plastic after removal, adjacent to the field in waterways and, you know, en route to the ocean.

So, I tend to see these, this issue as kind of in a comparative risk assessment format.

And, you know, that's something that people have commented in oral comments and written comments.

And, you know, many folks object to that. And, you know, I see the merits of that.

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In fact, let me step back a little bit.

You know, I've tried in this discussion to kind of lay out all the reasons for and against the biodegradable mulch. And I'm hoping that when everyone's done, perhaps we'll be sufficiently confused so that, you know, if you weigh the scales of justice, so to speak, that there's a lot of uncertainties here. And the uncertainty alone may, you know, suggest a no vote on this.

In my mind, again, there's this concern that the current use of polyethylene films needs a replacement.

Now, of course, in this proposal that there is adoption of biodegradable mulches we're not necessarily going to see -- you know, it's possible that increased use of films in general may not necessarily decrease polyethylene films.

And that is a, you know, a factor here. I guess I'm hoping that there will be less polyethylene film use if this gets accepted.

There has been, you know, a fair bit of research on this. They are degradable. And certainly in the laboratory setting they are

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biodegradable. You know, there's evidence that, based on the quality, that degradation varies in the field depending on having moisture content, and tillage practices, temperature, a lot of factors. In fact, one study suggested that a better regime to predict degradability was thermal time versus --

OPERATOR: Recording in progress.

MR. BRADMAN: -- thermal time versus regular time. You know, the temperature and other factors determine rates of degradation that affect the rates. But you might not see it in a laboratory setting.

You know, when we look at comments like, you know, Harriet mentioned, concerns about this and, you know, what happens when this blows into the water, and it will blow into the water. I mean, in some cases if we're using these biodegradable films there will be situations where it does blow in the water. And that's of concern.

At the same time, again, in my frame I see this as an alternative to existing polyethylene films which we know are bad for the

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environment in many different ways. I really don't, you know, don't want to judge what's organic and what's not organic. And polyethylenes are used. But, again, I think they have a very serious environmental impact and should be reduced.

There's been some -- I think I've hit on some of the major points.

In terms of public comment, you know, I think the public comment represents kind of the range of views we have on the board, the range of views that I hold inside me that, you know, there's benefits and negatives here. And depending on where one falls out, one might outweigh the other.

There is quite a bit of support for this change, with the hope -- and it's aspirational right now because there are not 80 percent biobased films available -- but that it will perhaps move forward the goal of finding some replacement for polyethylene films. And some of the supporters include, you know, Vermont Organic Farmers, Oregon Till, and OPWC, and others as well.

And then, of course, there's also many people who feel that this is not ready for prime

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time and that, you know, the original intent was 100 percent biobased material, and we shouldn't compromise that.

The 80 percent, I think I mentioned last spring, I mean, I kind of came up with that and proposed that because that what we're requiring for the paper pots. And the paper pot proposal, you know, leaves open the door for possibly 20 percent of material that's actually a plastic fiber, so that's that aren't even necessarily biodegradable.

You know, I think when we think of scale, this is much different. You know, Harriet mentioned that, you know, we're talking potentially thousands of acres. Right now I think in California, I forget the acreage, they have 2,000 organic acres, something like that. So, we're talking potentially a lot of use there. And that scale of use, I agree, makes this kind of a different consideration compared to the paper pot which allows synthetic fibers.

But, again, for me, in my head there's this comparative risk compared to the use of

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polyethylene, you know, polyethylene films which are essentially in my mind are a containerized method of growing, although they're using soil to meet, you know, especially strawberry production.

And films like that, it's basically a container system, especially if we're using, you know, chemigation and fertigation, we're using, you know, water soluble nutrients for delivering that under the films. To me that's basically what, you know, we might call a hydroponic system even though it's in the soil.

So, I feel like this is better, and it ensures some, you know, recycling of the film, whereas right now we have no recycling. You know, if you want to get into the hydroponics discussion, for example, I think we should have a standard for that, we should have recycling demands on those materials.

A lot of plastic is used in crop production. You know, I see piles of drip tape.

And, you know, I feel like this is a situation where, you know, maybe it's time to make a decision one way or another. And ultimately, of course,

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we're not going to have all the information we want to have. And, you know, that's one of the rubs I think in a lot of decision making around technical and, in this case, also philosophical reasons. You know, we often have to make decisions about all the information we want.

Another piece of this, too, I mentioned, you know, the fact that we allow polyethylene film, which is introducing microplastics and macroplastics into soils and the environment. We do allow the application of petroleum-derived materials as part of organic.

I've mentioned this before. But, you know, we do use things like mineral oil and things like that as really an essential pesticide for organic production. And that's, you know, directly derived from refined petroleum products.

So, we're not being inconsistent here.

Although I think all of us, I think, cringe at the, you know, the use of the material that has a carbon source, that's potentially petroleum based. In the original version last spring we had an attempt at language for continuous improvement,

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so that if we got to 100 percent biobased, that would then be required. We had problems with that language. And we kind of took it out in this version. And although we explained, put that intent into the narrative of the document.

And then we -- also, I want everyone to consider this current language, which might not be perfect but could, I think, be an approach to show our intent for continuous improvement is that we move to 100 biobased material, that should be required. And that will also be, would also be included very clearly in a cover letter to the program should we decide to approve this.

So, I think I've covered the bases, and look forward to discussing this. Well, I guess it's the last time for me.

MR. ELA: Good point.

Are there questions, comments?

Sue.

MS. BAIRD: I detest plastic mulch. I used it one time in my fields. I did all the correct procedures to try to get it all pulled up at the end of the season. And 15 years later I'm

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still lifting up pieces of plastic mulch.

I realize this is not 100 percent. But I believe this is a, truly a step in the right direction. I like the fact that we put a commercial availability on it. I think that was a great move that we did. I'm, I'm going to vote for it.

MR. ELA: Kyla.

MS. SMITH: Thanks. So, I first have a question. And that is if the annotation change passes -- this maybe is a question of the program, unless someone on the board knows -- maybe I should, but I don't -- anyway, does it get a new sunset date or does the old sunset date remain?

MR. ELA: That is a great question for the program.

I don't know, is Jarod or Devon, Jenny on? Can anybody answer that on the program?

MS. SMITH: If you don't have an immediate answer I have some other, like, comments to make. So, I can keep talking and then people can --

MS. ARSENAULT: I'll let Devon or Jarod

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chime in. Devon, we had that conversation a lot.

I think once it went to rulemaking, you set the sunset date.

But we'll let Devon or Jarod correct me. I'll let them jump on it and correct me if that's wrong.

MR. PATTILLO: Yeah, Michelle and members, I'll, I'll take a look. We had a number of cases like this in 2018. I just want to double check.

MS. SMITH: Okay, thanks.

Okay. So, yeah, I felt that there was a good balance of comments. I think certifiers were on both sides, you know. I do think that there was noted that this is a true compromise and, you know, where not everybody or where no one's left happy.

And it does, you know, on one hand there are not commercially available products, so there's not -- like, in as far as, like, enforcing the annotation, there's nothing to sort of enforce against. But, should there become products available, this is a clear annotation. We do

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appreciate the continuous improvement language that was added.

I want to also call out that there were some comments in regards to if -- because this continues to come up at least from certifiers, is that it's a meaningless listing if there's no products that are available. So, what's the point of having it on the list?

And so, while it is aspirational, and it does seem that, like, based on the way industry is moving that they do keep increasing the biobased content. So, in looking back at old documents it did seem like in 2016 in the TR that we were looking at, about 10 to 20 biobased, and that, as Asa said, it looks like a product with the most bio-base is at 60 percent.

So, you know, over the course of the past 5 years we've improved. And so, again, hopefully we can get up to 80 percent to make it a meaningful listing, if it should go that way.

And then the -- but if there's not, then I do think that there were some comments that, you know, asked about a time line or, you know, just

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saying, like, once we get around to the next sunset, which was why I was asking that question, to let it sunset off.

If there continues to be not that commercially available product within 5 years, then maybe that's enough time. You know, we got from 10 to 20 percent to 60 percent, like, within 5 years. So, maybe another 5 years is enough time.

And then the only other point that I wanted to make that spoke to me was the fact that there is the national list, but then there's also the practice standard. And I have it -- but then moved away from my -- But, anyway, there is the practice standards, but where it does refer to, you know, fully biodegradable mulch as well as where plastic is listed with the requirement to remove. And so, since this listing would be neither of those things that it -- or it's somewhere in the middle, or something like that. Anyway, I just wonder if there will also need to be a change to the practice standards that would align with this listing, otherwise it could be a little bit weird. So, anyway, just wanted to point that out.

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I'll pull up the actual reference to the e-code. I had closed that tab. But, anyway, I could speak to that more if you have questions.

MR. ELA: Sure. Yeah, thanks, Kyla. That's great to hear from the certifier's perspective, as always.

We've got Amy, then Wood, and then Carolyn. Go ahead, Amy.

MS. BRUCH: Okay. Thanks, Steve. And thank you, Asa, for all your work that you've done over the years on this particular topic. And also for the community and all their comments, both public and written. That's definitely a tough one. I agree with you, Asa, on this.

And ideally, you know, on the surface it does to me appear that having the BDM mulch would probably be better. But, I do have some deep concerns with that as well.

You know, consecutive usage concerns me, allowing for that deep plowing below the microbial zone. Because that's what plowing is, essentially, is getting it below the microbial zone, and how will that decompose in that area.

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Most of our microbes to do this are in the top 6 inches. So, I'm concerned with how well will it decompose.

Also, there was a comment that mentioned, hey, we can reduce our dependency on plastic if we approve DBM film. That's an important first step. But innovating just around plastic solutions I don't know gets us really to the end result any of us in the community are looking for even as we are considering approving this at 80 percent.

There was an article also in the written comments that I read, and it was really interesting. And it actually started kind of comparing and contrasting the BDM films with the PE films. And are we really going to get for the community the right solution if we do this type of replacement?

There was comments that PE films, they actually warm up the soil faster than BDM films.

I know that that's a usage for these films in some of the colder production areas that we need to farm the soil. And it's saying BDM films actually

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probably won't do that as well.

Water is maintained better under PE films than on these BDM films.

So, I'm not a producer that's going to use them. But, are there some drawbacks in this direction versus, you know, innovating around a non-plastic solution? I don't know.

Another comment's in that written article -- and this kind of struck me as really interesting, I never thought about it -- said a soil toxicity test of several chemicals used in bioplastics found that some exhibits a concentration that could inhibit plant growth. So, just because it is biobased, you know, what, what is it contributing to the soil when we leave it there for years and years on end?

So, to me, there are some concerns. I definitely want to improve the current scenario because it's really bad to just have all this plastic sitting around. And I'm just concerned that this media isn't getting us to where we want to be.

MR. BRADMAN: Yeah. I mean, I

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totally, you know, I hold those concerns, too, you know, about whether this would really -- I mean, my, in my ideal world it would reduce the use of polyethylene plastic, which I think would be a net benefit there.

You know, some of the issues raised about the polyethylene plastics in terms of water conservation, I think that's important. And maybe that would, you know, minimize replacement.

You know, and I agree wholeheartedly with the comments about, you know, should we be using organic mulches like plant and other materials. But the reality is, too, that, you know, in organic in many settings plastic is really heavily used. And, you know, I think something, something better -- I guess I think this is a little bit better if it could really replace that.

I should mention, too, that when we talk about 100 percent biobased plastic as its current listing which is, you know, also aspirational, some of the same issues I think would exist with that in terms of breakdown, decomposability. And, you know, that's not unique to something that's not

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100 percent in terms of the carbon source.

I mean, the papers I've looked at have also suggested that, you know, that any breakdown products of the process which are biodegradable, i.e. the, you know, foods for microbes, that any breakdown products were not, were not toxic, at least in the microbial setting.

But, you know, I'm not really trying to convince anyone. I'm trying to kind of lay out the issues. And I think you made some important points.

MS. BRUCH: Okay. Thank you.

MR. ELA: Thanks, Amy and Asa.

We've got Wood, and then Carolyn, and then Logan.

MR. TURNER: Thanks. It's hard to follow Amy on that one. She raised a lot of really good points.

I've been really pained by this piece of work. And I just want to say, Asa, thank you for much for stewarding this and everything. This process has really been challenging, so I really appreciate it.

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I think for me, I've been really struggling with it because I'm, you know, there's this state of affairs that you're talking about, Asa, which is that we're using so many plastics we should be, we should be fundamentally aligned around getting plastics out of organics, fundamentally. That should be our pathway every, every day of the week, in every context.

And so, and yet I know this proposal doesn't do that. This is not going to do that.

But I have to get, in the way I'm thinking about this, I have to be focused on forward motion, forward movement. And I know these materials are going to have some value and some use. I know they're going to be used.

I know that there's a potential that if this middle ground can be achieved by producing this material, it's going to create some opportunities to move people away from PE, which to me is fundamentally the goal.

So, as much as I've struggled with this, and as much as I'd like to vote -- as much as I would like to take a harder line cant on this, I

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feel like we've got to move forward on this. So, I'm leaning toward moving it forward.

MR. ELA: Now, Carolyn, and then Logan, and then Nate, and then Brian, and then Jerry. You've generated, you've generated thoughts, Asa.

Go ahead, Carolyn.

DR. DIMITRI: Okay. So, I appreciate everyone's thoughts on this. And so, I just have two short comments. And these comments come out of my training as an economist, which really looks at the behavior of people and farmers, because as we know, farmers are people.

So, my two questions that I don't think we have a good answer to is, like, there is no guarantee that farmers are going to switch from the current plastic that can be used to this product, unless that other product is delisted.

And then that's a slippery slope. You know, we have no guarantees that that product will be delisted.

So, I mean, whether a farmer switches probably will have a lot to do with the price, the relative price of these two products.

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So, like, well, the concept of having, like, a better plastic is appealing, but I'm not sure that it will actually do what people are hoping it does.

And then my other concern is, if this 80 percent target, or 20 percent is put in on the list, like, what is the incentive for a manufacturer to actually try to go up to 100 percent or to basically eliminate all plastics out of there? And this doesn't even touch the soil.

I, like, I don't know enough to talk about the soil. But I do know enough to talk about, think about how businesses respond and how people respond. And I'm not sure that passing this will really move things forward as opposed to just, like, introduce another permanent source of plastic.

So, like, I'm, I'm leaning against this.

MR. BRADMAN: You know, I think the points you're raising are really important. And that's my concern. In terms of continuous improvement, I hope we can frame it. And if we

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don't get it quite in the cover letter, that the intent here is that, you know, if a 100 percent biobased film was created, that that would be required over, you know, over the 80 percent.

So, but, you know, keep in mind, though, like I said, the issues around 100 percent biobased, the material might have the same environmental and other concerns that the, you know, the 20 percent does. So, that's something I haven't really talked about, but I think that should be understood by people.

DR. DIMITRI: Yeah. If I could just make one small comment.

I don't think that there is a guarantee that someone will bother inventing a 100 percent one if there's an 80 percent one that is used in the market. That's all.

It's just it's an empirical question that we may actually never know the answer to unless, you know, you know, time might give us an answer.

Thank you.

MR. BRADMAN: Hopefully, there'd be a

market incentive, and there could be future decisions on the board, too, that would incentivize them.

MR. ELA: All right. We've got Logan, then Nate, then Brian. And then Jerry, and then Amy.

Go ahead, Logan.

MS. PETREY: Yeah. It's a good thing we do this after lunch.

Yeah. Okay, so, Carolyn, a potential answer for that is competitiveness, I think what Asa was pointing to. If one company produces a 90 percent, and that is appeasing the farmers and they want that for their own farm because they don't like plastic, I think that we give them a competitive edge, so we rely on the competitive marketplace to get to the 100 percent.

Because just like we don't like plastics around, we don't like dealing with it.

I grew up on a plastic farm. It does, it hangs around on rakes in the yard, and we didn't even put plastic in the yard.

And so, we don't like it, nor do the

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farmers that are using it either. So, you know, if they're wanting to get to a biodegradable mulch, then they want all the way. But it's not there now.

The company that I did speak to over the summer about this, they have a -- they're working on the 80, and they've also been playing around working with the 100. So, that they want it, too. And like I said, it's a competitive thing.

Also, with the mention of organic mulches, so, Amy, you're exactly right. People like to use those mulches; they're black. You can't get the -- you know, we see white in the fall season. But it's so hot, we don't want to overheat. Those black mulches do heat up the ground, you know, when you've got transplants in the ground, and you want that protection so people can get an edge on the spring market.

So, organic mulches actually, I think, kind of do the opposite of that. They don't heat the soil, they actually cool it. I would imagine they cool it because you're not getting that

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radiate -- you're not getting on that sun to warm the soil up.

At least when I speak to no till farmers around here, that is kind of a concern that when they print down their rye, or whatever, and drill into it, that they are kind of concerned with the soil temperatures being cold. But as far as plastic mulch, it is specific so that you can't just be a plastic mulch farmer and then go to an organic mulch. If you're going to swap them, you're going to need a pretty good substitute for that, which I think this 80 percent, you know, it has that potential.

And I think we just have to find that farmers want to get to that biodegradable and don't want the plastic around, just like we don't want the plastic around. I think that's what we kind of have to hang on.

No, there's no guarantee that farmers are going to swap to it, but it gives them an option to swap to it. Because the only way you would, like Carolyn said, is you would have to take plastic out of it. And with as many farms as we have on

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plastic mulch that really rely on it, like strawberries, and peppers, and squash, and watermelons, there's a lot of things that really rely on that plastic mulch or that type of farming.

And so, doing anything that's really different, I don't think they're going to switch to.

But I think if you give them something that's similar and then rely on the marketplace to get to that 100.

So, I'm going to vote for it.

MR. ELA: All right. We have Nate, and then a long list after Nate. Nate and then Brian.

Nate, you're on mute.

MR. POWELL-PALM: Darn. Can't get away with it.

So, in looking at the idea that we're plowing in, you know, essentially 100 percent plastic every 5 years, if we're going to be really incorporating this, I want to ask Asa when we talked about toxicity to the microbiome, I understand that it's not necessarily found to be toxic to the microbiome, but disruptive. And I think that's a question of, like, overall cycling of nutrients

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and the overall health of that active top layer of the soil.

If you have any more information, or any thoughts on what we're sort of seeing as far as soil health if we're plowing in this much material that may be too deep to biodegrade, and impact the soil in that sense, or be, you know, that remaining non-digestible 20 percent better.

MR. BRADMAN: A couple of things. I mean, 20 percent would still be digested.

But, I mean, I think that's a good question. I've done, you know, some back-of-the-envelope type places. I don't have them with me. The films are pretty lightweight.

If you look at that in terms of, say, the mass of soil in the top 2 inches, it's a tiny amount carbon that's getting added.

So, I don't think seeing, like, that huge influx of nutrient or changing the, you know, the balance in that sense.

So, another way with it, too, I did some calculations a couple years ago, you know, thinking about, like, mineral oil. In the heaviest mineral

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oil applications that I could find, at least on the California databases, weren't necessarily organic. It was just I was looking for, you know, massive mineral oil use per acre.

And then I had some information at that point on the weight of the films. The mineral oil applications are about one-twelfth of what might be the mass of the film, so about an order of magnitude difference. So, we're not, like, that far off. That was the highest mineral oil use.

Which may have been on avocados. I'm not sure.

But, you know, we're not that far off what might be already being added already in terms of other petroleum products.

So, I, you know, I mean there's a lot of public comment. There's a long list of articles and summaries from the folks from Washington State.

And, you know, my takeaway is that it probably won't disrupt soil microbiology, you know, relative to the impacts, say, of just tilling or something else which is, you know, of course a big impact.

So, I don't think the mass of carbon

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from it is that large.

MR. POWELL-PALM: Thank you.

MR. ELA: All right. We have Brian, then Jerry, and then Amy, and then Sue.

So, go ahead, Brian.

MR. CALDWELL: Thanks, Steve. And thanks, Asa, for all this great work. It's really impressive.

I'm really, I'm really pleased that so many people are chiming in on this one. This is great to get everybody's perspective.

I just wanted to speak quickly to the whole question of whether if we approve this and the 80 percent is obtained, whether farmers will switch and use less polyethylene mulch. And I believe in the northeast the answer is yes.

I work for a cooperative extension. And I was Milton, New York's educational director about 20 years ago. And at that point there were quite a few growers who did not want to use polyethylene mulch. And because they couldn't use a biodegradable plastic film, BioTela was the brand that was available at that point, they left the

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organic certification. They left the organics scene.

And it was really a point of -- they were really upset about it because they wanted to support it in so many other ways. But that was a crucial aspect of their operation, and they weren't going to go for plastic.

So, that's one sort of subgroup.

But, also, I remember again a time, so my real experience with this is back about 20 years, but at that point we were saying our thought on extension here in New York State was that if the price of a biodegradable mulch was three times or less what polyethylene mulch was per acre, that people would switch to it. Because the costs of picking up and disposing of the polyethylene was really significant.

So, so anyways, I just wanted to throw those two thoughts into the mix.

MR. ELA: Great, Brian. Thanks for that perspective.

Jerry, and then Amy, and then Sue, and then Mindee.

MR. D'AMORE: This is a hard group to follow. And I'm not sure we got an answer to whether or not we'd be creating a 5-year sunset date with this annotation.

MR. ELA: Well, Jerry, if it were, it would reset.

MR. D'AMORE: It would reset. Okay.

MR. ELA: It would reset. So, go ahead.

MR. D'AMORE: So, I love this conversation. And, Asa, I am just in awe how you can present all of this and stay on sort of neutral ground. And I say sort of neutral ground because I read facial expressions pretty well, and I know you're not really on neutral ground all the time here.

And there's a lot I'd like to talk about. But I'd like to focus right now only on the annotation itself.

And that is are there unforeseen consequences of getting this through? Is there messaging that we're giving that might actually slow things down with this when we say the community

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says, hey, you know, we're on the path? Because I don't think we're on a path at all.

I listened to you carefully, Asa, and part of your message is that at the end of all of this we may still have something and still be unacceptable.

So, my only question now is, is if we go ahead and get this language through have we sent a message that we may not want to send?

And if that was too ambiguous, I apologize.

MR. BRADMAN: Honestly, I'm not sure how to reply. Anyone else on the board have a reply?

MR. TURNER: Yeah, can you go further, Jerry, on that?

MR. D'AMORE: All I'm saying is that we've gone through all of this, and all of your testimonies, and what's come out at the end of this, as I hear it, is that we're working our tails off to get something done that may be an improvement.

And if you want to correct me and say it will be an improvement, then I'll accept that, too. But,

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may be an improvement.

And I'm wondering with resetting that clock and the time, have we disincentivized the community to really look at the broader picture which, in my mind, again, is that we'll end up with something else that is -- we're going to be scratching our head about in 5 years and saying, you know, it didn't do what we wanted. We're still in the same quandary in terms of what's in the soil, and what gets blown away, and all that.

And if we leave this out and we're back to something that we all agree upon that is totally unacceptable, might we then send a message that it's actually the plastic we've got to get rid of in a stronger sense than we ought. Are we offering a crutch now to make people feel good about themselves?

MR. BRADMAN: I mean, I think the points you're raising are important. I mean, some of the ways that I think about that, one, you know, and the point was made earlier that if this is approved is it really going to -- is there going to be an overall increase in use of plastic, you

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know, polyethylene plus biodegradable?

And, you know, and there is -- and that's not good. In my head I do think it as, hopefully, a replacement with a biodegradable; polyethylene films go to landfill. But that, that might be wrong.

And it's true that if we list this, too, there's no product out there. And some people feel like let's just get rid of it because there's no product. And that is another approach.

Although, back to those issues of degradability, impacts on soil and stuff like that, that would all hold true, and those concerns hold true whether it's 100 percent biobased or not. So, you know, historically the board did put it on the list of 100 percent. I don't know if they thought through, you know, that the 100 percent has all these same issues. Have an idea that 100 percent is more benign. I don't know if that's true.

But, again, you know, my thinking, again, is I'd love to see less polyethylene films going to the landfill, say, in Monterey County.

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And like I said, too, I'm not trying to convince anyone. You know, I think this is just an issue that we all have to kind of hold. And I know I hold both views in terms of this product.

MR. D'AMORE: Well, in two years I've been onto these, you know, look at paper. And I think we all deemed that paper was unacceptable. It's breakable. You walk through it and all that.

So, my real question is are we allowing with all of this hard work to ignore that there might be something totally different out there, and that's what we should be going for?

MR. BRADMAN: Yeah, that's a good point.

MR. ELA: And I want to, I'm going to jump in before Amy here. I want to ask the program, because my impression was the 100 percent was not exactly what the board passed. That was what the program came up with in the rulemaking process.

So, anyway, Devon, could you answer that? Because I think you were around when that happened. I don't know what the board felt.

MR. PATTILLO: Yes. In terms of

research on it, yes, as I recall it was a little, it was a little vague what was intended by the board at the time. The board's recommendation made it clear that they wanted, they wanted the materials to be used, to be allowed.

And then through the, through the rulemaking process it was when, you know, they were interpreting that as being a 100 percent biobased requirement in the final rule, included that.

MR. ELA: Great. Thanks, Devon. Yes, that just tweaked a memory of maybe the board didn't exactly say 100 percent. They just wanted it used. Which I think in terms of thinking about board precedents, that might be important to this discussion.

So, go ahead, Amy. Sorry to jump in.

MR. D'AMORE: Let me just add one sentence.

MR. ELA: Uh-huh.

MR. D'AMORE: Again, for me what we're discussing right now is one of the topmost important, three most important things we're talking about as a group. And I just appreciate

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all the conversation. Thank you.

MR. ELA: Thanks, Jerry. Okay. Amy.

MS. BRUCH: Yeah. I just have another quick comment. I think no matter what our vote is today, plastic will probably be something we talk about in the years to come in one way or another. And this was really striking to me. I just wanted to share this with the full board.

That I recently actually had a call from an organic row crop farmer. And he was staying very close to this issue. Currently, you know, we put the box around these plastics that are being used in fruit and veg crops. There is cost analysis currently going on today just as can this be rolled out on a row crop scenario? And then we're going to be talking about massive amounts of acres.

So, it's just something to put, you know, in the back of our heads that this is an aspirational act. You know, what we vote on today won't necessarily be how it's applied tomorrow.

So, just something to put in the back of our heads.

Thank you.

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MR. ELA: Thanks, Amy. Real quick question on that. Would they roll that out with polyethylene mulch as well?

MS. BRUCH: You know, currently I don't see anybody doing that. It's just more conversational. But, you know, as our crop costs for crop care go up, and field prices go up, you know, there's just that analysis that that's happening. But, today I don't see it.

MR. ELA: Thanks.

MS. BRUCH: Uh-huh.

MR. ELA: Sorry to jump ahead of you there, Sue. So, Sue, then Mindee, then Kyla, and then Rick, and then Logan. It's definitely generated some thoughts.

MS. BAIRD: Just a comment. But here in my area, the Missouri/Arkansas/Oklahoma, basically because of the MLA influence stuff, we're not -- landfills are not taking plastic. And vegetable product is, if you've got any size at all, is being done on plastic. And so, you're seeing just piles and piles and piles of this plastic everywhere. And there's nothing for them

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to do with it.

That's just an observation. But there is a question -- I'm addressing Carolyn now -- is if we allow this and we put a commercial availability on it, what is the precedent, what, what would encourage them to go up to the 100 percent or whatever? Would we use it?

And I appreciated Brian's answer. But I'm also thinking we do have a precedent in 606.

We put products on 606 saying when it became available, is organic, you can source it. It's organic but it's not, you can use these products.

But over time we're seeing a lot of those products or all those materials taken off of 606 because people have seen an economic reason for developing organic products.

So, we have seen over time, and it's been a long time, that products, materials are being taken off of 606. And I think we will see the same thing happen here.

But that's just my suggestion. It may not happen at all?

MR. ELA: Thanks, Sue.

Mindee, then Kyla, then Rick.

MS. JEFFREY: I run this one around in the analogy of retailing because that's where I live. And talking to consumers about plastic, we did an initiative about 15 years ago where we spent a year asking consumers to choose something other than a plastic delivery device. Say, you don't need a plastic bag to take a bell pepper home type of stuff.

And in that year we got at least a ton, more than a ton I think was the number -- it was a while ago, sorry -- of, you know, because consumers choosing not to use plastic to load a vehicle to get produce home, and stuff like that.

And so, knowing that the consumer responds really clearly to the ethos of what we're trying to accomplish in climate change and, you know, honoring the ecosystem, like, I look at this classic issue more as just as, like, I'd rather choose to buy berries out of a cardboard container than, like, argue for another synthetic mulch in a way.

Like, I realize I'm, like, it's a big,

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long analogy there. But for me, because I'm a retailer and I talk to consumers a lot, and I know how, like, when you give them the tools to make a better choice, oftentimes they do.

And I think when they don't, it's not that I -- I don't think that organic is in love with plastic, I think that organic is born out of a response to chemical industrialization such that we are constantly trying to figure out how to move that needle in a society that might be trying to move the needle. And it's a really hard, it's a really hard conversation for me because I really feel the pain of what happened for farmers, and I feel the pain of seeing those piles of plastic.

But I think I have to go out farther and say, no, I'm going to hold myself accountable for more local berry choices from producers who are choosing a container I can take home and feel better about, and hope that that then translates into the farmer seeing that the consumer wants that, and that they can choose organic mulching when possible.

And so, for me, I can't vote for this

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annotation change almost from that emotional ethos of where we want to go than for any other reason.

And so I feel almost apologetic about that, but it's really true for me.

So, thank you.

MR. ELA: Nice perspective, Mindee.

We're going to Kyla and then Rick. And before Wood, I'm going to throw in a comment. And then after, Wood. And then after me, Wood.

MS. SMITH: Yeah. I just felt like I was, like, fumbling around before about the platform. If I could speak about that.

So, at 205.206(c) it talks about any problems may be controlled through. And then one says mulching with fully biodegradable materials.

And then six says plastic or other synthetic mulches, provided that they're removed at the end of the growing or harvest season.

So, I guess, again, this is a question in that if we, if this annotation passes, is that something that would just get worked out with the program during rulemaking on whether or not there would need to be a change to the practice standard?

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MR. BRADMAN: I can't really answer that. Steve, you're muted.

MR. ELA: Thanks, Asa. Yeah, I think that's a great question with the polyethylene mulch listing still on the national list, too, if there's question on interaction between these two, not sure how that would be handled.

But, go ahead, Rick.

MR. GREENWOOD: Yeah. I want to go back to our desire for continuous improvement. And in my thoughts, usually continuous improvement takes place in small steps. We don't usually go from one thing, to this giant leap to something new.

And I see this as part of continuous improvement. And reflect on the comment, don't let the perfect be the enemy of the good. So, I see it as a step forward.

I mean, obviously we're all concerned about this. But I do think it's a step forward.

And I'm in favor of it, even though, like, I can see on Asa's face and everyone else, we're not happy about it. But I think it, I think it has potential

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to change some of the discussion.

MR. ELA: Thanks, Rick. I'm just going to jump in with my own comment. And Sue, and Asa, and I, and I can't remember, Rick, if you were on the board when we had a panel, informative panel of some of the researchers working on biobased mulch. But, you know, at that point, so that's 4 years ago probably, we were talking about this issue and really talking about the research, that the board was very much asking do these, do these actually degrade in the soil? And, you know, what are the effects on soil biota?

And at that point, if I remember -- and correct me -- the board kind of came down on, well, let's wait for, let's wait for some of the research results to come out in those studies. Of course, as things be, that those results came out and, you know, further studies were going to be done. I think some of them didn't get funded.

But, you know, more information is always useful, but I'm afraid we're going to get caught in that trap of always wanting more information and, unfortunately, needing to make

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a decision without it.

But, you know, at that point for me it was really -- and I still have the real question of whether these will actually biodegrade. I mean, in certain soils, absolutely yes. And in a lot of soils I'm going to say, hmm, not so sure.

And so, like Sue said about, you know, 15 years still finding polyethylene in her soils, I'm struggling with the fact that I don't think -- I think we're going to keep finding those until I see research that says we're not. And I haven't seen that research. It's still inconclusive to me.

But I just wrestle with the fact that we are using polyethylene in organics. I know the reasons why we use a little bit on our farm. And I am trying to use my brain, you know, do we need to use it every year? Couldn't we use it every third year, you know, to stretch it out in terms of weed control. But I'm not proud that we use it.

And so I'm just totally conflicted, as I always have been, on this, on this topic because

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I, I agree with you, Rick, that we should make incremental changes. And I also, at least if polyethylene mulch we require that it's taken up, and if a certifier goes by and sees plastic shards in the field, they have a reason to write a notice of noncompliance. And the biobased mulch there, they don't have that, that ability.

So, so I, you know, a small breeze could blow me on either side of this fence. So, Wood, go ahead.

MR. TURNER: This is painful stuff, obviously.

I just want to go back to something that Mindee said. I have mad respect for Mindee, so I don't want to just, I don't want to put a line in the sand between us. But I do want to talk about, I do want to talk about retailers, retail for a second.

Because we keep battling about whether this is something, whether we can -- whether this is the right thing for organic crop production, all this. We need innovation across the value chain, fundamentally. We're talking about

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organic on farms, and I'm talking about organic in stores.

Consumers need to tell, need to go -- they need to tell the stores where they buy their products that they don't want to buy things in polyethylene to carry. They don't want to buy things in poly bags. They don't want these things.

We need more innovation across the value chain. And if I, honestly, I'm at the point where I feel like if another consumer study tells me that the consumer doesn't want to take delivery of some berries in a cardboard box because they can't touch the berries, they can't see the berries, or doesn't want, doesn't want to get table grapes in cardboard because they can't touch the grapes, they can't see the breaks, I'm going to go crazy.

I mean, the idea that we've got to put film, film layers in between the cardboard so the consumers still have that visual, visual experience, I mean it gets deeply frustrating. And we're sending so many mixed messages across the value chain that I just, at a certain point,

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you know, we've got to, we've got to start innovating this. We've got to start thinking about the impact of plastics across the value chain.

So, I love what you're saying, and I love the point you're making, Mindee, on this but I, you know, honestly, I want to see more consumers say they don't want plastics at all, period. And then we're going to see innovation at every, at every turn.

So, I just wanted to make a heartfelt point that I just -- this, this to me is an imperfect innovation, and we need a lot of imperfect innovations to get where we need to go.

MS. JEFFREY: Yeah. Thank you, Wood.

I don't, I didn't take offense to your point.

And I know really clearly that there are a huge number of independent natural food retailers, and natural coop grocers' associations, coops that do have these conversations with consumers on the ground.

MR. TURNER: Yeah.

MS. JEFFREY: And they do change the

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choices.

And I think you're seeing people up against what society requires of humans to make it through the world.

MR. TURNER: Yeah.

MS. JEFFREY: You know, up against their choice of can I, you know, do I buy convenience food or can I have the time to participate in whole foods? And that's where the tension is for me, because there is a lot of work going on in the retail landscape on this front.

MR. TURNER: Yeah. And we talked about -- sorry, Rick; sorry, Steve -- we talked about the breakdown of recycling markets. Sue mentioned some of that. I'm sure Rick knows this very well. The COVID experience over the last two years we have taken giant steps backwards in the continuous space on plastics. There's so many more plastics in the last two years than we had before that.

So, anyway, we just have to really get serious about this.

MR. GREENWOOD: So, Steve, you want to

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call for a vote? Steve, you're muted.

MR. ELA: Thanks, Sue. You're rubbing off. Actually, you're not rubbing off, I'm trying to be respectful so you don't feel alone.

MS. BAIRD: You're so nice, but I really need Jerry following me because he's going to follow tradition. You can leave the same time I am.

MR. ELA: Well, I want to be a moderate here and try to bridge the gap. So we do have, I'm just going to point out to the board, we do have several choices here.

We can send this back to the subcommittee, which we have done many times before, as ISO well knows, or we can vote on the proposal for the annotation change.

So I am going to pause here and see what the feeling of the board is, if anybody would like to move it back to subcommittee or whether we should go ahead and proceed to the vote.

All right, I am hearing that we should go ahead and proceed to the vote. So I was really hoping to go back to subcommittee so I wouldn't

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have to wrestle with this.

So the proposal is that the crop subcommittee proposes the following annotation change for biodegradable biobased mulch film, and the change is to demonstrate at least 90 percent biodegradation, absolute or relative to microcrystalline cellulose in less than two years in soil according to one of the following test methods, ISO 1756 or ASTM D5988, and both are incorporated by reference in 205.3, and must be at least 80 percent biobased with content determined through ASTM D6866, incorporated by reference.

And I think we did add commercial availability clause to that, when greater than 80 percent biobased, biodegradable plastic films become commercially available, our users are required to use them given that they are of the appropriate quality, quantity, and form. And the program did rule that that is a non-substantive change, so it is included.

Okay, if we can go back to that other slide, the motion was made by Asa. It was seconded

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by Brian, and we are going to start with --

MS. JEFFREY: Kyla.

MR. ELA: Kyla, thank you, Mindy. So,
Kyla?

MS. SMITH: Lucky me, first one. I'm
going to say yes.

MR. ELA: Okay.

MR. TURNER: Yes.

MR. ELA: Okay. Sue?

MS. BAIRD: Yes.

MR. ELA: Asa?

MR. BRADMAN: Yes.

MR. ELA: Amy?

MS. BRUCH: No.

MR. ELA: Brian?

MR. CALDWELL: Yes.

MR. ELA: Jerry?

MS. BAIRD: No.

MR. ELA: Carolyn?

DR. DIMITRI: No.

MR. ELA: Rick?

MR. GREENWOOD: Yes.

MS. JEFFREY: Jerry, was that a yes,

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Rick?

MR. GREENWOOD: Yes for Rick.

MS. JEFFREY: Thank you.

MR. ELA: Kim?

MS. HUSEMAN: Not perfect, but yes.

MR. ELA: Mindee?

MS. JEFFREY: I'm going to express my gratitude for the work done on this and say no.

MR. ELA: Logan?

MS. PETREY: Yes.

MR. ELA: Nate?

MR. POWELL-PALM: Same comment as Kim, but I'm going to say yes.

MR. ELA: The Chair is stepping out of the room. The Chair is going to say, oh, man, I'm sorry, I should know this before. The Chair is going to say yes.

MS. JEFFREY: Well, that's 10. We have 10 yeses and 4 noes and zero ARAs. Is that what you got, Nate?

MR. POWELL-PALM: Yes.

MR. ELA: So the motion passes.

MS. JEFFREY: Wow, motion passes.

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MR. BRADMAN: Thank you, but I would also say good job. This is a hard issue, and I --

MS. JEFFREY: I really appreciate how you help us, all the sides. Thank you.

MR. GREENWOOD: Is that called a Pyrrhic victory?

MR. ELA: Oh, my goodness. And the Chair was counting votes and realized the Chair was the decisive vote at the end of that, which made it all that much harder.

So Rick and Asa, you have worked on this the whole time we've been on the board, and I don't know how much time you've put into it but it's been a lot.

Everybody else has recognized that, but I'm so glad it didn't have to be me and I'm so happy for really the countless hours you have put in.

I can't even imagine how much you've wrestled with it yourself, so thank you.

MR. BRADMAN: Thank you.

MR. ELA: Rick?

MR. GREENWOOD: Yes, back to me. So first of all, Steve, I know you wanted to send all

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of these things back to committee so you could be gone while we actually did it, but I'm sorry it happened this way.

So actually, the next proposal is sodium nitrate, a petition, which is Steve, and then we have the ammonia extract, whose petition is also Steve.

So why don't you go ahead, Steve, and take both of these, unless you want to send them back to committee right now, and be done with it?

MR. ELA: And walk away. Yes, don't tempt me, although I'm sure a future committee member might not be happy with me.

So the proposals for sodium nitrate, and it is, we did ask for a work agenda item on this that was approved.

And the motion basically is to make a technical correction for the listing of sodium nitrate.

It does appear on our national list with an annotation limiting its use, but the sunset review has been suspended.

It ran into the issue of, and the board

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often talks about this, we talked about it today, of today we vote on the sunset and then if we want to make an annotation change, we do that separately.

In this case, the board voted simultaneously on a listing and an annotation change, and also at that point, the board had to relist things for them to stay on the list, whereas now we have a process where we have to delist them.

Basically, it left sodium nitrate in limbo where the program never took action on the board's request to prohibit sodium nitrate completely and to remove the annotation.

And as such, it technical should have sunsetted because it was never relisted as such, either as prohibited or with the 20 percent restriction.

As you saw in the public comments, there's some discussion of that, but in essence, for myself and reading the documents that basically left the program to take action until I think it was 2012, and if after that, and it was supposed to be resolved at that point and it never was.

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So for me, the intent of this proposal, and it is something that since I've been on the board, nearly every meeting, if not all, stakeholders have requested for us to resolve this issue, I would prefer it to be resolved by the program acting on the previous board's recommendation.

But that has not happened, and so my pragmatic side says let's make this listing official again so there is no question there is at least a 20 percent restriction on the use of sodium nitrate.

Because at this point, I think somebody could easily make the case that they could use much more than 20 percent.

And while we've received a number of testimonies saying it's still being used under the 20 percent, I have heard anecdotally there are areas where it might be used well above that, but I can't support that with data.

So that is very anecdotal, which I do want to stress. But at this point, it can be used however it wants to be used, and I'm not comfortable

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with that.

So I am in favor of this motion to at least officially get it back on the list, get it into the sunset process so the board can talk about it without having to ask for a work agenda item, and then I would encourage further work.

Specifically, I would love to see a petition that readdresses the board's desire to prohibit this material.

And I think that goes into the general discussion of highly soluble materials.

So with that, I think I will open it up to any discussion, but I purposely did not go into or ask for this to be the referendum on the value or use of sodium nitrate, but really just a technical petition to get it listed and get it official recognized as a 20 percent restrict. So Amy?

MS. BRUCH: Yes, Steve. Thank you. I think it's important to get this back on the list and make it official, for sure.

I just had a sidebar question. Chilean nitrate, I believe, is more of the non-synthetic.

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It's the salt recovered from the mine.

Sodium nitrate, though, I believe should be synthetic. Not that we work on that now, but, I mean, they're chemically one and the same.

However, they are two different products.

So if this does come up as an agenda item, is there ever a way to parcel those two apart?

MR. ELA: That is a good question. I think, I mean, the Chilean nitrate is sodium nitrate.

And so in the past it's been referred to as Chilean nitrate, but more technically, it is sodium nitrate.

As you said, there are synthetic forms of sodium nitrate, and I think, please correct me, anybody, if I'm wrong, but the allowance for sodium nitrate has to be the synthetic form, because that's written into the rules, non-synthetic forms are allowed unless prohibited.

But the assumption is that they are not synthetic.

MS. BRUCH: Okay.

MR. ELA: Please, correct me, anybody,

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if I am stating that incorrectly. We have Logan.

MS. PETREY: Question, and hope this doesn't take too long. Why did the NOP not accept NOSB's recommendation?

MR. ELA: That, by my understanding, again, I wasn't there. This is where our stakeholders have a huge edge on the board in terms of their long-term perspective of people who have been watching board meetings for many, many years.

My understanding is that it did not go through rulemaking. We do not, as NOSB, do not and have no jurisdiction to rule over economic concerns.

That is not part of our analysis. The program, on the other hand, has to take into account economic concerns.

It did not, my understanding is it did not go through rule making because, but understanding is he did no rule over because if the ethologic impact of taking sodium nitrate away because many people were actually using it.

And Kyla, I don't know if you know man more than year do? You've watched things longer

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and certainly if anybody from the program was to chime in, that would be fine.

DR. TUCKER: Yeah, I'm happy to chime in, because that is a question, a programmatic question of why didn't we do role-making.

And I have, I think, in the past meetings, talked about the different criteria. The board has one set of criteria. When you get to rule making, it's another set of criteria.

It was known born on a number that were using this substance, that change thing the rule was going to have a significant economic impact.

At the time, the administration decided not to move forward with that rule making because of that cost analysis.

It was going to be very carefully for farmers to change their practices because it was in wide use.

MR. ELA: Thank you, Jenny. Much appreciate that. Other questions, comments? I will say that for the most part, stakeholders were in favor of this motion, although certainly several brought up the president issue and to honor the

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previous board's wishes.

I guess I agree with that 100 percent, and then my pragmatic side says if we had gone for a motion to completely prohibit it again that it would have, or likely could have ended up in the same fate.

And I just felt like we should have some restriction on it without taking the chance of having no restriction on it again. Pragmatism versus philosophy there.

Okay, anything else? You ready to go to the motion, Rick?

MR. GREENWOOD: Yes, go ahead, Steve.

MR. ELA: Okay. There is a motion to reinstate the listing of sodium nitrate at 7 CFR 205.602(g), prohibited non-synthetic sodium nitrate unless use is restricted to no more than 20 percent of the crop's total nitrogen requirement.

Use of spirulina production is unrestricted until October 21, 2005. The motion was made by myself, Steve, and seconded by Brian.

And we are going to start with Wood. Yes. So,

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Wood?

MR. TURNER: Yes.

MR. ELA: That was a yes, wood?

MR. TURNER: Yes.

MR. ELA: Sue?

MS. BAIRD: Yes.

MR. ELA: Asa?

MR. BRADMAN: Yes.

MR. ELA: Amy?

MS. BRUCH: Yes.

MR. ELA: Brian?

MR. CALDWELL: Yes.

MR. ELA: Jerry?

MS. BAIRD: Yes.

MR. ELA: Carolyn?

DR. DIMITRI: Yes.

MR. ELA: Rick?

MR. GREENWOOD: Yes.

MR. ELA: Kim?

MS. HUSEMAN: Yes.

MR. ELA: Mindee?

MS. JEFFREY: Yes.

MR. ELA: Logan?

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MS. PETREY: Yes.

MR. ELA: Nate?

MR. POWELL-PALM: Yes.

MR. ELA: Kyla?

MS. SMITH: Yes.

MR. ELA: And Steve, the Chair votes
yes.

MS. JEFFREY: Great, 14 yes, zero no,
zero ARA, the motion passes.

MR. ELA: Okay. Rick?

MR. GREENWOOD: Okay, Steve. This is
the one that I know you've been waiting for, the
proposal for ammonia extract. So take it.

MR. ELA: I just have to say, I
sympathize with Emily at her last board meeting
having to read materials, and I have complete
empathy for her position at this point. I did
then, but even more so now.

So I just want to start off in kind of
looking at this very difficult topic with just some
observations on the process first, then really get
into the comments and various things.

In humor, and also in, well, there are

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a couple things that I just really am unhappy about in this process in terms of comments, but I'm going to say in humor that I am relieved that I won't have to submit this to a journal and have the editors reject it.

If it were submitted to a journal, I would have had to delete all the public comments out of it, and I think the public comments are really in so many ways the gist of it. So it did not go to a journal.

And also, we've already talked about the tenor of comments. I value the professionalism of this board and the knowledge base of the board, and I think that comments that address the issues rather than people really do help the board more.

I'm also, I'm just distressed, when despite the request at the start of our oral comment webinars that consultants disclose who they are working for, that that hasn't always happened.

And this has been especially apparent in this round when a prominent scientist gave their written and oral testimony without noting that he

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was a consultant for one of the ammonia extract companies.

And so while there are allegations of conflicts of interest in many different directions, I have to note there's also a conflict of interest in supposedly neutral parties.

And I think that does such a disservice to the board in making decisions on the facts and what is presented and knowing where people are coming from. And I just have to say that at the start because this has been such a controversial issue, I think. It is important that the board know where things are coming from.

I also want to address some of the comments about me engaging with stakeholders. And I will apologize for not catching the subcommittee notes, the statement that I was going to engage with stakeholders and the OTA Task Force.

That is incorrect. I meant to say I would engage with stakeholders and I knew that OTA had a task force.

So just for the record, I have never engaged with that task force. I do not know who

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was on it or is on it.

I don't even know if it's still present.

So I just want to put that in the record that there was no bias toward OTA and their task force because there certainly was no contact there.

All right. With that, I'm going to call it the housekeeping, I am going to move on to a presentation of the proposal.

Obviously, you have all heard that it is not a slam dunk in any sense of the word, but I think it comes down to, I'm going to give kind of, summarize the comments into four main points.

And I apologize for presenting in this much longer fashion than on many other proposals, but I want to rebound some of the things that were presented.

So I want to talk about the stakeholders supposed to the manufacturing comments. I want to address some of the comments on recycling of the ammonia.

I want to address the definition issue and unintended consequences on other compounds, and then finally tie everything back into OFA and

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some of those criteria.

So just jumping into it, I think you can discern from the comments that were made, there's often a fairly clear distinction, there's not 100 percent either way, of long time organic stakeholders saying that this material should be prohibited because it does not comply with OFA criteria and does not meet the long-time acceptance of feeding the soil and not the plant and maintaining or improving soil organic matter.

And on the other side, there are many of the manufacturers of the materials that are arguing very strongly and deeply that this fits well into the OFA criteria and with a system of organic farming.

And so I think the board has to balance that, and I'm just going to put it very starkly, it's stakeholders versus manufacturers.

They both make strong arguments. And I want to just say that for long-term stakeholder groups, NOC, OFA, OFARM, OTA, Montana Organic Association, Cornucopia, Beyond Pesticides, and The OrganicEye along with, we did, well, I'll just

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leave it at that.

They have all said they support the prohibition on ammonia extract. And I will say most of them, some of them support the final motion on three to one ratio, but many say send it back to subcommittee for more work.

Of the scientists, certainly there was a comment from University of California Davis and the Organic Center and then also comments by Dr. Jerry Hatfield that were on opposing sides of the fence, and I just want to recognize that. And in the written comments, they certainly go into more detail.

So that's the first thing in terms of kind of analyzing this issue is looking, and up to the board to decide what side of those comments you want to consider.

The next point is an unhulling of recycling. There's probably a better term, but it came up certainly in oral testimony of the capturing of ammonia that may be going into the atmosphere and the ammonia extracts, in addition to the capturing of ammonia from the material

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itself there, keeping ammonia from out of the air.

And I think that is compelling in some ways and then also on the other side, I think we've noted that, like with the biochar in particular, but others, that organics do not have to be the old man recyclers, that when it fits in the organic program, yes, it is wonderful when we recycle some of these materials and capture them, but we don't have to do that. It's not necessarily part of the core organic program.

And I would also point to some of the other things where the board has made choices on this. For example, newspaper.

We do not allow colored papers or glossy papers be recycled into the soil as a mulch.

So while organics could be a part of that, we have made the statement that we are not always part of that.

As we said, biochar, there have been comments on that in the carbon dioxide petition that Logan is in charge of.

And in terms of energy use of what it takes to produce ammonia extracts, what it takes

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to ship manures, all those things were made in public comments.

The next issue I think really came out strongly, and that is on definitions. Of course, these motions would come down to definitions, like we saw on paper pots.

I keep referring to paper pots because I as the lead on that and had to deal with those definitions.

And I mentioned a number of times, I think on some topics the definitions are very important for the board to almost hammer out very explicitly, and in paper pots, I think that was important.

But on other sides, we are not the rule makers and we are not the rule writers and we do not have the expertise to write rules.

And so, intent is also very important, for us to say what we want, make a good attempt at it, and then pass on to the actual rule makers, let them wordsmith things.

And so intent, I think, has a huge factor and not have the board just spend endless

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time trying to specifically write a rule that may be rewritten.

So on the definitions, there were a number of comments that the definition we have before us, or definitions, I should say, it inadvertently includes other materials such as compost tea and feather meal and a number of other products.

Having been on this board for a long time, and Kyla I hope smiles at this, but the certifiers are not shy to let them, and the MROs are not shy to let us know when we have been ambiguous, and when it will put them in a difficult position to interpret.

That, I almost come to expect it on almost anything we put forward. And I value it because they are the ones that are on the frontlines and do have to make those decisions.

The board can do really well with our intents there. But if the certifiers and MROs can't understand it, it's going to be a difficult process.

And I'll point out that OMRI, ACA, PCO,

MOFGA, MOSA, OEFFA, all made comments that this definition is easily interpretable, that they had no question as to what its intent and how they would interpret it.

And I think that to me it's, I just take that to heart, that that means we've done a pretty good job and these ascertains that these, the way that this is written would have the unintended consequences of these other materials. It doesn't necessary apply.

And I want to just read one definition that is commonly used in chemistry of what stripping is, because I think stripping was the definition that was pointed to as to having these unintended consequences.

And I think the common chemical definition of stripping really helps with the compost tea and the feather meal and the fish debate.

But stripping is an activity that captures and refines vapor coming off on agricultural feedstock or other natural source.

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That type of vapor captured is not used in the production of manure tea, compost tea, fish fertilizers, because things aren't being vaporized.

And so I think when you're thinking about capturing vapor, that really makes a difference from making a compost tea where you're just using a feedstock and letting things leach into the materials.

You're adding water, not taking away in that extent. And certainly, in terms of fish fertilizers and feather meals, that also applies.

You're not taking a vapor and stripping it out, you're just making another material from it.

So I just have to say I appreciate the thoughts on wording. I think that's always important, but people that are going to be interpreting this have all signed off and said, yes, this is a readily interpretable deflection and they're in favor of it.

Finally, this really comes down to probably the gist of the matter and OFPA, in does

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this fit within an organic system or not? We've certainly heard a number of comments on both sides of this, and I'm going to really, I think, it does come down to the gist of it.

So I'm just going to, from the proposal and comments, just read from a few things. Certainly not going to read the whole proposal, but I was going to, say, digest or strip this down, but maybe those are the wrong words. Synthesize where things come from.

So, one was a comment on human health and what these effects were. Not a lot of comments here on either side. The proposal does list here that ammonia is a pulmonary irritant and can cause bronchial issues. So there are possible effects on human health.

I did appreciate, I believe, the one farmer who did note that in trying ammonia extracts to see how they would do, that they could not be in the tractor for a couple hours after they had spilled some. And so certainly, from that perspective, it's not completely benign with human health. So I just wanted to make that note.

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But then, when we go down to the real effects on soil and off of, I think, one comment started off and it was in reference to the tenets of organic agriculture.

And prior (audio interference) reactions, so we're looking at precedent and what the intent was, it was noted that, in contrast to the reductionism of chemical-intensive agriculture, the origins of organic agriculture are in holistic and ecological thinking. And that, to me, forms the basis of how we analyze things.

And then, as listed in our regulations, that we are compelled to maintain and improve soil and organic matter and show how we are doing that.

So, in kind of going through that, one thing that came up in the discussion document, and also in this proposal, is that much of research that has been done has not been done on organic soils. And as we all know, that can lead to very different results than if they're done on conventional soils. So I just want to point that out.

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One study by Kramer and Reganold did find that leaching increased in conventional as compared to integrated and organic plots, that nitrogen increased, nitrogen leaching increased. Another study did note that the rate of mineralization increased when readily available fertilizers, such as ammonia, are added.

And you can make the argument that that rate of mineralization does release more nutrients, but you can also argue that if you increase the rate of mineralization, you are breaking down carbon compounds, and that, over a long period of time, you may be increasing the rapidity of mineralization of the system, but you are also mining carbon out of the system over a long period of time, and that you are decreasing the ability of the soil to provide nutrients down the road.

Another note that was noted in some of the research is that crop rotations that include legumes can be especially effective for soil health, and that we should encourage and enhance preventative techniques and use those materials

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where nitrogen might be limited.

So it's a reference to, in general, the organic principles that you start with legumes, you start with crop rotations, and you really work through those materials to take care of nitrogen limitations.

There's also the dichotomy that I see personally, that I also see in the comments, that ammonia extracts have been noted to promote soil health, but then they also must be used in convention with other organic practices. And I struggle with, if they help soil health but then they also hurt it, it seems like I don't quite follow the rationale there.

It's also been noted that while some carbon -- or some ammonia extracts do include carbon, they don't actually work anywhere towards carbon sequestration, which we've been talking a lot about in terms of climate change.

A few other comments that were made.

I believe these were -- one of them was in the discussion document, that there is some plant yellowing when these materials are applied, but

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that disappears in a couple weeks as the system responds and adjusts to that addition of ammonia. But, to me, plant yellowing upon application of a material is not an indication that it is necessarily beneficial to the system overall.

And then there was one comment which bothered me about the use in California with drip irrigation where, because water restrictions that covered crops were very difficult to use, and that does make me very concerned about the overuse of ammonia extracts in different forms of growing systems.

It was noted by Dr. Jerry Hatfield that we needed to use meta-analyses to really look at these things, and certainly my review of the literature there, there were more than one meta-analyses, and we often came up with somewhat different conclusions.

But, certainly, one that Dr. Jerry Hatfield did note, was that when you looked at the various factors of crop rotation, including of legumes in the rotation, along with organic inputs, were all a significant factors affecting the soil

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microbial size and diversity. So, in a meta-analysis, the traditional organic inputs do increase to help microbial size and diversity.

And, coming back to the carbon sequestration, the production of these materials take carbon value out of the organic feedstock through filtration or other methods.

So, just a couple other things that people noted or the research noted, is if there are nutrient problems on a particular soil, avoiding solving them and bypassing the soil biota material should not be permitted.

And, finally, in the preamble to the publication of the NOP final rule, the NOP agreed with the NOSB and recommended to put limits on materials of high solubility. And that has come up several times, that there has been a distinction between, for example, sodium nitrate, calcium chloride, some of these other materials, that there should be a very close look at materials of high solubility.

So, with that, the public comments were long and large. You all have had the chance to

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read them. We've had two discussion documents along with this proposal. It's obviously created a substantial amount of controversy.

And, with that, I will open it up to questions, comments, et cetera. And I see Logan has raised her hand.

MS. PETREY: Hi, thank you, Steve. So, I was looking for the NOP handbook, going through a lot of those things. And, a farmer myself, so I have an OSP program, I use crop rotations, I use cover crops. But I was looking at Chapter 5, it was about soil fertility, and it says, you know, it just establishes healthy soil. It says healthy soils is the foundation of organics.

And I think we have this assumption that AE is unhealthy to soil. And, I mean, I don't think that's the case. I think that it's been compared to anhydrous ammonia in our discussions, and they're just two completely different products.

I mean, you have ammonia, this is a compound, but anhydrous ammonia, it can have a -- I want to say it's like an 80-0-0 product. It's

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very high. And we're talking about like the concentrated ammonia, for example, is a 6 percent liquid. So they're very different.

And plants need ammonia converted to nitrate to be able to use it. I mean, all of our organic sources of fertilizers turn into ammonia, and ammonium and nitrate. So they're not toxic to the soil.

Yes, it is important that we use them appropriately, but they're not going to make the soils unhealthy, because that is what you get. When you apply a manure, you very well could apply a manure at a rate that has available ammonia in it at the same rate that you will be using this contracted ammonia product.

The Organic System Plan is there to make sure that growers are using the (audio interference) and using the cover crops and using tillage practices.

The holistic approach is supposed to be within the program. It's not supposed to be within a material itself. Each material is not going to necessarily have that holistic approach.

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When we're talking about the needs, you know, this is a new product. It's using (audio interference), and then NOP looked at the concentrated product, I guess it was the 6 percent, and deemed it okay.

And it's not widely used. It is a very expensive product. But what is widely used is sodium nitrate, which, I mean, we just talked about. And even though the NOSB recommended it be taken off, it's being widely used, and it's widely used because it's needed. There are growers that need this product. We're not all -- they're vegetable farmers that need to maintain that quality.

It's not all corn. It's not all cereal grains. It's not all peas. There's more, and there's more to our entire organic portfolio here in the country.

And it's in different areas, too. I mean, we're getting 55 inches of rain here. That's a little over an inch a week. And if you're talking about a crop, even a short crop, like a cilantro, a 50-day crop, I mean, you're talking about 7 weeks,

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7 or 8 weeks, if I put three plants down two weeks ahead, we're adding on the weeks, you're adding on the rain. That's a leaching event.

So if you look at 00 it's called the four Rs, I guess the Stewardship Program for Nutrients, you have rights -- and I actually have them jotted so I don't get them messed up. You have right (audio interference), right time and right place. And I can't do that with Legume Cover Crops, Incorporated, in all three plant locations.

We can't do that here in the Southeast and get that done. We must have anhydrous applications or we will lose our available nitrogen. And so we can't use -- a lot of the other groups that have spoken about their program, we can't use those and get the job done here.

And that's actually even within the NOP handbook. I mean, it even states that growers are unique. Each farm is going to be unique based on the practices, based on the crops that they grow.

And so I mainly just want to hit home that it's not anhydrous ammonia. I mean, it is a different product. If you were to get the same

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amount of anhydrous ammonia, if you were trying to get 100 pounds, then you would have to apply about 120, I guess, if it's 80 percent. And if you want to do that with the 6 percent material, you'd have to put, I think it was 1,600 pounds.

They're very different. And ammonia, when it is anhydrous, it has no water in it. It has a high affinity to water, which means when you add it into the soil, it's going to really strip away that water and pull it from membranes.

That's why it may not -- I don't want to say that -- I don't want to say that that 6 percent, that he might have been mistaken that it was that hot of a material, but it seems unlikely that something that's not that -- like that anhydrous ammonia product, would cause any of those issues, human health-wise.

But when you add that type of product into the soil, you are going to strip away water from those membranes and it's going to destroy things. It does, but when you add ammonia to the ground, it requires bacteria to convert it to nitrate. So it does feed the soil. I mean,

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they're present there to take care of that.

But, again, it's under that 20 percent restriction if we pass that motion. And so, where Steve said he was worried about it being overused; it's not going to be overused if we have that 20 percent with that carbon-nitrate ratio, which I think is important. Just about every single comment that was pro-AE was pro to restriction rule.

We don't want to rely on this. We use it for rescue treatments, just like sodium nitrate.

And this could be substitute for sodium nitrate.

We want to get that on and prohibit it because it's a non-renewable resource and we want that away. I think this is a recycled natural product and I think it's a good fit.

So I'd caution us from prohibiting something like this so soon, especially when it's already being used and we've all seen use of it already. I know it was lengthy, but thank you.

MR. ELA: Thank you, Logan. Always appreciate your comments. I know we come down on opposite sides, but I think I've said it before,

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I very much respect your thoughts and I never want to take that away.

MS. PETREY: No, thank you.

MR. ELA: You have good thoughts. So, Nate.

MR. POWELL-PALM: I was thinking about your farewell speech yesterday, Steve, and in it talking about Borlaug and this well-intentioned but ultimately misguided idea that we can fix these really large problems like food insecurity with single inputs.

And we have spent the last 70, 80 years trying to say we can fix it with hybrid breeding, we can fix food insecurity with ammonia, we have fix it with the Haber-Bosch process. And what we've come down to is that we've failed. The Green Revolution has failed. There are still millions of people going hungry, as you well mentioned.

But what we have found is that organics in a system works. If we engage a system and really honor the system of soil building, feeding a natural ecosystem, and taking to task that idea that organics can't feed the world.

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I really love that myth, because organics is going to be the only thing that feeds the world. It's the only thing that will create a resilient system that doesn't rely on processing-intensive inputs that ultimately make the soil, make the system, hungry for inputs rather than able to generate their own nutrition.

I have more to say, but I'm going to get back in the queue.

MR. ELA: At some point I'll interject myself, as well, but as Chair, I also want to be respectful of not interjecting myself all the time. And so, Kim, you have a comment.

MS. HUSEMAN: Thank you, Steve. I'm going to start by saying I don't know exactly how I'm going to vote on this. I've gone through it with several individuals and tried to figure out where I stand. I wish I could say that by prohibiting ammonia extracts it's going to create every U.S. farmer to plant soybeans so we can quit being dependent on global soybeans and reduce this \$35 per bushel soybean or \$35 per bushel soybean prices, but it's not.

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I think that Logan really hits a chord to say you cannot grow any product that you want to in any inch of the soil in the U.S.

So what works in the south may not work across the Midwest, which may not work in California or in Colorado.

Being mindful that in certain areas, there's a need more so than in others, leans me in one direction versus another.

But then I go back to another chord, which is fraud. And if someone can answer to me how we can unequivocally understand and identify when and when not there's fraudulent activity, that would definitely swing my decision. Thank you.

MR. ELA: Thanks, Kim. Very much appreciated. And Logan again, then Amy, and then Nate, and then Sue.

MS. PETREY: Thank you. And I do want to state -- I don't know if I said it again -- because you use a water-soluble nitrogen does not mean that you don't build up the soil with other things. And testimony to that is we do use water soluble with sodium nitrate on things when we need

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it, but we still are building our soils.

And an example of that is that we grow carrots here. We don't have a nematode issue, and it is a phenomenon to all the growers around here.

We cannot believe these conventional farmers. They have to use toluene at a very high rate.

The reason we don't have to use any nematicide here, and have had no incidence of it, is because we have such an incredible microbiology going on in the soil, even though I have to use, at times, sodium nitrate to get some of the -- to not dis crops because the leaf looks pale, because the consumer demands almost perfection from our crops.

I mean, but to that, Kim, as far as the fraud, it was sudden in some of those comments but also when we were talking about subcommittee, I mean, to my knowledge they said they would be able to detect it.

They would be able to decipher what that is, I guess, based on the isotopes. But we can't -- I mean, I just don't think we can prohibit something based on we think that people are going

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to cheat. People are going to commit fraud and prohibiting something based on that -- I really appreciate your support on the other side, and I hope that we don't lose this base because we can't prove that fraud's not going to happen, because fraud's always going to happen. And I hope that we always catch it. There's people who are going to commit fraud. There's no stopping them from ordering conventional fertilizer when nobody's looking and putting it on.

And so now I know that the fraudulent concerns are probably more so on the manufacturers.

But as far as that, it is hard preventing something or prohibiting something based on that concern.

I think it's something that we do monitor and we are aware of it, but if we do have the restriction, like the 6 percent liquid rule and it's undergoing manufacturing, it has to be overlooked, I think that that will help.

MS. ARSENAULT: Steve, you're on mute.

MR. ELA: Okay, we're just going to be that way. So we're going to go to Amy and Nate and Sue, and I'm going to interject myself, and

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then Kyla.

MS. BRUCH: Okay. Well, Steve, thank you so much for how you're addressing this. It's very balanced.

I appreciate you conveying both sides of the equation. I think that's important for the stakeholder community.

A couple things that come to mind here, I think you made a good point earlier and I anticipate a conversation about just having those integrated systems and focus on the overall ecology of the system.

And I think that rings true here, as well, and across all of our products that we're analyzing.

To me, a lot of this comes down to root cause analysis. What is the learning factor that's preventing people from hitting their production goals? There were several comments, written comments, that doesn't necessarily look at getting after the root cause. We're using nitrogen sometimes as a substitute. There was a couple comments on Nebraska and you can't grow a

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certain yield without ammonia extract. There were two, actually.

And I can say, the one thing that they were missing was that crop rotation credit. They were accounting for manure, they were accounting for cover crop, but they didn't have that total integrated system of an actual complementary rotational crop. That was missing in both instances.

Another thing was on climate challenges. I've had the opportunity fortunately to farm in a few different areas, and it is truly root cause analysis. What's preventing you from hitting your yield?

And there's some comments on wet soil, cold soil, and I already had my nitrogen out there.

Well, adding more nitrogen is probably not the solution because you already had the right amount in there anyway and your weather changed.

So you need to look at what's preventing the yield that's not necessarily adding more nitrogen sometimes.

So I think this product could be maybe

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misused and the total analysis of finding the root cause might not be done.

Logan, I have to have a couple questions for you, because I most recently, my last place I farmed outside of Nebraska was Florida. And it was south of you.

I was there for four years. And you made some comments about rainfall there. And I know from our experience, we found two rotations, but we did that on both sides of the hurricane zone.

So we were before, we got our crops out before May and then we planted in September again, so we were kind of in that fine fold cropping during that purgatory period.

And that's where most of the rainfall hits. It's not necessarily dispersed one inch per week.

So I was going to ask, like, your crop rotations, how many of them fall in that hurricane time period?

MS. PETREY: So we grow 12 months of the year. We are growing all the time. And that is also because we rotate with, for example, we

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grow sweet potatoes and peanuts and the summer months with the most rain. Those are actually our low nitrogen crops.

So we do rotate with some low nitrogen crops, and their growing season, I can't change those.

They are in the summer. And some of these are long crops. You'll have crops that are 150-day crops. And so they are taking up significant amount of the year.

And then also the prep, it can be a monster fire to that. And so we do grow, we are harvesting 12 months of the year.

We are planting about 10 months of the year, and so growing all of it. Carrots will grow through the winter on that.

Some winters are relatively dry and then some can be very wet. I mean, it is, there is no, as far as the hurricane season, May is typically very dry.

We can bank on that, but it's also very hot and it's very hard to grow in that May and June window, unless you've got something that salvaged.

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Under the carrot crop, like I said, it could be 120 days to 150 days depending on when you plant because the days get shorter in the winter.

And then you have other crops that are shorter. We tried to, I'd love to be able to grow a lot of green beans.

That's the easiest crop. I mean, one of them. It's 60 days and I don't have to put any nitrogen on them. I mean, man, it's great, but I can't.

And then we have vegetables. We have a spring season and a fall season. It's dependent on the temperature and the pest pressure.

So we have other things to work with because it is a holistic system. So we've got those other things that are important to the growing of it. We can't plant and avoid leaching events.

No, you are correct. We do not get that much rain per week, right. So we'll have, we'll have like, we've had two weeks now with no rain.

But then that usually builds up to get

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to be about a two-and-a-half-inch rain because of all the heat. I mean, that happens especially in the late spring.

And it's dealing, even though we enjoy it, and we're like, just get ready, guys, get ready.

Start over right when we get out there.

And the leaching, it doesn't matter how much I put out ahead, I get that leaching event, nitrogen is gone.

So the root cause of that fall, like you were talking about, is the absence of nitrogen because it has leached.

Now, there are parts in Florida that have a mock soil, and so they don't really have those problems as strong as the sandier soils that are kind of up, not necessarily the Panhandle but up in the northern part of Florida, and in the southern part and parts of Georgia and parts along the coast of Carolina and stuff like that.

And so in that leaching event, nitrogen is gone. And so it is a nitrogen problem that we can't immediately fix with that limited use.

And we'll still make an application of

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the slow release fertilizer. It's just the issue is it's not going to be available for at least a week, temperature dependent, if it's even the right temperature to do that.

But our weather is not consistent enough from year to year. It is consistent enough in the year to get 55 inches, 60 inches or rain.

It's not consistent enough by the month to be able to say, well, I'm not going to plant in the second week of September because I'm going to get this much rain.

Hurricane season, we had Hurricane Michael come through, what, three years ago, four years ago, and it was in late October. So it rained inches and inches of rain.

So again, it's not predictable enough for us to change our farming practices to that.

MS. BRUCH: Sure. No, I just wanted to ask a little more clarification on your rain comment. Okay, I'm just going to pass it to, I think Nate's next.

MS. HUSEMAN: Amy, can I ask you a question in that same realm?

MS. BRUCH: Yes.

MS. HUSEMAN: Sorry to interject, Nate. Is your farm in Nebraska? Are you guys under irrigation or are you dry land?

MS. BRUCH: We're irrigation, but we're east central Nebraska, so we get very similar rainfall in our rain.

I guess in our cropping season we're getting about seven to 32 inches of rain a year.

So it's just supplemental irrigation versus out west where you're crop dependent on irrigation.

During our season, we get a fair amount of rain.

MS. HUSEMAN: Thank you.

MS. BRUCH: And like Logan, (audio interference).

MS. HUSEMAN: Sorry, Nate, I'm not trying to hijack this. I think it's interesting to see the, we're (audio interference).

MR. POWELL-PALM: We aren't trained to go in and take those samples. If they were going to take those samples, we don't have a test to do it.

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So we're really bound by not having a good way to prevent fraud in this fertilizer. It opens the gates to seeing rampant fraud across the board.

So one thing I wanted to also touch on, Kim, that you had mentioned, is how do we get farmers to grow soybeans and not have soybeans hover at \$35 a bushel?

And I'm going to say, because of crop rotation, that's how we get farmers to grow. If you're able to get 300 bushels of corn because you're pounding it with AE and you're able to not need to realize a good crop rotation in order to have good yields, there's going to be no incentive to grow legumes.

You're going to have no incentive. You're just going to grow those high yielding, high dollar nitrogen feeders.

If I may just real quick, though, Logan, could you speak real quick to, and I know you, I think you have said this, but do you grow anything on your farm that's a nitrogen fixer?

MS. PETREY: Yes.

MR. POWELL-PALM: And how many pounds of nitrogen do you fix with those nitrogen fixers? What part of the credit do they make up?

MS. PETREY: All right, and I want to comment on soybeans, I think three years, and it almost ends up in a crop failure because of the pest pressures that we get in the fall.

They are so significant and -- or I say in the fall; it's actually in the late summer. We get stink bug issues that sting the pods. I mean, and defoliators, we get a lot of issues with soybeans.

So there's not much growing during that time, during that July period, August period. And I've had crop failure. I mean, just absolute. It was very bad.

Okay, so other pictures. So we're looking at growing peanuts. We grew some this year. And then we also have the cover crops. Some hemp, we use it. That's our main summer cover crop. And I've got it all out here. It's beautiful golden flowers that I see all fall.

And then we have -- we use yeast as also

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a rotation and then we grew green beans and we do edamame. And so those are the three crops that we have for production: peanuts, edamame, soybean, edible soybean, and green beans.

MR. POWELL-PALM: And so when you said you get a lot of rain and there's a lot of leaching, it seems like AE would be a really prime candidate to experience significantly, in a much more volatile form than, say, processed manure.

MS. PETREY: Sure. Well, okay, go ahead.

(Simultaneous speaking.)

MR. POWELL-PALM: Saving our waterways, saving, I mean, it seems like we've -- in regenerative agriculture, which is this Bioblast of terms and everything, but the idea of regenerative, as I understand it, folks are recognizing that organics is the golden standard. And in that recognition, they're saying we should start limiting as much as we can our ammonia use. Let's figure out how to cut our ammonia use.

So I'm really stuck on why as organic being the gold standard we would go in the opposite

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direction using a material that could respectively contaminate waterways, leach out, is very volatile compared to our manures, and also is recognized, I mean, it's, to your acknowledged point, it's not anhydrous, but it's recognized as being, ammonia is damaging to soil.

It causes microbial blooms, yes. That's how they feed in the soil. Because once that microbial bloom is over, it's over.

It needs another dose of ammonia to go again. And so it's not systemic and it's not sustaining.

MS. PETREY: Not using AE solely, it is only a part of the program, and it is actually used whenever the nitrogen, the ammonia that has been broken down from the organic sources like the manures, has become that product, and it is leached, too.

And so it's when it leaches from, those organic fertilizers leach, then I use AE and there's a supplement, or I would use it, to supplement, just like the sodium nitrate.

I don't go out and throw sodium nitrate

out as a pre-plant. It is strictly there to help mitigate quality losses due to nitrogen losses from a leaching rain.

But, I mean, we are using those other fertilizers. It's not one or the other. It's a blend. It's part of the organic system plan.

And so it's not moving backwards. It's preventing that loss. And I mean, we will continue, and I don't even, when I write programs for the season, I don't even put those types, those high soluble or the ready available nitrogens in there.

I use, or I have the compost, I have bloodmeal, feathermeal, bonemeal, and pasteurized chicken liver, those are part of the program. And when we run into those unpredictable events, then we use those sources.

And that's what I'm asking for. I'm asking for, and growers like me, asking for that material to (audio interference) sodium nitrate use, which is obviously needed.

If the NOP could not follow through with it because of the economic issue, it's obviously

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being used, being needed.

I don't like using it. I wish I could just use organic for us, because I don't put it on anyway.

MR. ELA: I want to be very fair here, but I also, and to the board, I don't want to make this a referendum of, this is against Logan.

MS. BRUCH: Yes, I don't mean to make that at all.

MS. PETREY: That's great. I appreciate the dialogue because I've been wanting the answers to the questions they've been asking of the farmers, so I don't think they're attacking me.

I do think that it is important they ask these, because I've been wanting to answer some of those questions.

(Simultaneous speaking.)

MR. ELA: I just want to keep also the discussion on not just your program but --

MS. PETREY: On the material and not just Logan's farming practices, got it.

MR. ELA: And I also want to give all

the board members a chance to talk here because I think that's important, too.

So I don't mean to cut you off, Logan.

I just want to make sure we get to everybody. So Sue?

MS. BAIRD: Hi. This is interesting material, and I've flipped back and forth and back and forth on the thing.

I've been an organic inspector, Nate, since 2000, so that's 21 years. So you've been inspector for 12 years.

We were taught when I went to IOIA to calculate 20 percent nitrogen, or sodium nitrate, based on the crop needs, and based on mass balances, and based on invoices that documented what controls were bought.

I think it's very, you don't catch fraud every time. You never will. Fraud happens, but it's very doable to be able to do these calculations.

We've done it in the past and we will do it again. One of the points that I would like to say is that some of these materials, according

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to OMRI, are already in production.

Probably are sure mixed with other products. But they're already there. We're already using them. So there's that.

I'm torn because my first understanding was that this was going to be used as a total soil production product, and not at all.

This is intended to be, from what I'm hearing, to be just a supplement source of nitrogen on an as-needed basis, just as farmers use sodium nitrate, as Chilean nitrate, could sodium nitrate be used fraudulently? Absolutely, because there are synthetic forms out there.

And some people don't even realize that, so they may be using Chilean synthetic sodium nitrate instead of the Chilean nitrate, which is natural.

I don't know. I know that pragmatically, I do a lot of inspections in Salinas Valley, Florida, I do inspections in Florida, I do inspections in Arizona, a lot of those leafy green areas, and they use sodium nitrate. It's as simple as that.

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Do the people who are consumers understand that? Maybe not. They see the word organic and they think it's all done by crop rotation, you're putting alfalfa or you're putting in clover or you're putting in all of these things in between.

They're using crop rotation but it's not what we consider to be, we being in the Midwest, as putting in those legumes. They're using other rotational plants.

I personally, for many, many years, I hate the idea we're destroying bats' natural habitats down in Chile and we're pulling out their bat poop and we put it on because it's such a great source.

I would like to find another sustainable, local, domestic source for those farmers that I'm not one of.

I think we could find a source of nitrogen for when it's needed to add that extra oomph to those plants, because you're right, I don't want to go to the grocery store and see yellow leafy greens.

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I just don't. I like seeing those wide, green little leafy greens that I inspect from California and from Arizona, Uma Valley or wherever those inspections are.

And I'm told that doesn't happen without an additional injection of some nitrogen.

Now in my part of the world, we grow, if you're a crop grower, you're growing soybean, corn, wheat, clover, sometimes two years of soybeans, corn, and even though they're rotating into red clovers or alfalfa, they still never meet the demand for nitrogen in my part of the world.

So in my part of the world, a lot of farmers are flying on the higher plains and they fly on liquid fish, and that's their source for additional nitrogen.

And it's harvested from Manhattan Fish or wherever, out of the oceans. And is that sustainable? I don't know. They say not.

But if I could get that from a local manure hearing that needs to be gotten rid of anyway, because in my part of the world, Tulsa, Oklahoma, has sued Southwest Missouri, Northwest

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Arkansas, because of all the poultry litter that's getting into their water stream, including the water.

If we could get rid of a little bit more, big producers in Southwest Missouri would be happy.

Now, is that supporting tables? Maybe, but tables are there.

Just, I don't know, just the way, time to put all this to mind.

MR. POWELL-PALM: Just real quick, Sue, to the, I actually went in addressing audits.

To your point, we're trying to do the mass balances.

That's not where fraud exists. It exists in the source of ammonia on the farm. If there's suddenly ammonia on the farm in the form of AE, we don't know, we have no way to show, is it from AE?

Is it actually from the legitimate AE process? Or is it just anhydrous mixed with composting or mixed with manure. There's no way to know that.

MR. ELA: I want to move on to --

MS. BAIRD: CDFA says there is testing for that, and that's all I know, that they said they can determine it.

MR. ELA: Okay, I would like to jump in with my own comments. I have my own thoughts and I try to be respectful of everybody else's, but I do want to have the floor a little bit.

I guess in all this, and Sue, to your point right there, CDFA says they can and OMRI says they can't. So it's a mixed bag there and I worry about international use as well and fraud.

I guess to Logan's point, and I really don't want this to be about Logan versus everybody else, and I want to keep it on a higher end, and I think we had several specialty crop growers, Jacob's Farm, Taylor, some others, I believe, who said they don't need this.

And I guess, I look at that, there's some great farmers out there that don't need it as well. But I think coming back off it, for me, it's maintain or increasing soil organic matter.

That is what the regulations read. And so how can, do these materials help us maintain

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or improve soil organic matter? I don't see it personally.

On my own farm, I would love to have something that would push things in the spring on the treatment, because they're high nitrogen use, but we haven't because I've really tried to work with cover crops and make sure that we go with more the cell route.

So I still come back to maintaining or increasing soil organic matter as the base. And Sue, to your point that there's some products out there, one of the problems we have on the NOSB is that we're reactive, not proactive, and that's one of the reasons I wrote the last motion with the three to one soil ratio is to try and help put us in front so that products don't get on the market and then we're trying to pull them back, and that's the case with sodium nitrate as well.

It's so heavily used that the economic impact that prohibits it is very difficult to cover.

So to me, this discussion on ammonia extracts is let's get ahead of them before they

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become widely used and don't have that economic impact.

But I guess, I just, I think it comes down in my thoughts to, in terms of feeding soil health and biota, it comes down to protein and amino acids versus plant-available nutrients.

And anything that's a protein and amino acid has to go through the soil biota to become available.

And Logan's exactly right, plants use ammonia and nitrate. But to get there, it's not just a simple mineralization process of ammonia to nitrate.

It's a feeding of the soil with carbon and then a breakdown into mineralization and proteins at their bases make it happen.

And so I just feel very strongly about that. And to me, that's how we do approach the soil organic matter issue.

I know there were some comments that were suppressing these novel, innovative ideas.

I would rather see novel, innovative ideas of how we deal with these issues in cover crops. What

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kind of cover crops can we use that are more readily available?

How can we approach these through the uses of amino acids and proteins? And so I think organic is extremely novel.

I know how we've, on our own farm, what we've done is very innovative and novel. So I just want to see that go to a different direction than something that immediately substitutes for what eventually are conventional materials.

So I just, I guess I want to keep it not just Logan and ammonia extracts, but I think there's so much of a bigger issue beyond just Logan and so many other farms and stakeholders feel that this is a real important topic.

And yes, it may hurt Logan, but we're talking about all of organics here and not just one farm. And I want to keep that in perspective.

And Logan, I never want to hurt you, I'd never want to tie your hands and I never want to hurt you, but I do want us to see the big picture of organics move forward and such. So I'll move on to Kyla.

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MS. SMITH: Thanks, Steve. Yes, I'm really enjoying this discussion and everybody's point of view and the professionalism. So I really appreciate that.

So one of the big things again from a certifier perspective that Steve already brought up was around the definitions and making sure that we felt those were enforceable.

And that was consistent within the public comment. And then in written public comment, and then there was some things that came up in oral public comment.

And so I just, in looking back through the document and stuff, I just, the intent is really important and I'm confident that this subcommittee has consistently described and carried the thread through in how they've been talking about these different definitions.

And so I feel very confident that because of that and because of the confirmation in the written comments by certifiers that the definitions are sound.

The second thing that I've been

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thinking about during this conversation is especially with the stripped ammonia process is new, right, we're talking about new and novel here, and so at least from my understanding, that these products that are in the marketplace now are new, even only like two years old.

And so there's been a lot of years of production, not having these products. And so I'm not a farmer myself but I'm just like, we got this far not having these available to us, and so the necessity part is something I'm grappling with.

Like, now why do we need these products when we've not had them for lots of years? And one last thing --

(Simultaneous speaking.)

MS. SMITH: Again, with the inconsistent comments from the wider stakeholder community, farmers saying, I don't need it, anyway, so --

MS. PETREY: I can answer that directly. It's not that, you're right, it is new and a lot of growers are not using it.

I haven't even used it. It's not the

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need of AE, it's the need of water soluble nitrogen for those things, and it's obviously needed because of the sodium nitrate issue that we've had with NOP.

To me, that shows the need, and this is another option for that, and it could phase out sodium nitrate because we're going to use a natural recycled product for that.

MR. ELA: Let's see. Nate, I'm going to jump over you just so Mindee has a chance to say something.

She hasn't had a chance yet. And I do want to do a time check on this. It's a great topic but we don't have infinite time. So, Mindee, go ahead.

MS. JEFFREY: Thank you. I can't express my respect for the conversation, enough respect for the conversation that's going on, and I really appreciate everyone on all sides of this conversation.

And I think for me, the battle for understanding of how we can best impact soil in the nation is where I go, and that organic is having

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to work harder than it should have to work to convince people that we are the soil health system of agriculture across the most widest scale of this country.

And so that's where I hear all the sides and I am compelled by how the material review folks have gone about looking at this natural substance and the allowance and the limitations of the farmers and hearing that the definitions are functional, I have to go with that.

The work that organic needs to do to help people understand that we are a soil health emphasis system of agriculture succeeding at the widest scale with the best levels of transparency and enforcement, and I don't want to take a hit on that from a perception perspective.

And so for me, I'm really for those first two and open to hearing about the third motion, but that's where it comes down to for me.

As painful as it is to disagree with the side I disagree with, that's where it lands for me.

MR. ELA: All right. I had another comment, but Nate, why don't you give a quick one

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and then I think we'll try and move on.

MR. POWELL-PALM: Yes, I just wanted to think back a little earlier today on the kasugamycin vote.

You said that material itself would be super helpful to you, but we're going to put the standards over our own personal needs.

And I think that's what this really comes down to, is in the face at competing at labels, like regenerative, how do we keep organic the gold standard, as opposed to cede that ground to folks who want to differentiate and split the community.

And I think this is a clear example of how, with a strong voice, we can say organics is the gold standard for soil health and soil first.

MS. PETREY: And, I mean, Steve is doing that based on an antibiotic and the human health potentials for not using, for pharmaceutical issues. I don't like saying that I'm putting my --

(Simultaneous speaking.)

MS. PETREY: Okay.

MR. ELA: So I have one very quick last comment and then I think we should move on. And the only comment really at this point, and I know there's so many variations and things, I just ultimately look at the public comments and it's the stakeholders that have been around for a long time, pretty universally saying, no, we don't want this, and it's the manufacturers who are making these, saying, yes, we want this.

And so, I guess just like on so many other materials that maybe I would like to see in my toolbox, I really appreciate the stakeholders' opinions.

And they've been in this thing so long and they don't have a vested monetary interest in it, quite honestly. They didn't even go opposite that.

That's a big deal for me. If I had stakeholders coming out and saying, yes, these are really valuable, I would probably have a very different opinion.

So with that, I think that it's 5:13. We still have the sunsets to move forward on.

I think we should move on.

So Rick, shall we go to the --

MR. GREENWOOD: Yes. Steve, go ahead
and --

MS. PETREY: I'd like to make a motion
to move this back to subcommittee, because
concentrated ammonia is a product already listed
and I think that we need to understand it further.

So I'm going to make the motion to send it back.

MR. ELA: Is there a second? I am not
hearing a second so --

MR. BRADMAN: I'll second it.

MR. ELA: Okay. There is a second from
Asa, so motion made by Logan, second by Asa, to
move this back to subcommittee. And is there any
further discussion on it? Kyla?

MS. SMITH: Is this to move the whole
thing back or --

MS. PETREY: Yes. Yes.

MR. ELA: So just to move the whole
thing back, it looks like we start with Sue, is
that correct?

MS. JEFFREY: I thought it was Wood.

I could be wrong. Wood, did you go first last time?

MR. TURNER: I did.

MS. JEFFREY: Okay. Thank you.

MR. ELA: Okay. Sue, this is on to send it back to subcommittee.

MS. BAIRD: Oh, my gracious. Way to start it off. Yes, I think it needs to go back. Let's say yes.

MR. ELA: Okay, Asa.

MR. BRADMAN: Yes.

MR. ELA: Amy?

MS. BRUCH: No.

MR. ELA: Brian?

MR. CALDWELL: No.

MR. ELA: Jerry, are you there?

MS. BAIRD: I surely am, and the answer is no.

MR. ELA: Carolyn?

DR. DIMITRI: No.

MR. ELA: Rick?

MR. GREENWOOD: No.

MR. ELA: Kim?

MS. HUSEMAN: On the basis that it's anhydrous? Yes.

MR. ELA: Mindee?

MS. JEFFREY: No.

MR. ELA: Logan?

MS. PETREY: Yes.

MR. ELA: Nate?

MR. POWELL-PALM: NO.

MR. ELA: Kyla?

MS. SMITH: No.

MR. ELA: Wood?

MR. TURNER: No.

MR. ELA: And Chair votes no, and just note this is a simple majority.

MS. JEFFREY: I have 10 noes and 4 yes.

MR. ELA: So the motion fails. We will proceed with the motions. And I will note that if, since we have, well, we had a classification motion and then we had three other motions, if in one of those motions we need to revote as to sending it back to subcommittee, because normally we just have one motion, I would entertain a motion each of the individual motions.

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So we're going to go to the classification motion. And the motion is to classify ammonia extract as non-synthetic.

And I want to clarify this for the record. Since there are synthetic ammonia extracts out there, just like the sodium nitrate, the assumption is that in classifying them as non-synthetic, it is using only non-synthetic processes and not classifying all ammonia extracts as non-synthetic.

And so the motion was made by myself, Steve, seconded by Jerry, and we will start with Asa on the classification motion.

MR. BRADMAN: Yes.

MR. ELA: Amy?

MS. BRUCH: Yes.

MR. ELA: Brian?

MR. CALDWELL: Yes.

MR. ELA: Jerry?

MS. BAIRD: Yes.

MR. ELA: Carolyn?

DR. DIMITRI: Yes.

MR. ELA: Rick?

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MR. GREENWOOD: Yes.

MR. ELA: Kim?

MS. HUSEMAN: Yes.

MR. ELA: Mindee?

MS. JEFFREY: Yes.

MR. ELA: Logan?

MS. PETREY: Yes.

MR. ELA: Nate?

MR. POWELL-PALM: Yes.

MR. ELA: Kyla?

MS. SMITH: Yes.

MR. ELA: Wood?

MR. TURNER: Yes.

MR. ELA: And Sue?

MS. BAIRD: Yes.

MR. ELA: Okay. And Chair votes yes.

MS. JEFFREY: 14 yes, zero no, zero

ARA.

MR. ELA: Okay. The next motion is to add 205.602, Non-Synthetic Substances Prohibited for use in Crop Production, Stripped Ammonia, created by separating, isolating, and/or capturing ammonia or ammonium from an agricultural feed stock

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or other natural source using methods such as but not limited to steam stripping, pressurized air/heat condensation, and/or distillation.

The motion was made by myself, Steve, and seconded by Jerry and --

MS. BAIRD: Could we advance the screen, please?

MR. ELA: Say that again.

MS. BAIRD: Could we please advance the screen?

MR. ELA: The screen is correct on my computer.

MS. BAIRD: Okay. Thank you.

MR. ELA: So we will start the vote with Amy.

MS. BRUCH: Yes.

MR. ELA: Brian?

MR. CALDWELL: Yes.

MR. ELA: Jerry?

MS. BAIRD: Yes.

MR. ELA: Carolyn?

DR. DIMITRI: Yes.

MR. ELA: Rick?

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MR. GREENWOOD: Yes.

MR. ELA: Kim?

MS. HUSEMAN: Yes.

MR. ELA: Mindee?

MS. JEFFREY: Yes.

MR. ELA: Logan? Logan, are you
there?

MS. PETREY: Yes. No. I am here, but
the answer is no.

MR. ELA: Yes, you are here, and then
you were voting no. Nate?

MR. POWELL-PALM: No. I'm sorry, yes.
Yes.

MR. ELA: So Kyla?

MS. SMITH: Yes.

MR. ELA: Wood?

MR. TURNER: Yes.

MR. ELA: Sue?

MS. BAIRD: I'll vote --

MR. ELA: What was that again, Sue?

MS. BAIRD: I'll say --

MR. ELA: I still didn't catch that.

MS. JEFFREY: One more time, Sue.

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MS. BAIRD: I'm not muted. I am not muted.

MR. ELA: Okay, you're voting yes, okay. Asa?

MR. BRADMAN: Yes.

MR. ELA: And the Chair votes yes.

MS. JEFFREY: 13 yes, 1 no, zero ARAs. Motion passes. At 205.602 Non-Synthetic Substances Prohibited for Use in Organic Crop Production, Concentrated ammonia contains greater than 3 percent ammonia ample nitrogen and the total nitrogen content is predominantly, i.e., greater than 50 percent, in the ammonia or ammonium form. The motion was made by myself, Steve, and it was seconded by Asa. And we are starting with Brian.

MR. CALDWELL: Yes.

MR. ELA: Carolyn?

DR. DIMITRI: Yes.

MR. ELA: Rick?

MR. GREENWOOD: Yes.

MR. ELA: Kim?

MS. HUSEMAN: Yes.

MR. ELA: Mindee?

MS. JEFFREY: Yes.

MR. ELA: Logan?

MS. PETREY: No.

MR. ELA: Nate?

MR. POWELL-PALM: Yes.

MR. ELA: Kyla?

MS. SMITH: Yes.

MR. ELA: Wood?

MR. TURNER: Yes.

MR. ELA: Sue?

MS. BAIRD: Yes.

MR. ELA: Asa?

MR. BRADMAN: Yes.

MR. ELA: Amy?

MS. BRUCH: Yes.

MR. ELA: And the Chair votes yes.

MS. JEFFREY: So I have the only no as Logan, is that what you have, Nate?

MR. POWELL-PALM: Correct.

MS. JEFFREY: Okay. Thank you. So 13-1, zero ARA, the motion passes.

MR. ELA: And Kyla, I see you have a question, or raised your hand.

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MS. SMITH: Yes, before you called the next vote I wanted to move to send this motion back to subcommittee.

MR. ELA: Okay, is there -- was that a second?

MR. POWELL-PALM: Yes.

MR. ELA: And that is Nate, correct?

MS. JEFFREY: Okay, hold on one second. Just let me get some notes on the first and second. So that was a first by Kyla and a second by Nate?

MR. ELA: Is that right?

MR. POWELL-PALM: Yes.

MR. ELA: Okay.

MS. JEFFREY: And this is for the third motion?

MR. ELA: Actually, fourth, but I'll say this clearly. So can we go to the next slide? Okay.

So this is a motion made by Kyla, seconded by Nate, to send this motion to add at 205.203(f), matching products with a C to N ratio of 3:1 or less, and I won't read the rest of it, to send this back to subcommittee.

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And we are starting, well, I guess is there any discussion on this? We will start with Carolyn.

DR. DIMITRI: No.

MR. ELA: Rick?

MR. GREENWOOD: No.

MR. ELA: Kim?

MS. HUSEMAN: Yes.

MR. ELA: Mindee?

MS. JEFFREY: Yes.

MR. ELA: Logan?

MS. PETREY: Yes.

MR. ELA: Nate?

MR. POWELL-PALM: Yes.

MR. ELA: Kyla?

MS. SMITH: Yes.

MR. ELA: Wood?

MR. TURNER: Yes.

MR. ELA: Sue?

MS. BAIRD: Yes.

MR. ELA: Asa?

MR. BRADMAN: Yes.

MR. ELA: Amy?

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MS. BRUCH: Yes.

MR. ELA: Brian?

MR. CALDWELL: No.

MR. ELA: Jerry?

MR. GREENWOOD: Yes.

MR. ELA: And the Chair votes no.

MS. JEFFREY: Was that a yes from
Jerry?

MR. GREENWOOD: Yes, ma'am.

MS. JEFFREY: Yes from Jerry, no from
the Chair?

MR. ELA: Correct.

MS. JEFFREY: I got ten yeses and four
noes, Nate?

MR. POWELL-PALM: Yes.

MR. ELA: So this last motion is sent
back to subcommittee. All right. Thank you,
everybody.

I know the angst that went into this
on all members, and, well, I appreciate the thought
that went into it on everybody's part.

I know it's a big issue for organics
and I'm glad we were able to work through it in

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a civil manner.

I think I just have so much respect for this board in terms of disagreeing, but doing it in a very appropriate way.

With that, Rick, I believe that finishes all the crops proposals, doesn't it?

MR. GREENWOOD: It does. So how do you want to manage time now? We have eight sunsets to go.

So do you want to do a few of them and then pick them up tomorrow morning? Let's do a time check.

MR. ELA: It's 3:25. We've got until, well, it's 5:25 Eastern time, we have until 5:30, but I would like to make sure we get time to handling, so I would rather go a little bit longer here and see if we can at least, I think they may go fairly quickly.

MR. GREENWOOD: Dream on, Steve.

MR. ELA: It will be what jinxed it. They will take forever. But let's plan to go a half hour longer and put our takeaway time from tomorrow.

MR. TURNER: If you choose to, Rick and Steve, if you choose to make a motion that we, unlike yesterday, can we consider forwarding materials in a single vote stream, please?

MR. ELA: Yes, when we get to that we'll just --

MR. TURNER: You want to do it then?

MR. ELA: Yes.

MR. GREENWOOD: At 9:00 tonight when we get there, we'll do it.

MR. ELA: Okay, great. There you go, Rick.

MR. GREENWOOD: It's up to you. Copper Sulfate, and that's Jerry for a sunset.

MS. BAIRD: Thank you, Rick. Quick note of how I appreciated listening to this last go round. It's truly respectful and a lot covered.

So here we're reviewing two uses of copper sulfate, one at 205.601(a)(3), is an algicide, and two at 205.601(a)(4), tadpole shrimp. This is obviously for aquatic rice.

Both of them are limited to one application per field during any 24-month period.

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Both are also limited to rates that do not increase based on soil test values over a timeframe agreed upon by the producer then a credited certifying agent.

There appears to be broad consensus through the United States, the E.U. and Canada, that copper sulfate is hazardous to both human health and the environment.

Despite this, the use has been repeatedly extended in all three jurisdictions, as there isn't yet a viable alternative for copper sulfate in certain applications.

Despite the above, public comment and interviews with organic rice growers, certifying agencies, and former board members, have all highlighted the ongoing need for copper sulfate until an alternative herbicide or insecticides are available.

According to all of these sources, an abrupt delisting would have a tremendous negative impact on U.S. growing organic rice.

As reported under subcommittee review in the document used here today, much of the

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subcommittee's review centered on written and oral comments presented during our spring meeting.

There were an excess of 25 comments with the overwhelming majority in favor of keeping copper sulfate on the national list.

The written and oral comments presented prior to this fall meeting also numbered about 25, and were also mostly in favor of relisting.

So I'm heartened by this next one.

What has been a common theme in both periods is that generally, even those organizations most opposed to the continued use of copper sulfate, did not have advocate immediate delisting but rather strongly encouraged that the program get, quote, serious about continuous improvement and put real effort into finding alternative methods for materials that would limit or end the use of copper sulfate.

The crop subcommittee recommends relisting copper sulfate. It has called for a comprehensive review of copper sulfate as part of these research priorities for 2021.

During the written comment period,

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there was some confusion as to whether or not copper sulfate actually made it onto the list.

Please understand that it is indeed a research priority for 2021 timeframe. I think I'd like to open up for comment at this point.

MR. ELA: All right. Nate is first.

MR. POWELL-PALM: Jerry, just wanted to sort of, I don't know if it's a specific question, but I think talking about hitting that critical level of parts per million that is toxic or that threshold of what is too much, and I was wondering if you could just speak to that a little bit about what your research showed and ultimately where you think we might be able to do some work as forward on discussion of possible residues in the environment from pesticides.

MS. BAIRD: Okay. Good question, Nate. Thank you. It's one I wrestled with, and I'll give you a two-part answer.

When I came to, after being educated in dialogue with certifiers on our own board here, is that the most critical piece of this is a baseline established over years.

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And during subcommittee review, I actually went through that and was quite heartened to find that over the records that go sometimes as much as 11 years, sometimes as little as four, that in each generic case, the progression from 1994, for instance, to 2021 actually found a decline, and those numbers read 4.8, 6.6. 7.4, with a low of 3.5 for the largest farm I have on the list, the one that's got the most complete records.

And the second part of my answer, Nate, is that I was frustrated in this process, and that's why I reached out to certifiers, because universally, I could not get certifiers or farmers to give me a red flag indication number of any kind that caused concern for a deeper dive into this, and the answer that came back from the certifying community, or colleagues, if I may, is that certifiers and farmers predicated on crop, particular seasonality, soils, timing of emerging of the chutes, were reluctant to put themselves in a corner.

So during stakeholder review, there were some thoughts that 50 parts per million were

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acceptable.

That sounds high, but not from a scientific point of view when you've got a 3.5 as the lowest of the base over that period of time.

So I don't have red flags. I'm told that I probably won't get red flags. And I'm not sure that that's a good answer, but I took great heart in the values themselves, the PPM values, and I take real stock in over a period of time, like I said, as much as 16 years, that the progression wasn't linear.

It did vary up and down, but the first year was at 8.4 and the biggest farm at 7.1 in 2021.

So that's my answer.

There may be room for something that would give us internally an ability to look at this and at least say, hey, it's worthy of a deeper look.

Does that help?

MR. POWELL-PALM: It does, yes. I'm ruminating on a possible work agenda item, because this seems like a broader question, in a way lightly linked to the idea of looking into sanitizers as well, overall toxicology for these materials that

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we do use, and kind of taking a deeper drive, what's a good procedure that we can start setting up?

Both from a certifier's point of view but also just from a hunting for better information by which to make these decisions. So thank you.

MR. GREENWOOD: No, thank you. Thank you for the question.

MR. ELA: Wood and then Amy.

MR. TURNER: Thanks, Jerry. I had problems with the material but also certainly aware that the community had made their voices heard about what impact it can have if it's removed.

I think where I'm hung up is on the language because of what Nate was saying. I find the discretionary nature of this kind of discussion between the producer and the accredited certifying agent, it's too murky.

There really is almost this negotiated agreement. It doesn't feel like we're, it feels loose to me and I feel like I'd be a lot more comfortable understanding real thresholds of concern related to what's happening in this world, for example. So that's a lingering issue for me.

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I don't know if anybody, Kyla or anybody from the certifying committee could speak to an example of that, that negotiation or that dynamic. That's on my mind.

MS. BAIRD: Kyla, I don't want to put you on the spot, but you were one of my sources and if you'd be willing to comment to that, I'd appreciate it.

MS. SMITH: Yes, so I don't actually, for PCO we don't actually certify any rights.

And so these two listings of copper sulfate, I don't have experience with in this negotiating part.

There's a third listing of copper sulfate on the west that's not up for sunset review this go, and that's my experience, and it's not annotated in the same way.

And I'm going from memory here. I don't know that it's annotated at all, actually.

And so, it just says to not accumulate in the soils, but it doesn't talk about a baseline goal at all.

And so that, when I read these, I'm like, oh, you have to do that up front with the certifier and the producer to establish that baseline whereas the other listing, at least in my experience, we've had to sort of go back when we've noticed a problem, and that's been a bit challenging.

So maybe even something to consider future work is to align annotations because they're not all the same.

So anyway, and what I've seen in regards to the other listing is just that it is really dependent on where in the world you're using said materials across the specific crops, the site specific conditions, which is part of an organic system plan.

So that's not a very good solid answer.

This is something that comes up between certifiers consistently and the stakeholder community at large is where we really want, sometimes we really want prescriptive things within the regulation, because it certainly make it easier to enforce, but when it gets prescriptive, everybody goes crazy

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because it doesn't allow enough flexibility.

So somewhere striking a balance between providing some guidance without being overly prescriptive so that it can be applied in the various different site specific needs that we need to work with.

MS. BAIRD: Well, it's on the docket, copper sulfate for disease control was on the docket for the coming year, so maybe that's something you'd like to look at.

MR. ELA: There's a lead in. Amy and then Brian.

MS. BRUCH: Sure. Jerry, thank you for your sincere work on this. I know you've put a lot of research and time into this particular product.

I just want to say, I mean, the stakeholder community, they resonated loud and clear the necessity of this.

This is a challenging type product. I know there were references that, well, it was used and real crops are being, and there's no issues or less issues in this particular function.

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But the functionality of copper sulfate when directly applied to soil is very different than when it's absorbed into water.

So I just wanted to point that out that there is definitely a distinction there. But anyway, that's all. Brian, you can go ahead.

MR. ELA: Go ahead, Brian.

MR. CALDWELL: Yeah, Jerry, thank you so much for, I know, I got a little glimpse of all the work and it's really great how you did this.

I think it's very encourage that soil test numbers sort of pretty much hovered around the same value and weren't increasing. And I would think certifiers would be really looking for increasing soil test numbers as they key indicator.

But one thing about that is that of course most soil tests use a certain extraction to try to approximate the available nutrients that crops see.

And maybe, as something that certifiers and maybe should think about in the NOP is testing for total copper, zinc, and some of these other

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materials that could be problematic along the way.

And just the last thought, and this may be part of the continues improvement five years from now if this comes up again, and that is that if so, soil copper levels are not increasing after applications, I think the question is, well, where is the copper that was supplied going?

And I see that it could go out in the crop and it could go into other water channels.

And that's beyond us I think right now, but something to think about as continuous improvement.

MS. BAIRD: No, thanks to your prodding last time around, I could spend time with certifiers on Water 2 and I'm not sure if you call out names.

We certainly have, so I will, CCOF, was very robust on the findings that they were getting through the water.

They were even more, again, robust about that than the soils and they were very happy with the soils.

So thanks to your prodding at

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subcommittee. That's when we've also looked into, but it was also an area where I was not able to get that red flag indicator.

MR. ELA: One more comment from Asa and then if we can, we'll move on. I don't want to cut anybody off.

MR. BRADMAN: No, I think Brian just made an excellent point of measuring total versus extractable content in the soil.

Total would be you have a very strong acid, and you adjust your sample to mobilize it and then you test that extract for copper, and the bio veil would be a weaker acid where that approximates.

So I wonder if maybe some of that copper that we're not finding or maybe it's just going in the soil but it's not available for the extraction, I'm a little concerned about whatever contamination.

And I don't know if, Jerry, you can speak to that a little bit more about, for example, there's a lot of, very well-known projects right now, and Central Valley to flood.

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Rice fields flood, a habitat for birds, and salmon fry and things like that. And I'm curious, do we have any information on that?

MS. BAIRD: Yes, there I was prodded by Ph.D. biologist daughter who was quite offended by what it might do to birds and aquatic, amphibious creates.

And the farming community particularly, even without my prodding on that, sort of turned that around on me and said that they will leave fields fallow and untreated under programs of rotation that would be a net benefit primarily to regulatory birds.

Asa, I don't know that I can go much beyond that, but I'd like just to read, and this is a little off topic to your question, of a long dissertation that came to me.

Just one thing that I don't think I said quite clearly enough, but maybe it's assumed. So the one sentence in conclusion is it should not be assumed that copper sulfate is used as a preventative measure against the shrimp by aquatic rice growers, as this would be indeed

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non-compliant.

The only other thing I can add is interviews with half a dozen of the producers, and they're all there in California that I talk to.

They have through documentation indicated to me that they have taken a real stab at, again, crop rotation, fetch being perhaps the biggest one, where it's the residual from the rice farming is actually quite conducive to the production of that crop.

And my sense of it is that the community has not ignored this issue. I think our community here has asked itself a lot of these questions and has made some pretty robust attempts at trying to do their own mitigation there.

MR. ELA: All right.

MS. BAIRD: Thank you, Asa, particularly for not following on with the fact that I didn't quite answer your question.

MR. ELA: I do share some of the same comments. My brain of mass balance says if you add it, it's got to come out somewhere. Copper does not volatilize well, so I am very curious what

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the fate is and someone named it that it is non-bioavailable. So let's go ahead move to the vote.

MS. BAIRD: Yes.

MR. ELA: Wait a second. So let me just, okay, here we are. Sorry, it's moving down through it.

So there is a motion to remove copper sulfate from the national list at 205.601(a)(3) and 205.601(e)(4). It was made by Jerry, motion was made by Jerry, seconded by Rick, and I guess if anybody has an objection to voting on both of these at once, you've got a very short time here to say so. All right.

MR. GREENWOOD: Okay. And Steve, do you want to remind people this is the reverse vote, so we're voting no to keep it on the list, yes to remove it.

MR. ELA: Thank you, Rick, for saying that. Yes. So everybody --

MR. GREENWOOD: I'm watching out for you, Steve.

MR. ELA: Yes. Okay, we're going to

start with you, Rick.

MR. GREENWOOD: Okay. No.

MR. ELA: And then Kim.

MS. HUSEMAN: No.

MR. ELA: Mindee.

MS. JEFFREY: No.

MR. ELA: Logan?

MS. PETREY: No.

MR. ELA: Nate.

MR. POWELL-PALM: No.

MR. ELA: Kyla?

MS. SMITH: No.

MR. ELA: Wood?

MR. TURNER: No.

MR. ELA: Sue.

MS. BAIRD: No.

MR. ELA: Asa?

MR. BRADMAN: I'm putting yes to send
the message that we need copper alternatives.

MR. ELA: Amy?

MS. BRUCH: Yes, as well. Same
reason.

MR. ELA: Yes. Brian?

MR. CALDWELL: No.

MR. ELA: Jerry?

MS. BAIRD: No.

MR. ELA: Carolyn?

DR. DIMITRI: I'll put a yes in there
for the same reason.

MR. ELA: Chair votes no.

MS. JEFFREY: I have three yes and 11
no. Nate?

MR. POWELL-PALM: Yes.

MS. JEFFREY: Zero ARA, motion to
remove fails.

MR. ELA: All right. Back to you,
Rick.

MR. GREENWOOD: Okay, so the next
sunset turns out to be mine, and it's for ozone
gas. And it's ozone, as I think all of us know,
is a strong oxidant and it's for use as an
irrigation system only.

And I think that's important to keep
in mind because ozone is reactive and people worry
about the ozone layer and adding ozone.

But this is a reactive compound that

is generate electrically, basically, within the irrigation system.

So it reacts very quickly. So it never really escapes from the system. In terms of our stakeholders, virtually everyone was in favor of keeping it on the national list because it's very useful.

And the other issue is, as opposed to chlorine compounds, there's no residual because it's basically active oxygen, which when it destabilizes turns back into basically water.

So I think I'll stop there. I think it's a fairly simple compound. Open it up for discussion.

MR. ELA: Any discussion on this? I don't see any, Rick. Should we move to the vote?

MR. GREENWOOD: Sure.

MR. ELA: I don't know what I'd do if you said no. So the motion is to remove ozone gas from the national list.

The motion was made by Rick, seconded by Amy, and we are going to start with Kim.

MS. HUSEMAN: No.

MR. ELA: Mindee?
MS. JEFFREY: No.
MR. ELA: Logan?
MS. PETREY: No.
MR. ELA: Nate?
MR. POWELL-PALM: No.
MR. ELA: Kyla?
MS. SMITH: No.
MR. ELA: Wood?
MR. TURNER: No.
MR. ELA: Sue?
MS. BAIRD: No.
MR. ELA: Asa?
MR. BRADMAN: No.
MR. ELA: Amy?
MS. BRUCH: No.
MR. ELA: Brian?
MR. CALDWELL: No.
MR. ELA: Jerry?
MS. BAIRD: No.
MR. ELA: Carolyn?
DR. DIMITRI: No.
MR. ELA: Rick?

MR. GREENWOOD: No.

MR. ELA: And Chair votes no.

MS. JEFFREY: Zero yes, 14 no, zero
ARA. The motion to remove fails.

MR. ELA: All right, Rick.

MR. GREENWOOD: Okay. Next sunset
review is peracetic acid. And that's Wood.

MR. TURNER: Thanks, Rick. I'm going
to try to keep this one short and sweet, if folks
are okay with that.

So, an important sanitizer. We talked
at length about sanitizers, in this particular
case, on crops, it's used for disinfecting
equipment, it's used as a copper headed cleaning
material permitted in hydrogen peroxide
formulations as well.

Also used to control fire blight
bacteria. This has gotten wide support across the
community, not just for this use but for all uses.

I'll channel my inner Asa and just
reiterate the fact that we've got, these materials,
peracetic acid, the core materials that we'll talk
about later are all part of a larger conversation

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we're having later about sanitizers and the like, and even though strong support across the community for relisting, also strong support for a different way of thinking about how we do these evaluations.

So I'll cut it off there. Rick?

MR. GREENWOOD: Okay. Take care. So discussions?

MR. ELA: I am not seeing any raised hands. So either raise your hand now or hold your peace. All right. Shall we move to the vote?

MR. GREENWOOD: Yes.

MR. ELA: Okay, the motion is to remove peracetic acid from the national list. It was made by Wood and it was seconded by Jerry. And we will start with Mindee.

MS. JEFFREY: No.

MR. ELA: Logan?

MS. PETREY: No.

MR. ELA: Nate?

MR. POWELL-PALM: No.

MR. ELA: Kyla?

MS. SMITH: No.

MR. ELA: Wood?

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MR. TURNER: No.

MR. ELA: Sue?

MS. BAIRD: No.

MR. ELA: Asa?

MR. BRADMAN: No.

MR. ELA: Amy?

MS. BRUCH: No.

MR. ELA: Brian?

MR. CALDWELL: No.

MR. ELA: Jerry?

MS. BAIRD: No.

MR. ELA: Carolyn?

DR. DIMITRI: No.

MR. ELA: Rick?

MR. GREENWOOD: No.

MR. ELA: Kim?

MS. HUSEMAN: No.

MR. ELA: Chair votes no.

MS. JEFFREY: Zero yes, 14 no, zero

ARA, motion to remove fails.

MR. ELA: Back to you, Rick.

MR. GREENWOOD: Okay, so question for
you. Do you think we have enough time to do EPA

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List 3 or should we hop to another quick one lie rotenone and call it quits?

MR. ELA: I think we'll go for EPA List 3.

MR. GREENWOOD: Okay. In that case, it's Asa and Steve.

MR. ELA: And I will do that presentation. So I think it actually can be fairly straightforward. The comments given to us are very similar to what we saw for List 4 last year.

There's pretty much a universal opinion that List 3 is obsolete and we should not be referencing on the national list, that there should be a better way.

And there are several member stakeholders that say just delist it and then solve the problem, and then I would say the majority of the stakeholders, they're begging us not to disrupt and leave, relist List 3 but note the problem does need to be solved.

And I think we discussed at the start of this meeting with the ANPR coming out, the program is working on that list 3 and 4 listings

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and trying to find a way to solve it.

As I said before, it's up to the stakeholders in many ways to come up with solutions to this problem and this is very stakeholder engaging, and I just implore stakeholders to be creative and thoughtful in the solutions to this.

But because of that, I am in favor of relisting them even though there are the issues of reference to List 3.

It should be noted that there are only four, I believe, materials on this list because it is limited to passive pheromone dispensers. And so this is one where it could be conceivably possible to review each of the inerts on their own, but I guess I would prefer to see it done as part of the larger package with List 4.

The other aspect of this is because they are passive pheromone dispensers, they do not actually contact the consumer product, in our case it would be apples, or other materials. So there is some separation there of the actual materials and the crop.

And so with that explanation, I will

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turn it over to questions. All right. I don't see any. I don't think you could have done -- oh, wait, Asa's got a question. I was thinking you could have done voting faster, but I wasn't so sure, but now Asa --

MR. GREENWOOD: Let's see what Asa says before you gloat.

MR. BRADMAN: I won't be too loquacious. I think that's the important part with these, that they're not in direct contact with food, and I think maybe it makes it less conflictive than with the List 4.

And at least my feeling is that we should really move fast to address the inerts issue in general. Although I think, in principle, there's the same issues here. And like I said the other day, we have a road map on how to move ahead.

There's been great outlines and inputs on that from stakeholders and I feel like the path forward is clear.

We just need to put the resources into it. I know I'm going to vote to remove this but I think if we're going to grow, we need access to

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pheromone dispensers and just the base materials should be regulated in a different way.

MR. ELA: Anybody else? All right. We will move to the vote if that's okay, Rick.

MR. GREENWOOD: Yes, it is.

MR. ELA: The motion is to remove EPA List 3 from the national list. It was made by myself, Steve, seconded by Asa, and we are going to start with Logan. Logan, are you there? Just as a reminder, a no vote would be --

MS. PETREY: I'm sorry, I kept trying to hit it. No.

MR. ELA: Okay. Nate?

MR. POWELL-PALM: No.

MR. ELA: Kyla?

MS. SMITH: No.

MR. ELA: Wood?

MR. TURNER: No.

MR. ELA: Sue?

MS. BAIRD: No.

MR. ELA: Asa?

MR. BRADMAN: Yes.

MR. ELA: Amy?

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MS. BRUCH: No.

MR. ELA: Brian?

MR. CALDWELL: No.

MR. ELA: Jerry?

MS. BAIRD: Jerry says no.

MR. ELA: Okay. Carolyn?

DR. DIMITRI: No.

MR. ELA: Rick?

MR. GREENWOOD: No.

MR. ELA: Kim?

MS. HUSEMAN: No.

MR. ELA: Mindee?

MS. JEFFREY: No.

MR. ELA: Logan? No, we started with Logan, didn't we? Sorry. Chair votes no. And I love the panic when people can't find the unmute button and finally hit it.

MS. JEFFREY: So one yes, 13 no, zero ARA, the motion to remove fails.

MR. ELA: All right.

MS. BAIRD: It's possible, Steve, that you put this stuff in that we're all so brain-dead we really can't see, maybe.

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MR. ELA: I didn't say it.

MS. PETREY: Even my wi-fi is brain-dead. It's like running out. iPad is almost dead. The whole thing.

MR. ELA: Okay. On that note, I think we have gone a half-hour over. Looking at the schedule tomorrow, I think we should be in good shape. So I'm going to suggest that we respect the braindeadedness and finish with chlorine materials, magnesium oxide, calcium chloride, and rotenone tomorrow.

We can probably go through this fairly quickly, although I've been wrong before, and then we will move on to the Handling Subcommittee followed by CACS and then our various, any deferred votes and elections and work agendas and such tomorrow.

So let's call it a day. We don't want Logan's internet to wear out. And we will come back tomorrow. So we will recess now and we'll come back tomorrow at noon Eastern Time. So, long day, everybody. Thank you so much.

(Whereupon, the above-entitled matter

went off the record at 6:00 p.m.)

UNITED STATES DEPARTMENT OF AGRICULTURE

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NATIONAL ORGANIC STANDARDS BOARD

+ + + + +

FALL 2021 MEETING

+ + + + +

THURSDAY
OCTOBER 21, 2021

+ + + + +

The Board met via Videoconference, at
12:00 p.m. EDT, Steve Ela, Chair, presiding.

MEMBERS PRESENT

STEVE ELA, Chair
NATHAN POWELL-PALM, Vice Chair
MINDEE JEFFREY, Secretary
SUE BAIRD
ASA BRADMAN
AMY BRUCH
BRIAN CALDWELL
CAROLYN DIMITRI
RICK GREENWOOD
GERARD D'AMORE
KIMBERLY HUSEMAN
LOGAN PETREY
KYLIA SMITH
WOOD TURNER

ALSO PRESENT

JENNIFER TUCKER, Deputy Administrator, National
Organic Program, USDA; Designated Federal
Official

MICHELLE ARSENAULT, Advisory Board Specialist,
USDA

JARED CLARK, National List Manager, Standards
Division

ANDREA HOLM, Materials Specialist

DAVID GLASGOW, Associate Deputy Administrator,
National Organic Program

ERIN HEALY, Director, Standards Division

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P-R-O-C-E-E-D-I-N-G-S

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(12:01 p.m.)

MS. ARSENAULT: Welcome, everybody, to day three, the last day of the NOSB board meeting. We'll get started in just a minute.

I just wanted to let folks know who are with us on Zoom if you're on your computer screen, attendees are in listen-only mode and observation-mode only and you don't have access to your camera or mic. Trust that we cannot see you either, so don't worry if you think you're on camera, you are not.

At the bottom center of your Zoom screen, if you cover over it, you have two widgets available to you. You have the chat widget and please feel free to chat to each other. You can chat to everyone in the room which includes all the NOSB panelists, NOP staff and everybody that's an attendee or you can chat individually to one another as well.

The board members don't interact with the public during this portion of the meeting, so they're not answering questions or responding to information that's in the chat. But please free

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to chat amongst yourselves.

There's also a raised hand button that shouldn't be there. But it is. We will not be answering or you can't raise your hand to be called on as an attendee, but board members also have that function and that's for the chair to be able to call on them to talk.

So we are recording, just so you know.

After the meeting concludes in a couple of weeks we'll have official transcripts available that will be posted on the NOSB website. We don't post the recording because it is not compliant with the Americans with Disabilities Act until we have that transcript.

Thank you so much, and Steve, I will turn it back over to you.

MR. ELA: All right, thank you, Michelle. I guess it's practically day five if we count the two public comment webinars, so kudos to the Board for hanging in there. We've had some long days. And I've got my shirt on for the final day here, a little bit of celebratory regalia.

But I guess, Rick, Crops kind of

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dominated the show yesterday and you can take a little more time. You can blame Asa and myself for having some longer-winded materials. But I'm going to turn it back over to you to finish up the Crops sunsets and then we will move to Handling and CACS.

One thing, just so the Board knows it's listed correctly on the website, but in Handling, the fish oil annotation is in your Crops -- apparently in your Crops part of your binder so if you're looking for it, that's where it got put.

MR. D'AMORE: Steve, may I interrupt, sir? It's actually in the right spot but improperly named as Crops.

MR. ELA: Oh, got it. Okay. Fair enough. Thanks, Jerry.

MR. D'AMORE: Thank you.

MR. ELA: I appreciate that. So with that we'll turn it back over to Rick and let you finish up with sunsets.

MS. GREENWOOD: Okay, very good. I was hoping to take the rest of the day today on these sunsets, but we'll see how it goes.

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So the next sunset is Wood's and that's chlorine materials that we're going to cover as one group so that's calcium hydrochloride, chlorine dioxide, hypochlorous acid, and sodium hypochloride.

So Wood, do you want to --

MR. TURNER: Yes, thanks, Jerry. So to clarify, we are going to -- I'm going to present those together and we're going to put all those together.

MS. GREENWOOD: Yes.

MR. TURNER: Great. Super. As we continue to discuss every time we bring up these materials, it truly came to me that this feels like a perfunctory vote in some ways, the chlorine materials. You know, in my opinion and I think many in the community, chlorine materials shouldn't be in organic.

It's an issue, but as we deal with very real safety considerations for those in the community who don't know when we mention FSMA, Food Safety Modernization Act, it looms very large over all of our work and it's our job to make sure that

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the food we deliver is clean and healthy and safe for consumers. And so thus we have this pesky and difficult sanitizer component to what we do.

And I want to point out that I hear everybody in the community. I mean this is so far reaching and again, as we continue to say, there is clear support for the relist of all these materials as part of the Sanitizer Panel that is going to ensure all the things that we need to be able to deliver in terms of food safety.

But there is also a continued drum beat about a need for the process and the need for comprehensive review. I know we all know that. So many producers are using the materials. Every organization almost to a person -- I mean in total -- supports the relist.

Again, I'll just mention what we're talking about here is chlorine materials, four different chlorine materials as in algicides, disinfectants and sanitizers including irrigation system cleaning systems. Chlorine materials for pre-harvest use with residual chlorine levels in the water and direct crop contact and as water from

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cleaning irrigation systems applied to this soil must not exceed the maximum residuals of the disinfectant limit under the Safe Drinking Water Act, except that chlorine materials may be used in edible crop production according to EPA label direction.

So again, I think that's all I need to say at the moment. Is there any more discussion of this? We're going to -- I think I'd love to hear it, but I think we're pretty clear on this.

MR. ELA: All right. Thanks, Wood. Are there questions from the Board?

Wood, I am not seeing any, so Rick, do you want to proceed to the vote?

MS. GREENWOOD: Yes. Why don't you, Steve?

MR. ELA: Okay. There's a motion to remove calcium hypochloride from the National List, to remove chlorine dioxide from the National List --

MS. ARSENAULT: Steve. I see Asa's hand up.

MR. ELA: Go ahead, Asa.

MR. BRADMAN: I'm sorry. I feel like I have to say something. Just to say I feel like we've covered quite a few materials other times in this meeting and I think everything that's said has been -- should be said has been said from my perspective, but I guess I want to have a reiteration that by reference I'm incorporating all the previous comments to this vote.

MR. ELA: Thanks, Asa. That makes sense.

Sue? And guess what, Sue, final day.

MS. BAIRD: There you go. I just want to say thank you to Asa. He has certainly enlightened all of us to some of the inherent dangers of the chlorine materials with human health and that has been a big help. Yes, it's needed right now, but I hope that we continue to understand that we need to do continuous improvement.

MR. ELA: Great. Thanks, Sue. Any other comments?

All right, we will move to the vote so there's a motion to remove hypochlorous -- calcium hypochloride from the list, to remove chlorine

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dioxide from the list; to remove hypochlorous acid generated from electrolyzed water from the National List, and sodium hypochloride from the National List. They were all motioned by Wood, seconded by Logan, and we're going to vote on them, all four of them at once, unless there are any objections.

Are there any board members that object to voting on all four of them?

MS. GREENWOOD: Steve, remind people since it's a new day that a no vote keeps them on the list.

MR. ELA: Why don't you just go ahead, Rick, you started it?

MS. GREENWOOD: Okay. No.

MR. ELA: Okay, on sunset, just to mind everybody, a yes vote is to de-list, a no vote is to keep it on the list. So you all did great yesterday on that.

So we are going to start with Nate. So Nate, what is your vote?

MR. POWELL-PALM: No.

MR. ELA: Kyla.

MS. SMITH: No.
MR. ELA: Wood.
MR. TURNER: No.
MR. ELA: Sue.
MS. BAIRD: No.
MR. ELA: Asa.
MR. BRADMAN: No.
MR. ELA: Amy.
MS. BRUCH: No.
MR. ELA: Brian.
MR. CALDWELL: No.
MR. ELA: Jerry.
MR. D'AMORE: No.
MR. ELA: Carolyn.
DR. DIMITRI: No.
MR. ELA: Rick.
MS. GREENWOOD: No.
MR. ELA: Kim.
MS. HUSEMAN: No.
MR. ELA: Mindee.
MS. JEFFREY: No.
MR. ELA: Logan.
MS. PETREY: No.

MR. ELA: And the chair votes no.

MS. JEFFREY: Zero yes; 14 no, zero ARAs. The motion to remove fails.

MR. ELA: Go ahead, Rick. What's the next one?

MS. GREENWOOD: Okay, the next item is the sunset for magnesium oxide and that's Amy.

MS. BRUCH: All right, thank you, Rick.

This is in reference to 205.601. And this does have, I guess is listed as J as a plant or soil amendment. And magnesium oxide is only to control viscosity of clay, suspension agent, for humates.

One addition since the spring meeting is that we did receive the technical report. So that is available. But in general, magnesium oxide is to keep finely ground insoluble humate particles suspended in water. The water insoluble nature of the substance makes it unlikely to enter water systems. There were a handful of comments and most supported relisting.

A few to highlight is the need for liquid

humates, basically as a recycling agent to help foster cycling of minerals, conserve water, and improve soils in multiple ways. By having magnesium oxide, there's tremendous benefits for farm workers when they're applying humates in the liquid form instead of having to apply humates in the dry form.

And another commenter mentioned that it's a valuable part of our tool kit and the alternatives to magnesium oxide are not suitable.

The one cautious comment received was just noting that this is the first sunset review.

Initially, when this product was discussed to be listed, there was a minority opinion that supported adding an expiration date. Even though it's benign, the commenter said that they would prefer nonsynthetic acids used in manufacturing as well as applying dry humates instead of liquid.

Final thoughts from the FDA and EPA is that FDA actually lists magnesium oxide as generally recommended to be safe and as a direct food substance. The EPA lists magnesium oxide as an inert ingredient used pre- and post-harvest and

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exempt from the requirement of tolerance. So it is a pretty benign substance and I guess we can continue with voting then, Rick, if there's nothing further.

MR. ELA: Are there any questions or comments?

All right, I'm not seeing any, so shall we proceed, Rick?

MS. GREENWOOD: Yes, go ahead to the vote.

MR. ELA: Okay, there's a motion to remove magnesium oxide from the National List. It was motioned by Amy and seconded by Logan. We are going to start with Kyla.

MS. SMITH: No.

MR. ELA: Wood?

MR. TURNER: No.

MR. ELA: Sue.

MS. BAIRD: No.

MR. ELA: Asa.

MR. BRADMAN: No.

MR. ELA: Amy.

MS. BRUCH: No.

MR. ELA: Brian.

MR. CALDWELL: No.

MR. ELA: Jerry.

MR. D'AMORE: No.

MR. ELA: Carolyn.

DR. DIMITRI: No.

MR. ELA: Rick.

MS. GREENWOOD: No.

MR. ELA: Kim.

MS. HUSEMAN: No.

MR. ELA: Mindee.

MS. JEFFREY: No.

MR. ELA: Logan.

MS. PETREY: No.

MR. ELA: Nate.

MR. POWELL-PALM: No.

MR. ELA: And the chair votes no.

MS. JEFFREY: Zero yes, 14 no, zero ARA,
the motion to remove fails.

MR. ELA: All right, Rick, next?

MS. GREENWOOD: Okay. Calcium
chloride and this one is Logan.

MS. PETREY: Okay, calcium chloride,

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a pretty easy one, reference 205.602 which is non-synthetic substance prohibited for use in organic production. Calcium chloride is prohibited except for foliar treatment to spray a tree -- a physiological disorder associated with calcium uptake.

So it is a non-synthetic source. It can be obtained by extracting of non-synthetic brines and only the non-synthetic is allowed although there is the calcium chloride can be obtained by synthetic sources, but only the non-synthetic is allowed.

Through the public comments, this is a very used product. It's used to treat -- it says three dozen physiological disorders and possibly more. This includes rain cracking in cherries, blossom end rot in tomatoes, tip burn in Chinese cabbage, bitter pit in apples, and also cork spot on pears.

The application of foliar calcium spreads release calcium physiological disorders because these are local deficiencies due to calcium transport issues and there are other alternatives

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to using calcium for soil applications, however, those do get bind up and are not available and will cause quality issues on the crops.

Again, summary of public comments related to calcium chloride as a non-synthetic material is widely supported, so the restriction is very supported. Calcium chloride material is needed to combat physiological disorders and many commenters say that calcium chloride is necessary to ensure the quality in many crops. Significant losses would occur if this substance were not relisted.

The current annotation restricted as a foliar spray to treat this disorder is also supported to prevent the soil build up of chloride.

Are there any questions?

MR. ELA: I will just make a comment.

I know in public oral comments, Amy, you had asked a little bit about it and I'll explain a little bit more. We, for example, on our farm, our soils are 7.8 to 8 pH. We have calcium readily available which is really fun if you have a little bit of

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acid to pull on it. As a geologist, I still love the fizz test.

So calcium readily available, but we can still get bitter pit in apples which is a calcium deficiency and one of the reasons is calcium is moved in the plant by water. It is not preferentially taken up like some of the other nutrients. So if you run into an issue with drought stress or very light crop, the growing tips of the plant will actually pull calcium from the fruit and if the plant isn't moving enough water to take calcium up, it will pull calcium out of the fruit and you will get bitter pit and or cork spot in pears even though calcium is readily available. So it's one of those oddball things that the way the plant takes calcium up actually affects the calcium level in the fruit, even though it may be readily available.

So I don't know if you have any more questions on that, Amy, or want to chime in, Brian, but that's why it can be very useful, because you can put calcium directly on the fruit and the fruit will absorb that and avoid those physiological

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issues.

MS. BRUCH: Thank you, Steve, for explaining that, it's good to have some real-life examples of this, too, in addition to the public comments that we heard.

I believe my question at the time was more in regards to are there farmers such as yourself indicating or looking at base saturation versus pH when evaluating calcium in the soil? Because sometimes you do have maybe a higher pH indicating that there's probably no need for lime, but base saturation, looking at that core space might indicate maybe there's still a need for calcium.

MR. ELA: Yes, no, it's a good question and yes, we have plenty of calcium available to say the least.

MS. BRUCH: Yes.

MR. ELA: So yes, when you're looking at the other magnesium and potassium, you definitely have them, but there's no shortage of calcium. Great question, always a good one to ask.

MS. BRUCH: Thank you.

MS. PETREY: We also see that -- excuse me, we also see that deficiency in very humid times because like you said, Steve, the pull of the water is not happening, so you're not getting that transpiration pull and so when it's not pulling water it's not pulling calcium and so those new growing shoots, like you said, you can see that deficiency there, so again, another example of how a deficiency can occur when there's ample amount and the soil -- if that flow of water is not happening, it's not coming from the soil.

MS. BRUCH: Our soils in Florida, when we were down there, I think it was 93 percent calcium and still had some deficiencies in our plants. So yes, understandable for sure.

MR. ELA: I have to say I find that really ironic, that you have calcium deficiency from humid conditions and we have calcium deficiency from such dry conditions and heat, the least amount of clothes in the afternoon and the plant quits respiring.

MS. PETREY: If we only both had the nitrogen deficiency. I'm playing with you. But

no, you're right.

MS. BRUCH: Good continuation, Logan.

MS. PETREY: Just a joke, just a joke.

MR. ELA: Fair enough. All right,
anything else?

All right, Rick, are you ready for the
vote?

MS. GREENWOOD: I am and I'd just like
to make a comment that farming is not easy.

MR. ELA: Yes, we like a challenge.

MS. PETREY: Very humbling.

MR. ELA: Yes, humbling is the right
word.

Motion to remove calcium chloride from
the National List is motioned by Logan, seconded
by Brian. And we are going to start with Wood.

MR. TURNER: No.

MR. ELA: Sue.

MS. BAIRD: No.

MR. ELA: Asa.

MR. BRADMAN: No.

MR. ELA: Amy.

MS. BRUCH: No.

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MR. ELA: Brian.

MR. CALDWELL: No.

MR. ELA: Jerry.

MR. D'AMORE: No.

MR. ELA: Carolyn.

DR. DIMITRI: No.

MR. ELA: Rick.

MS. GREENWOOD: No.

MR. ELA: Kim.

MS. HUSEMAN: No.

MR. ELA: Mindee.

MS. JEFFREY: No.

MR. ELA: Logan.

MS. PETREY: No.

MR. ELA: Nate.

MR. POWELL-PALM: No.

MR. ELA: Kyla.

MS. SMITH: No.

MR. ELA: Chair votes no.

MS. JEFFREY: Zero yes, 14 no. Zero,

ARA motion to remove fails.

MR. ELA: All right, Rick.

MS. GREENWOOD: Okay, last, but not

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least, sunset review is rotenone which turns out to be mine. It's on the National List as a prohibited substance. Rotenone, I'm sure many of you know, is a highly-toxic compound that has been used in the past. It comes from a tropical plant's root and has been used to kill fish in waters and it's also been used on vegetables and berries to control pests.

It was once registered by EPA, but it's no longer registered as a pesticide, so it's not available for purchase in the U.S., but apparently can be purchased in other countries, although it's pretty much banned everywhere for organic use. Documented human health issues, so it's on the National List as a prohibited natural substance.

And so the idea is to keep it on the National List like that to prevent people from using it.

So I'll open it up for questions.

MR. ELA: What I'm hearing Rick, is even though it isn't registered for U.S. use, we keep it on the list to help prevent any potential international use? Is that --

MS. GREENWOOD: Yes. It still

currently is available in other foreign countries, so potentially could get back into the U.S. And it's a pretty dangerous compound.

MR. ELA: And I guess that's a good reminder to the Board that our organic standards extend beyond our borders.

Any other questions or comments?

All right, Rick, do you want to move to the vote?

MS. GREENWOOD: Yes, go ahead, Steve. Thank you.

MR. ELA: Okay. There's a motion to remove rotenone from the National List. The motion was made by Rick, seconded by Amy, and we are going to start at the top of the alphabet with Sue.

MS. BAIRD: Yes -- Yes or no. No. No.

MR. TURNER: This is confusing. We shifted in these last two materials.

MS. BAIRD: Yes, we shifted.

MR. ELA: Same voting. Yes is to remove it from the list which in that case would remove the prohibition. No is to keep it --

MS. BAIRD: So the answer is no. Sorry

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about that.

MR. ELA: No, that's fine. Good to explain.

Asa. Asa, we're not hearing you.

MR. BRADMAN: No.

MR. ELA: Amy.

MS. BRUCH: No.

MR. ELA: Brian.

MR. CALDWELL: No.

MR. ELA: Jerry.

MR. D'AMORE: No.

MR. ELA: Carolyn.

DR. DIMITRI: No.

MR. ELA: Rick.

MS. GREENWOOD: No.

MR. ELA: Kim.

MS. HUSEMAN: No.

MR. ELA: Mindee.

MS. JEFFREY: No.

MR. ELA: Logan.

MS. PETREY: No.

MR. ELA: Nate.

MR. POWELL-PALM: No.

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MR. ELA: Kyla.

MS. SMITH: No.

MR. ELA: Wood.

MR. TURNER: No.

MR. ELA: Chair votes no.

MS. JEFFREY: Zero yes, 14 no, zero ARA.

Motion to remove fails.

MR. ELA: Rick, are there any other sunsets that you just want to do ahead of time, so you can take up the whole meeting?

MS. GREENWOOD: We're going to start on the 2024s if you want to go on to those now.

MR. ELA: I think you're off the hook now. Thank you so much for a really long Crop Subcommittee report. I'll just have to say you did a great job in subcommittee, too, to shepherd all these through. It's a bit lift.

MS. GREENWOOD: Yes, it is. But again, it goes to the committee members. Everybody was engaged and did some great work, so as you know, Steve, being the chair of something is just a small part of the work.

MR. ELA: So true. Okay, we're going

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to move on to Handling and I'll turn it over to Jerry.

MR. D'AMORE: Well, Steve, thank you very much. We're starting the day -- and good day to everybody out there.

We're going to start this session with the petition material. It's Zein and it was originally petitioned as a non-organically produced agricultural product and after review of the petition, the TR, the NOP classification of materials guidance decision tree and in consideration of past NOSB decisions, it is now presented as a nonagricultural substance. It was voted through subcommittee as nonsynthetic.

It was specifically petitioned for use as a food coating covering issues such as ingredients and as a processing aid including as a glaze, as a coating, as a taste masker, a wheat gluten substitute, and for use in micro-encapsulation in the pharmaceutical and nutraceutical industry.

The TR notes that it, as a food substance, is generally recognized as safe, as a

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direct food ingredient. The TR also identifies Zein as an anti-caking agent, a free flow agent, a drying agent, and as a humectant. Further, the TR says that Zein is also allowed as a direct food contact additive, as a compound for adhesives.

As indicated in the document presented for the fall session and referencing written oral comments for our spring meeting, there were about ten total comments with none in favor of adding Zein to the National List. For this fall session, we had about seven commentators, again, none advocating Zein's addition to the National List.

I need to put these stakeholder comments into perspective. For the spring session, only two were actually against the material itself with the remainder simply stating that our industry does not need another shelf life extender. While for this fall session no person or organization is advocating Zein's addition to the National List, only one group specifically said it was against the material and this was specifically on the lack of essentiality.

One prominent organization indicated

no position as annotated. Another group did not support as a coating for fresh fruits and vegetables, in other words, they limited it at that.

Another well-known organization did not advocate for or against, but rather challenged the classification as non-agricultural. Yet, another well-known group disapproved of the non-organic agricultural classification which we have subsequently changed. Finally, another respected company noted if Zein is listed, the NOP must explicitly prohibit use for nano-encapsulation.

I find all the fall stakeholder comments to be thoughtful and informative. However, I guess I could also characterize this in another way and say only one or two organizations are opposed to listing Zein on the National List as it is currently annotated.

At subcommittee, we had part of three full sessions dedicated to this material with much of the debate centered around essentiality. We determined that Zein's hydrophobic properties appear to be unique and preferred. I leave you with the last paragraph in our document. Zein is

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created from a renewable source, corn gluten. It is fully biodegradable and it represents no threat to human health.

Now the substance is created and applied in a laboratory, as annotated. It has no impact on the agro-ecosystem beyond serving as a vehicle for ingesting organic pharmaceutical, neutraceutical properties.

I'd like to go a bit off a script as I wrote it. I personally feel that we may have annotated Zein too restrictively. I think that it has unique functionality within the dairy industry as a stabilizing ingredient. With that said, the majority of the Handling Subcommittee felt otherwise and I respect their thoughts and opinions.

I note this because I am quite sure that the one vote majority to add Zein to the National List would not have been achieved had the annotation been less restrictive. And I'll open it for comments, please.

MR. ELA: All right. Are there questions, comments?

Kyla, I'm going to put you on the spot.
I'll go to you first and then go to Asa.

MS. SMITH: Yes, this material is interesting because as Jerry explained, it's maybe more complicated than it should be and there's lots of nuanced things that come into play here because of a previous board discussion on corn steeped liquor which is related due to the process.

So I -- anyway, so there's like that for past board precedent. There's the decision traits which we didn't have the time and there's the definitions that we need to look at, so for me the classification part is the most complicated part of this material before we even get to like what it could be or should be used for and I don't know that we've -- I feel like -- anyway, I don't feel like this is resolved for me, per se, and so would recommend that this go back to subcommittee to take a deeper dive in looking at the classification.

MS. JEFFREY: I'll second it.

MR. D'AMORE: Could we just -- yeah, okay, I think we are through it enough to do that.

And Mindee, I'll share with you that you beat me to that second.

As a clarification, though, Kyla, your reference to no-decision treatment goes back to the corn steep liquor, correct?

MS. SMITH: Correct. Yeah, yeah, yeah.

MR. ELA: So Kyla, was that an actual motion?

MS. SMITH: I can --

MR. ELA: Or a recommendation?

MS. SMITH: It was a recommendation. I'll let Asa say his piece, and then I can make a motion when everybody's done with the discussion.

MR. ELA: Wanted to make sure. I heard it as a recommendation, wanted to make sure I hadn't missed something. So go ahead, Asa.

MR. BRADMAN: Yeah, I just, you know, I was one of the people who would vote no on this material, except with the very strict annotation that we proposed. I think sometimes maybe I'm a little more flexible on the five percent for processed products than others.

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But I -- the notion that this might be able to contribute to more access to vegan, you know, nutraceutical-type things, you know, I think that's a benefit. I'm really wary of this, though, this being an unlabeled ingredient, particularly when some of the original proposals suggested for coating fruits and vegetables and stuff like that. That, I'm not comfortable with.

Also, whether it could in fact be produced from organically sourced corn gluten meal.

But I think for the narrow use that we've suggested that it's not such a bad thing.

MR. D'AMORE: Thank you for that, Asa.

MR. ELA: I guess I'd like to toss in a comment myself, and this is part of the back to subcommittee or not. As Jerry noted, without the very narrow annotation, this likely would have failed in subcommittee. And I think, I can't speak for the full Board, but I think likely might have failed in the full Board discussion.

So I'm going to throw it out there that the Board, if we vote it back to subcommittee, we continue to work on it. If we think -- if we think

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it would fail anyhow and we'd like to have it off our work agenda, I would suggest we don't send it back to the subcommittee.

And we can -- whether or not the classification vote sort of is passed or failed, we can then vote after the classification vote whether to send it back to subcommittee. And if it goes back to subcommittee, we continue to work it. If it doesn't, then it is off our work agenda item.

So I'll just throw that out there. I mean, personally, I would rather -- I'm going to have a hard time voting for it regardless. But if you do, all do want to spend more time on it, then certainly send it back at this point.

So Mindee.

MS. JEFFREY: Follow up question to your statement, Steve. If we don't vote it back to subcommittee and we aren't of a mind to pass it, then when we vote to classify it, if the motion to classify fails, do we then vote on the National List motion and that to fail, or do we stop there?

Because I just want to make sure we're

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not setting any precedents of classification that we're not all totally comfortable with.

MR. ELA: Yeah, great question, so.

MS. GREENWOOD: Well put.

MR. ELA: Yeah, Kyla, do you want to jump in, then I'll jump in?

MS. SMITH: I mean, that's my concern, is like that because there has been such a reliance on precedent, like, for this material specifically, I just, I feel irresponsible sort of doubling down on it continuing the confusion. And so I'd like to get it right.

And because, you know, for future boards, they'll look at this, and it just seems, yeah, just irresponsible to, I don't know. Anyway, so that's my main thing about it, is wanting to continue to work on the classification part to like get it right and not continue with these weird precedent-setting, confusing, and conflicting things.

MR. D'AMORE: Excuse me. I would just like to say that I agree with Kyla. I'd like to put a little bit different slant on it, having

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agreed completely with what you said.

As the lead on this one, I would not feel right about it just going into limbo and dying a slow death or going sort of into the vapors with having just failed to get it done. So I as the lead would welcome a motion to bring it back to subcommittee.

MR. ELA: I just want to jump in and to answer Mindee's question specifically, and not to disagree with what's just been said at all. But Mindee, we could fail the motion to classify, which would indicate the Board hadn't come to a decision, which obviously makes Kyla nervous and, you know, maybe rightly so.

And then so we can fail that vote, leave it as the Board has not decided, and then either go back to subcommittee to, after that vote, to as Kyla said, determine that more and decide whether to continue to work on it in terms of passing or failing the motion to list it. Or we can send it back to subcommittee right now and just work on the whole thing.

I personally would rather see it just

have, well, have the vote on the classification whichever way it goes and then not work on it further. I don't see that this, just based on the subcommittee discussions, I don't see it's a material that is going to go forward.

But so I'd rather have it off our work agenda item and spend our time on other things. But I'm certainly not going to argue against Kyla and her thoughts, so. I do agree with them as well.

Mindee.

MS. JEFFREY: So what you're saying functionally is by your logic, if we fail the classification motion, we fail the petition?

MR. ELA: No, no, and we talked about this. If we fail the classification motion, then we can take vote whether to send it back to subcommittee after that. And if we don't send it back to subcommittee, then it just, it just dies right there because we've said we're not going to work on it further.

And it leaves the classification motion up in the air. But that is one way we can say we don't want to work on it further because we're going

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to ultimately fail.

If you really -- if you do want to work on it further, get the classification under agreement and then take a vote on whether not we want it added to the list, that's fine. That's the -- we can -- there is a mechanism to take it off our work agenda, and there's a mechanism to leave it on our work agenda, so.

MS. JEFFREY: Well, does that mean if we fail to classify it, then a material review organization could view it as a nonsynthetic and it could be for use?

MR. ELA: Say that again?

MS. JEFFREY: Go ahead, Kyla.

MS. SMITH: No, the Handling List works differently. Like so crops and livestock lists it's like, you know, if it's nonsynthetic then it's allowed unless prohibited. But the Handling List works differently. So 605 materials have to be listed to be used at all.

MS. JEFFREY: Okay, all right, thank you. I got -- you got me over in crops land there for a second.

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MR. ELA: Yeah, Rick.

MS. GREENWOOD: Yeah, just a quick comment because we've done this before on some items. I think each of us have to think about how much time we want to spend on something when we ultimately think it's not going to be added to the National List.

So we can spend a lot of time on classification issues, but if most people don't see a need for it and, you know, spend another three-quarters of the year and then come up and vote it down because nobody really wants it on the list.

So I think that's something that should guide our decision on what we do, whether we bring it back to subcommittee or we just kill it because we know eventually it's not going to go anywhere.

MR. ELA: And I also want to chime in and say I actually think the listing motion is correct. I went through it myself and I felt like, based on the data we had, that I think it's correct.

I know that is disagreed with by other members, but I'm actually comfortable with the listing

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motion, so my two cents.

Mindee.

MS. JEFFREY: What do you think, Kyla, do you like Steve's plan?

MS. SMITH: I'm like I don't know. I'm -- I do agree that I don't want to waste time working on something that's sort of moot. On the other hand, I do feel like accuracy is important.

And I feel very conflicted, like, based on a read-through of all of the items, the TR working through the decision trees the previous stuff. Like I feel unresolved about it.

MR. ELA: Mindee, then Nate and then Kim and then Jerry.

MS. JEFFREY: I'm good, thank you.

MR. ELA: Okay, Nate.

MR. POWELL-PALM: Yeah, I just, I don't mean to like sort of belabor this, but thinking that the classification I agree, Steve, does seem correct. And it seems like an opportunity to at least get that part done.

I also, I think looking at the -- I just hear both Jerry and Kyla so clearly, that we want

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to do it right, but also the question of resources and time. If we're just going to ultimately come to the same conclusion, is it better to do other things.

So I apologize, I'm not really making a comment, I'm more asking a further question to those who feel stronger about it.

MR. ELA: Kim and then Jerry.

MS. HUSEMAN: Is it possible to change the order of the voting? Okay. Because I think that's a kicker, right, is I'm reading through the comments, reading back through the comments, and what Jerry had mentioned, I don't see anybody other than the petitioner promoting this particular substance.

So why do we want to add something to the National List that is not needed? I go back to what our goals and our objective and our job is, and I'm struggling without having -- for the past year we've asked for input, and there's not stakeholder input, other than from the petitioner that's positive.

So I'm going to have a hard time voting

this in anyway.

MR. ELA: Jerry.

MR. D'AMORE: Well, folks, I'm losing just a little bit of steam, and it's not because I don't have enthusiasm, because it just dawned on me that I can't make the statement that I wanted to make, which is hey guys, I'll take care of it.

Because it may not be mine to take of if I'm not on the right subcommittee. I have no idea where I'll land.

So I would like to take one more stab.

First of all, I'd like to answer Kim. I'm not sure I see the correlation with a brand new petition on something that's so highly specific and the notion that there's nobody jumping on the bandwagon to say yeah, yeah, yeah, I need it.

I think its newness and its uniqueness, which is where I'm going to land on my final thoughts here, it just doesn't -- it doesn't -- I can't connect the dots between a you know, an express outcry for it or not, because it is unique and it's brand new in terms of the annotated uses, I think.

So I would ask to consider one more time

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that there is as a hydrophobic, I think a very, very compelling set of testimonials that it is the best in the industry at that. And if that's it, then, you know, I still -- I still feel I'd like to go forward with it.

MR. ELA: Um.

MR. D'AMORE: Oh, yeah, left to me, Steve, I would ask to have it sent back to subcommittee.

MR. ELA: Yeah, I'm just looking at OMRI's comments here. Just give me a second here.

So OMRI says that they would find, and I kind of trust OMRI's sense on this, so they find that the classification design as both nonsynthetic and agricultural, with nonsynthetic classification largely based on the NOP's policy on corn steep liquor.

So OMRI, I think, agrees with this -- with this classification as nonsynthetic. But just to throw that out there.

Sue and then Kyla and then we should probably move down the list. And Jerry's got a comment after -- I think Jerry just made his

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comment, I'm sorry. So go ahead Sue, and then Kyla.

MS. BAIRD: I think I'm comfortable with it being classified as a nonsynthetic. Again, I've read the comments, and based on history and OMRI's comments, which you just read, I think that you probably have it right. You guys have done a lot of work on it.

I agree. I have vegan friends that it's like, at least in their mind, poison in their system if they have to intake an animal product. And so then, I think they probably need this product.

The fact that you've got limited in scopes by annotation so specifically, I think you guys have done great and we need to send it back for Jerry to continue working, then I would support that.

MR. ELA: Okay. Let's hear Kyla, I think I accidentally lowered your hand. I remember the process. And then we'll go to Nate and Mindee, and then we'll move on to other topics.

MS. SMITH: Yeah, that's okay. I mean, Steve, you read OMRI's comment, which said based on the NOP's like classification or whatever, the

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precedence set with corn steep liquor.

Well, now we have a new tool in the decision tree, we have new TR, and there's, I just feel like there's more information that we have that I don't know if it would change the classification or the listing. I'm just saying there's enough for me to warrant a further look. That's all.

MR. ELA: Yeah, fair. I just want to be clear, they did use the decision -- OMRI used the decision trees to result in a nonsynthetic classification. So I may not have read that very clearly.

But let's go to Nate and Mindee, and then we will decide what to do here, with Jerry being the final --

MR. POWELL-PALM: Just wanted to jump on a little bit Kim, or not Kim, sorry, Sue's comment about the need. I think OTA, if I understood correctly, did canvass their members, and especially their, I think it was their supplements council. And just there did not sound like there was anyone coming out strong for it.

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I think we want to kind of stay within what we know to be the need rather than -- I mean, it's easy to kind of guess what the industry need.

But those asked and those stakeholders involved really haven't said they need this or really that anyone wants it.

So just sort of putting that to Sue's comment.

MR. D'AMORE: Okay, Mindee and then Jerry and then I'm going to -- we're going to go to decisions on this, so.

MS. JEFFREY: I am of a mind to vote on the classification and not work on this further, in hopes that we vote it down, frankly. I really, I'm not sure that we need the use, and I didn't hear that from stakeholders. So for me I just wanted to throw that out there.

MR. ELA: Okay, Jerry, one least thing.

MR. D'AMORE: Steve, I'm going to give it back to the Chair. I've listened to it all, I've said my piece, and I'm happy for the consensus.

MR. ELA: All right. So at this point, I know Kyla had a recommendation to go back to

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subcommittee. I'm wondering if there is a motion for that or not, and if there's not, we'll move to the --

DR. TUCKER: Steve --

MR. TURNER: You have a question from the program -- there's a question from the program.

MR. ELA: Say that again? Oh, Jenny, sorry, I missed that.

DR. TUCKER: So this has been a fascinating conversation, honestly. And I think that's why we do board deliberations is to have this. And I do wonder if a new option has been raised through the discussion that could be implemented.

I think it was a good reminder that on this part of the list, that everything has to be listed. So it isn't like the other lists where you have to decide whether it's natural or synthetic before you vote it. On this part of the list, everything has to be there, right? Everything has to -- you can use it unless it's listed.

So I think from a program perspective, given the conversation that has happened and the

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concern about precedent and everything else, I think we might be comfortable, if the Board is comfortable, voting on the decision to list first and then deciding what you want to do.

And then if you want to send it back to the committee for more work on the classification, you could do that. But that would give you a read of the room as to whether you actually want this on the list or not.

So it wouldn't be adding a new motion, it would reversing the motion. So it would be, you know, take a read of the room of do you want this on the list. And that would give you a roadmap for whether then you need to continue to work on classification, but wouldn't leave sort of a mystical classification vote on the table with no, you know, bow to tie.

So I think you're not introducing any new motions, we're simply flipping the motions. The program is comfortable with that, but only if the Board would like to do it.

MR. D'AMORE: Thank you very much for that input, I appreciate it.

MR. ELA: Yup, I do too, Jenny. This is -- these are indeed very interesting procedural topics. I have never been on the Board with a classification motion failing. So I think that's a great idea, that the program's comfortable that voting on the National List motion first and then the classification motion.

Is there anybody on the Board that does not like that idea, that objects to it?

Okay, I'm not seeing any. So with that, it would still, if somebody wants to move to send the whole thing back to subcommittee, that is an option. Otherwise, we will go to the National List motion.

Asa.

MR. BRADMAN: Sorry, I have a question about 605 and the possibility of organic sources of this material. We haven't really discussed that kind of piece of it.

We got -- so I don't know if, Jerry, you have a comment on, you know, the possibility of sourcing the source material from organic source. I know the producer says it's not

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available, but if it was listed and down the road became available, can we influence that with its own 605?

MR. D'AMORE: Asa, I think we'd respond to that, because it was a two-part question I think, as I heard it. In looking at it initially and then getting ready for the spring session as well, my digging indicated no to availability then.

However, you've asked two questions. Is it possible that it would be available later if there's that -- if there's that much of a demand for it. Did hear you correctly? I can't hear you, Asa.

MR. BRADMAN: I just want to kind of note the strains of 605.

MR. D'AMORE: Okay.

MR. ELA: Yeah, 605 does not require organic use if it is available I believe.

All right, so back to the motions. I'm going to pause to see if there's any desire to send it back to subcommittee. Brian?

MR. CALDWELL: Yeah, I definitely am in favor of sending back to subcommittee. But I

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thought we had just decided that we were going to take the vote on the second motion first.

MR. ELA: The order of the motions, if we don't go back to subcommittee right now, then we'll vote on the national list motion, and then the classification motion. So --

MR. CALDWELL: Okay, I will move --

MR. ELA: We have an opportunity to send --

MR. CALDWELL: I will move to send it back to the subcommittee.

MR. ELA: Okay, is there a second?

MR. D'AMORE: Sure, I'll second it, Steve.

MR. ELA: Okay. So we have a motion to send it back to subcommittee, made -- motioned by Brian, seconded by Jerry. Any other discussion?

Okay, we are going to start with Asa.

And this is a majority, simple majority. A yes vote is to send it back to subcommittee, a no vote is to proceed with the National List motion.

Asa.

MR. BRADMAN: Yes.

MR. ELA: Okay, Amy.

MS. BRUCH: No.

MR. ELA: Brian.

MR. CALDWELL: Yes.

MR. ELA: Jerry.

MR. D'AMORE: Yes.

MR. ELA: Carolyn.

DR. DIMITRI: No.

MR. ELA: Rick.

MS. GREENWOOD: No.

MR. ELA: Kim.

MS. HUSEMAN: No.

MR. ELA: Mindee.

MS. JEFFREY: No.

MR. ELA: Logan.

MS. PETREY: No.

MR. ELA: Nate.

MR. POWELL-PALM: No.

MR. ELA: Kyla.

MS. SMITH: Yes.

MR. ELA: Wood.

MR. TURNER: No.

MR. ELA: Sue.

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MS. BAIRD: Yes.

MR. ELA: And the Chair votes no.

MS. JEFFREY: I have five yeses, Nate.

MR. POWELL-PALM: Yes, same.

MR. ELA: Okay, so the motion fails.

MS. JEFFREY: Five yes, nine no, zero
ARAs.

MR. ELA: Yeah, so the motion fails.

MR. D'AMORE: Steve, let me just
comment, if I may, and tell you how much I really
appreciate this group. This is democracy at work,
and I appreciate it.

MR. ELA: Thank you, Jerry. We are
going to proceed with the National List motion.
And the motion is to add Zein at 205605A, annotated
as only for use as nutraceuticals or
pharmaceuticals as a microencapsulation acting as
moisture barrier and taste masker. It was --
motion was made by Jerry, it was seconded by myself,
Steve.

And we are going to start with Amy.

MS. BRUCH: No.

MR. ELA: Yeah, to be clear, this is

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a super majority. A yes vote is to add it to the list, a no vote is to not add it to the list. So Amy voted no.

Brian.

MR. CALDWELL: I'm afraid I'm going to abstain. I'm just -- I've been too confused by this discussion.

MR. ELA: Abstaining is perfectly okay.
So Jerry.

MR. D'AMORE: Yes.

MR. ELA: Carolyn.

DR. DIMITRI: No.

MR. ELA: Rick.

MS. GREENWOOD: No.

MR. ELA: Kim.

MS. HUSEMAN: No,

MR. ELA: Mindee. Mindee, we're not hearing you.

MS. JEFFREY: No.

MR. ELA: Okay. Logan.

MS. PETREY: Yes.

MR. ELA: Nate.

MR. POWELL-PALM: No.

MR. ELA: Kyla.

MS. SMITH: No.

MR. ELA: Wood.

MR. TURNER: No.

MR. ELA: Sue.

MS. BAIRD: No.

MR. ELA: Asa.

MR. BRADMAN: Yes, for the narrow annotation.

MR. ELA: Okay, and the Chair is going to vote no.

MS. JEFFREY: So I have three yeses, nine noes, one abstention, zero refusals, zero absents. So the motion fails.

MR. ELA: I think you missed one vote in there. That only added up to --

MR. POWELL-PALM: I think it's ten noes, right.

MS. JEFFREY: One, two, three, four, five, six, seven, eight, nine, ten. I'm sorry, you're right, ten noes.

MR. ELA: Okay, why don't you read it again for the record.

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MS. JEFFREY: Three yes, ten no, one abstention, zero refusals, zero absents.

MR. ELA: Okay, the motion fails. So with that, that would take that off our work agenda. And we will move on to the next -- to the next material.

So thank you, Jerry, and everybody, that's a tough one.

MR. D'AMORE: Appreciate it, thank you. So next up is Asa with the fish oil annotation. And I will just reiterate what Steve said, as it's in your binder perhaps, it'll say Crop Subcommittee. That's an error, it's definitely the Handling Subcommittee's to do, so thank you.

MR. ELA: And that is Asa's.

MR. D'AMORE: Yes, sir.

MR. ELA: And Asa, you're on mute. There you go.

MR. BRADMAN: Okay, sorry. Sometimes I get lost in the screens here.

Okay, so this is another somewhat challenging issue. This dates back to a little over a year ago when the Board voted on -- I'm just

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kind of repeating some of the stuff from the spring, but I'm just going to go over it again -- voted, yeah, it's been a year, a little over a year ago, voted to renew the listing of fish oil.

But several members of the Board at that time, which I supported, was that that vote to relist fish oil was contingent on a work agenda to have some assurance that the fish oil sourced for organic products came from sustainably -- sustainable fish stocks.

And that led to a process where the original proposal suggested using marine sustainability standards set by NOAA, the US National Oceanic and Atmospheric Agency, and then FAO under UN for out of US jurisdiction fisheries.

And issues that came up with that, that there was a lack of consistency between those two agencies and they use different approaches to assess sustainability and different definitions.

And so after a number of -- and then I inherited this from, actually it was Tom Chapman who originally wrote the original document, and

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I inherited this and started communication both with stakeholders among the organic community, and then also with folks at NOAA and Seafood Watch and the Marine Sustainability Council, as well as, you know, we've had a number of public comments from stakeholders through the NOSB system.

And we proposed three possible choices from last -- for last spring. And those choices covered one kind of a generic, you know, fish sourced from byproduct only and from a fishery that was sustainably -- certified sustainable by a third party.

And then the more specific number two option, which is what we're considering today, where we -- where we defined it as sourced from the fishing industry byproduct only and certified sustainable against a third party certification, certification that is ISEAL, International Social and Environmental Accreditation Labeling code compliant for global seafood sustainability initiative recognized.

And then the third option to use the Seafood Watch standards by the Monterey Bay

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Aquarium. They've been a leader on this issue.

The first one I think was preferred by many, especially on the industry side, but also felt that it was too weak and that it didn't specific which standards would be met. And that there was a greater chance, for example, for greenwashing.

The third one seemed, the Monterey Bay Aquarium beach is more consumer-oriented, and they didn't seem to have, even beyond the consumer and in terms of, you know, when people are, you know, buying pieces of fish, it didn't seem broad enough to cover the range of fisheries that would be sourced for fish oil.

So that kind of left us with the second option, which refined the language a little bit.

And just to kind of summarize some of the public comment about this, and there's a range of comments.

In general I would say there's general support for this option. OEFFA Crop, Community Grocer Group, and the Puget Sound QAI, and then the manufacturers, you know, say they're willing to live with number two. They prefer number one,

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but they're willing to live with number two.

So in general, I think there's some support for this. I should mention too there is some general objection to the listing of fish oil on the National List.

And I do -- I've said this before, I do feel like that's a separate issue. And the Board did vote to relist it. And I think of fish oil as kind of a consumer choice issue and it's a labeled ingredient.

Some major concerns about this proposal here focus on the reliance on a third party certification, and that's the GSSI or the ISEAL code-compliant member. And you know, some groups, Oregon Tilth in particular and others too are just outright opposed to the idea of outsourcing a third party certification within the National Organic Program standards.

And you know, that's a concern that we, you know, highlighted in the write-up and you know, I think there's a lot of merit to that. Although, to add a little -- I'm trying to stay out of the editorial part, but I'll note that I'm going to

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get editorial right here.

That you know, I think that we have to realize too that with the food system, organic food system production system, we use a lot of resources that come from outside the organic system.

In fact, many or most in some cases I think of the resources that go into organic production and processing originate outside that system. And particularly marine materials, where we're taking something from an entirely different environment and removing them from that environment and putting in both the production and processing dimensions, that that is inherently beyond the scope of a lot of what we can do as an agency and as a program.

I'll go a little bit farther and say, you know, there is the wild crop option, although I personally don't believe there should be a wild crop option within organic, but that's a whole other issue.

There's also a sense in a few comments that were expressed in different ways that we should really fast track a agriculture standard for fish.

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And that that could then solve the sourcing issue of material to product fish oil.

And I totally agree with that, and I think that that's something that needs to be made a priority among others to address kind of the backlog of issues. There should be an aquaculture standard and a standard for defining organic fish.

And then in a way that would make this moot, if that was also provided material for the fish oil production. And I think that's a really strong issue.

And some comments were that, you know, we shouldn't even bother with this at all and just instead of taking time on this, fast track the aquaculture standard.

Others like Crop Valley said, you know, we support this proposal for this option two, but we would much rather, you know, buy organic, you know, fish oil that has the USDA label, it's organically approved. So that I think is another comment and perhaps something that the program should hear and listen to.

Let's see. The third parties that we

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really considered, both GSSI and ISEAL, are pretty clear. And I mean, we have some comments and I've had discussion personally and there's public comments that were submitted by the Marine Sustainability Council on this issue. But they're, you know, they're pretty clear they're public requirements.

And if you look at the wild caught seafood sustainability programs that are covered under these two categories, it covers many areas of the world and many fisheries. And you know, I think addresses a lot of issues around sustainability.

They also include, some of them, you know, fair trade and other factors around labor, which is a big issue in the seafood harvesting issue both for, you know, for human and pet production and stuff like that. It's a huge issue.

And I know there's discussion within the organic community of how we can institutionalize better treatment of workers. And I think that would be an interesting component of this that at least some and maybe all of the fishery

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standards actually include some social benchmarks for fair trade.

Let's see. I think I've covered most of the issues here. So I think maybe we could open this up for discussion.

Oh, actually, I'm sorry, there is one other issue I wanted to address. There's been some confusion about the sourced from fishing industry byproduct only. And I want to emphasize the difference between byproduct and bycatch. There's been some reference to bycatch.

So bycatch would be the harvesting of nontarget marine organisms that were, you know, not the intent. So the classic examples would be, you know, dolphins getting caught in tuna nets or turtles getting killed from gill nets. So I want to emphasize that this is the intent here is to use only byproduct only.

In other words that the fish oil would not be coming from, sourced from marine organisms, but they were harvested specifically for fish oil production. And there's even some data on that, worldwide I think about 26% of fish oil is produced

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from byproduct versus targeted.

So about a quarter of all the fish oil out there is already produced from byproduct. And that is, you know, I think that's a good thing. And I think on the other front, we don't want to support more harvesting of wild fish specifically to provide an additive, you know, an additive, an additive to food.

Although of course, you know, of course we look for plants, we do allow the harvesting of wild populations. But I wouldn't want to -- given that it's possible right now for harvesting fish, wild fish, for fish oil, I would much prefer that the organic community and organic process products that we use byproduct and not primary catch.

And then by -- and then of course bycatch is, like I said, is the inadvertent harvesting of nontarget -- nontarget species. So again, the intent of this, and we'd make this very clear in our cover letter and this listing is that again we'd be sourcing it from byproduct, i.e., what's left over after the primary purpose of the fish harvesting was complete.

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So I think we can open this up for discussion now, and.

MR. ELA: Thanks, thanks, Asa. Yeah, you picked some -- you picked some difficult topics.

Or they've been put on you. So appreciate all your thoughts on mulch and this. You've done a heavy lift on these.

Wood has a comment.

MR. TURNER: Asa, all due respect, I'm not totally sure that byproduct, bycatch description you just gave is really crystal clear.

So I might ask that you try to make that -- try that again, make that a little more concise, in a second.

The other that -- I wasn't clear about it, so maybe others are clear but I didn't hear it quite right. And then the other issue is, you know, I think this is a challenging issue, and I think this is sort of a, you know, like many things we deal with, is sort of an imperfect solution.

I'm comfortable with the -- and I definitely get uncomfortable with the idea that we link what we're doing to other standards or

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outside standards. We've done it before, I think inert process is a good example of sort of where that can go sideways and be complicated.

On the other hand, I've gotten comfortable with this, I've comfortable with over the course of our discussion and feel, even though I'm concerned about the implications of linking to outside standards, I think what you've been able to navigate here is something that I'm generally comfortable with.

MR. ELA: Okay, we've got Brian.

MR. BRADMAN: Can I, before we go there can I respond to the thoughts of the definitions?

And you know, I feel like I perhaps was a little remiss on maybe my homework here. But in fall 2020, when we were talking about native fish for liquid fish, the folks at NOC, you know, reiterated some of the definitions that we had included in that meeting.

You know, bycatch is the -- is defined as incidental or discarded catch that have low or no economic value, fish that must be discarded because of management regulations, or fish that

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are unintentionally killed by fishing gear. So there is kind of a definition.

And according to the -- and I apologize, it probably should have been in the write-up -- Magnuson-Stevens Fishery Conservation and Management Act for the MSA, that bycatch is defined as fish that are harvested in a fishery but are not sold or kept for personal use, and includes both economic and regulatory discards.

So bycatch is pretty well-defined as, you know, what were, you know, basically mistaken killed animals in the fishing product.

And byproduct is, again, is material, again byproduct is the material that is left over as we, you know, cut off the filet from a salmon or you know. And then there's this carcass that's left over, and that then becomes the raw material for fish meal or fish oil or other products.

MR. TURNER: You did a great job of dumbing it down. Thanks, Asa, I appreciate it, perfect.

MR. ELA: Brian.

MR. CALDWELL: Yeah, thanks, Asa. It

sounded like there -- you gave a statistic that I heard as the 26% of fish oil is sourced from industry byproduct. Is that right?

MR. BRADMAN: Yes, and I can tell you where that's from.

MR. CALDWELL: Well, so I -- what I'm wondering about, does that mean that if we follow these rules, that 74% of the current fish oil would not be allowed?

MR. BRADMAN: Yes.

MR. CALDWELL: Okay, great, thanks.

MR. ELA: We've got Amy.

MR. BRADMAN: I should say too that was from about five or six years ago, that data.

MS. BRUCH: All right, thank you, Asa, for your work on this. It is a little bit challenging, like everything you take on. I just had a question. You kind of briefly touched on this, but I just wanted to hear additional thoughts from you.

There was a comment linked to this specific question that I have. But it just says challenges can arise when organic regulations are

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linked to folks outside of NOP jurisdiction. And then they made comment in reference to, you know, the EPA List 3, List 4 when things change in their jurisdiction but not necessary in the NOP.

So I just am real curious on your thoughts and to apply that to this particular area.

MR. BRADMAN: Yeah, I mean, that's a great question. I think that's a real issue with this. And I mean, the original proposal that Tom had was NOA and UN, so that was two organizations.

And here we have a situation with List 3 and List 4 where we're relying on an agency within the US Government, and there's still, you know, lack of consistency and management.

So, I mean, I think that's a real issue with this. And the notion of, you know, this would be a second example, but here we're working, relying on kind of a, you know, nonprofit third-party system, so it's even outside the government. And you know, I think that does raise issues.

You know, I think there would have to be some, you know, ongoing and you know, oversight of these issues. And fortunately within the

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context of the National List, you know, these things come up for a review every five years. So I think every subset review on this there should be a reevaluation of this.

And I think hopefully if there -- we get to an organic standard for fish, we can ultimately sunset this off as a listing, you know, and just specify that, you know, the product used for fish oil production should be organic. So I, you know, I think there's a challenge there.

At the same time, I, you know, having gone through the discussions with marine materials and the breadth and depth of materials that come from in many cases wild environments that we then harvest and put into the organic system, you know, in some ways I think that is beyond the scope of a lot of what we do and think about.

And so I think there's actually potentially a plus for using this kind of external validation when the complexity of issue is beyond what's really handleable by, you know, the National Organic Program. That's of course a personal opinion.

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MS. BRUCH: Sure. Thank you so much for expanding on that.

MR. ELA: Kyla.

MS. SMITH: Thanks. A little bit more on that point. To me, it's somewhat similar but a little bit different than the listing. So these are like referencing like accreditation schemes and just being certified to those schemes.

So like the scheme would sort of have to go away is how I was reading it, which seems unlikely. Versus just having a list go away. I don't know if that is how you guys are interpreting that as well.

But it says that sourced from byproduct and certified as sustainable by a third-party to these things. So like the certification standards could change. It doesn't anything specific about the standards, it just says it has to be certified to, or like by, you know, to this other scheme.

MR. ELA: So Kyla, can you, this is a topic I'm trying to wrap my head around. So to that point, you're saying that this is an okay listing because of that?

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MS. SMITH: It seems less risky in my opinion because it doesn't seem like these organizations are likely to go away.

MR. ELA: And they can change, and we would still reference them, unlike for example, List 3 or 4.

MS. SMITH: Right.

MR. ELA: Okay. Anybody else? All right. I will say I still -- we've gotten burned enough by referring to outside sources. I'm hesitant, and on the other hand I just don't see much other solution on this because NOP is not going to certify fisheries by any stretch of the imagination, so.

And I agree, and I do want to say that, you know, this did come up. I know several Board members would not have voted to renew the sunset material if there wasn't going to be some sort of annotation on fish oil.

I think Lisa De Lima was one of the most adamant about that, but there were others. So I do want to respect their desire for some limitation on fish oil as well, just to make a note of that.

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Any other comments? All right, Jerry, shall we move to the vote?

MR. D'AMORE: Yes, we should. Thank you.

MR. ELA: All right. We have a motion to accept the proposed fish oil annotation as written in the proposal. I won't read that whole verbiage, but -- actually, I will just for the record.

So the annotation is changed to read, Sourced from fishing industry byproduct only and certified as sustainable against a third-party certification that is International, Social, and Environmental Accreditation and Labeling, ISEAL, code-compliant, or Global Seafood sustainable -- sustainability initiative GSSI recognized.

All right, the motion was made by Asa, it was seconded by Kyla. We are going to start with --

MR. BRADMAN: Steve, we also have the sentence in the future listing of fish oil 205606, and the annotation be reevaluated when organic aquaculture standards are approved.

MR. ELA: Thank you, Asa. So I will
-- correct. So the annotation does in the future
listing fish oil at 205606 and the annotation can
be reevaluated when organic aquaculture standards
are approved. Thanks, Asa.

We are going to start with Brian.

MR. CALDWELL: Yes.

MR. ELA: Jerry.

MR. D'AMORE: Yes.

MR. ELA: Carolyn.

DR. DIMITRI: Yes.

MR. ELA: Rick.

MS. GREENWOOD: Yes.

MR. ELA: Kim.

MS. HUSEMAN: Yes.

CHAIR GREENWOOD: Mindee.

MS. JEFFREY: Yes.

MR. ELA: Logan.

MS. PETREY: Yes.

MR. ELA: Nate.

MR. POWELL-PALM: Yes.

MR. ELA: Kyla.

MS. SMITH: Yes.

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MR. ELA: Wood.

MR. TURNER: Yes.

MR. ELA: Sue.

MS. BAIRD: Yes.

MR. ELA: Asa.

MR. BRADMAN: Yes.

MR. ELA: Amy.

MS. BRUCH: Yes.

MR. ELA: And the Chair votes yes.

MS. JEFFREY: Okay, 14 yes, zero no,
zero ARA. Motion passes.

MR. ELA: Great. Again, Asa, thank you
so much for --

MS. JEFFREY: Thank you, Asa.

MR. ELA: Yup, very hard work on this.

Okay, Jerry, back to you.

MR. D'AMORE: Thanks. A quick hello
to Kim, who I'm going to introduce. And would like
to acknowledge how really well she introduced her
subcommittee. I'm going to be a bit shorter. So
we have up next Kim, agar-agar at 205605A.

MR. ELA: Kim just let us know she just
dropped off.

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MS. HUSEMAN: I think I got back on.

MR. ELA: Okay, great, Kim. Go ahead then.

MS. HUSEMAN: Okay, thanks, sorry. My internet died but I was able to jump back on, so.

Okay, yes, so sunset review for agar-agar. Comments, there were a handful of comments very similar to the spring.

Agar-agar has been used for many, many, many years as a food additive. It's a versatile ingredient that don't have an organic alternative for. And you know, it lists -- it is compatible with organic principles.

There's one mention that this could potentially be a work agenda item. The manufacturing process of agar-agar can be in either a synthetic or a nonsynthetic form. And as it is listed, it's listed as nonsynthetic. It has to do with the type of species of algae that's used for the production of agar-agar. And it should be taken into consideration.

However, when looking at the way that it is listed today and the entities that are using

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agar-agar, there's overwhelming support for it to be relisted.

So that's the (Audio Interference). I do think that at some point in time, you know, we definitely do look at that listing from a synthetic to nonsynthetic and the way that it's produced. But today I support the relisting as it's written.

Back to you, Jerry.

MR. D'AMORE: I would ask if there any comments, or comments -- excuse me, or questions.

MR. ELA: I am not seeing any, and to your point, Kim, I think that is important. We ran into that with ammonia extracts with, you know, two different possibilities.

And I think the assumption is, but it always is good to clarify, that if it's listed as nonsynthetic and there are two methods, that we would reject the synthetic form. But I think it's always good to be clear about that and make sure certifiers are aware of that.

Anything else before we move to the vote? All right, the motion was to remove

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agar-agar from the National List. It was made by Kim, seconded by Jerry. And we are going to start with Jerry.

MR. D'AMORE: Jerry says no.

MR. ELA: Carolyn.

DR. DIMITRI: No.

MR. ELA: Rick.

MS. GREENWOOD: No.

MR. ELA: Kim.

MS. HUSEMAN: No.

MR. ELA: Mindee.

MS. JEFFREY: No.

MR. ELA: Logan.

MS. PETREY: No.

MR. ELA: Nate.

MR. POWELL-PALM: No.

MR. ELA: Kyla.

MS. SMITH: No.

MR. ELA: Wood.

MR. TURNER: No.

MR. ELA: Sue.

MS. BAIRD: No.

MR. ELA: Asa.

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MR. BRADMAN: No.

MR. ELA: Amy.

MS. BRUCH: No.

MR. ELA: Brian.

MR. CALDWELL: No.

MR. ELA: The Chair votes no.

MS. JEFFREY: Zero yes, 14 no, zero ARA.

Motion to remove fails.

MR. ELA: Back to you, Jerry.

MR. D'AMORE: Well, Kim, the seat's still warm, so you're up next with animal enzymes at 205605A.

MS. HUSEMAN: Thank you, Jerry.

Animal enzymes is a sunset review. We again had a handful of fall comments very similar to the comments from the spring. Animal enzymes is -- are used for organic cheese production. They are, from commenters' standpoints, very vital in specific cheese production.

Animal enzymes include rennet, which is animal-derived; catalase; animal lipase; pancreatin; pepsin; and trypsin, sorry. The TR that was conducted did heavily focus on rennet,

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and there was a comment made that other enzymes weren't covered in the TR.

There's a push to find or utilize organic animal enzymes, but I think through the comment process there's significant voices basically stating that it's not commercially available as it stands today.

This is an area that I would encourage the market space, the stakeholders, to put more time and effort into. But to delineate organic versus not organic animal enzymes just does not have the buy-in today.

I would say so from the perspective and listening to stakeholders, cheese production is a huge component I think to the organic space, and this is a vital ingredient in order for that to be achieved.

That's my summary for animal enzymes.

MR. ELA: All right, are there any questions? I am not seeing any. Jerry, are you ready for us to move to the vote?

MR. D'AMORE: I would like that, Steve, thank you.

MR. ELA: Motion to remove animal enzymes from the national list. The motion was made by Kim, and seconded by Jerry.

We are going to start with Carolyn.

DR. DIMITRI: No.

MR. ELA: Rick?

MS. GREENWOOD: No.

MR. ELA: Kim?

MS. HUSEMAN: No.

MR. ELA: Mindee?

MS. JEFFREY: No.

MR. ELA: Logan?

MS. PETREY: No.

MR. ELA: Nate?

MR. POWELL-PALM: No.

MR. ELA: Kyla?

MS. SMITH: No.

MR. ELA: Wood?

MR. TURNER: No.

MR. ELA: Sue?

MS. BAIRD: No.

MR. ELA: Asa?

MR. BRADMAN: No.

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MR. ELA: Amy?

MS. BRUCH: No.

MR. ELA: Brian?

MR. CALDWELL: No.

MR. ELA: Jerry?

MR. D'AMORE: No.

MR. ELA: If I have this right, Chair votes no.

MS. JEFFREY: Zero yes, 14 no, zero ARA. Motion to remove fails.

MR. ELA: All right, back to you, Jerry.

MR. D'AMORE: Yes, sir.

Next up is Wood, calcium sulfate - mined, 205-605(a),

And, I would like to point out to the team here and the world at large, that Wood will then present glucono delta-lactone, and what that would do is prevent him from being sandwiched in between carrageenan.

So, he'll do two in a row. It will be one step out of sequence.

Thank you.

MR. TURNER: You mean sandwich and

carrageenan, Jerry.

MR. D'AMORE: Yes.

MR. TURNER: Thanks.

So, the sunset review is for calcium sulfate - mined. This is a coagulate used in tofu manufacturing; really essential to, deemed essential by many in the community to soft and silky tofu types. It can be used in other, have other uses as well.

Dough conditioners, perming agents, gelling ingredients, and so on.

I think this is generally considered to be by the community and a largely essential product.

Although the listing doesn't get, it doesn't get by comparison if I looked at GDL, the next one I'm going to present, it doesn't get as many comments as that, and it tends to have sort of somewhat similar, somewhat similar uses.

Most of the feedback from the community is that it strongly supports relisting, and many consider it to be an essential part of organic production certainly, in tofu manufacturing.

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I have flagged because of my own concern about this in the, in the sunset review, the fact that you know, this is produced from mined gypsum or alabaster, it's calcium sulfate.

And, it is mined in places that are maybe considered to be sort of sensitive areas, noting that the particular calcium sulfate comes often from Grand Staircase Escalante National Monument in Utah.

And, I did put that in there because I am concerned about this, not just the mining of this particular product, for this particular product, but sort of mining impacts in general.

And, so I'm not recommending that we remove it from the list, but I would never, would not recommend it in the current scenario that we remove the list.

But I do urge the community to continue to help bring forward any indication of, to help the board learn more about impacts from mining of these kinds of products, and other products in the future.

And, you know, there is limited support

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for that additional research in this in the future from some in the community.

So, but in general, strong support from the community and that's all I have.

Thanks.

MR. D'AMORE: Okay. Any questions or comments, please?

(No audible response.)

MR. ELA: I am not seeing any. Should we move to the vote, Jerry?

MR. D'AMORE: Please do, Steve.

MR. ELA: So, the motion is to remove calcium sulfite - mined from the national list. The motion --

MR. TURNER: Sulfate.

MR. ELA: -- was made by --

MR. TURNER: Sulfate.

MR. ELA: Did I say that wrong? To remove calcium sulfate - mined from the national list. The motion was made by Wood, seconded by Jerry, and we will start with Rick.

MS. GREENWOOD: No.

MR. ELA: Kim?

MS. HUSEMAN: No.

MR. ELA: Mindee?

MS. JEFFREY: No.

MR. ELA: Logan?

MS. PETREY: No.

MR. ELA: Nate?

MR. POWELL-PALM: No.

MR. ELA: Kyla?

MS. SMITH: No.

MR. ELA: Wood?

MR. TURNER: No.

MR. ELA: Sue?

MS. BAIRD: Sorry, I had to turn my
phone off.

No.

MR. ELA: Asa?

MR. BRADMAN: No.

MR. ELA: Amy?

MS. BRUCH: No.

MR. ELA: Brian?

MR. CALDWELL: No.

MR. ELA: Jerry?

MR. D'AMORE: No.

MR. ELA: Carolyn?

DR. DIMITRI: No.

MR. ELA: And, the Chair votes no.

MS. JEFFREY: Zero yes, 14 no, zero ARA.

The motion to remove fails.

MR. ELA: All right, back to you, Jerry.

MR. D'AMORE: Okay. Next, as said a moment ago is Wood, of glucono delta-lactone, at 205-605(a).

MR. TURNER: Thanks, Jerry.

The review is for the sensitive glucona delta-lactone, which you've been referring to as GDL, produced by the oxidation of D-glucose with bromine water, and it is prohibited.

Another material used in the production of tofu, particularly silken tofu, thought to be the only material that can produce some of the physical and sensory components favored in that product.

Generally considered to be a safe product with no risk to, to human health or environmental health.

This originally came on the list out

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of a petition for the coagulation of tofu.

There is some ongoing interest in annotating this, some limited interest in the community in annotating this material, suggesting somehow that there's other, other ways to get that same, that same characteristic that I described.

But it's very limited, very limited, and not a huge outpouring from the community. Lots of support from certifiers, from users of material obviously, for continuing to relist it.

We continue to ask questions, I think as we've said in the sunset documents. We continue to have some questions of the community as we try to understand this more broadly.

But in general, strong support for the material and I, the subcommittee made a motion to, moves to keep it on the list.

MR. D'AMORE: Well, thank you, Wood.

I would ask of the full board if we have any questions or comments?

(No audible response.)

MR. ELA: I am not seeing any.

So, with that, should we move to the

vote, Jerry?

MR. D'AMORE: Yes, sir.

MR. ELA: There is a motion to remove glucono delta-lactone from the national list and I am so impressed Wood, that you just rolled that right off your tongue.

Motion was made by Wood, seconded by Jerry, and we will start with Kim.

MS. HUSEMAN: No.

MR. ELA: Mindee?

MS. JEFFREY: No.

MR. ELA: Logan?

MS. PETREY: No.

MR. ELA: Nate?

MR. POWELL-PALM: No.

MR. ELA: Kyla?

MS. SMITH: No.

MR. ELA: Wood?

MR. TURNER: No.

MR. ELA: Sue?

MS. BAIRD: No.

MR. ELA: Asa?

MR. BRADMAN: No.

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MR. ELA: Amy?

MS. BRUCH: No.

MR. ELA: Brian?

MR. CALDWELL: No.

MR. ELA: Jerry?

MR. D'AMORE: No.

MR. ELA: Carolyn?

DR. DIMITRI: No.

MR. ELA: Rick?

MS. GREENWOOD: No.

MR. ELA: And, the Chair votes no.

MS. JEFFREY: Zero yes, 14 no, zero ARA.

Motion to remove fails.

MR. ELA: And, Wood, I know you're going to have to leave in a little bit. If you would just let us know when you need to drop off the call so we know what to change the vote counts.

MR. TURNER: I will, thanks, Steve.

MR. ELA: All right, Jerry, back to you.

MR. D'AMORE: Okay. Next up is carrageenan, and it's mine to do.

Got to share with you that listening to this morning, I do see similarities with some

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of what Asa said with fish oils, and what Ken said with agar agar, and the, and sort of the complexity around, you know, aquatic products, marine products.

Okay, carrageenan 205-605(a), a non-organic substance allowed as an ingredient in or on processed foods labeled, processed foods labeled for organic.

This is a food additive used as an emulsifier, thickener, and gelling compound, mostly in meat and dairy products. It is not animal sourced.

Carrageenan is an acceptable vegan alternative.

It is grass or generally accepted as safe by the FDA as a food additive.

Carrageenan is manufactured by heating edible red algae in a hot alkali solution, mostly using potassium hydroxide.

Most of the seaweed sourced from carrageenan comes from either China or the Philippines. International acceptance and the EU accepted for organic dairy foods, including baby

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formulas.

Canada accept it as a food additive for organics without restriction.

Japan accept it as a food additive for organic dairy production.

IFOAM accepted -- (audio Interference)

MR. ELA: Did everybody else lose Jerry, or is it --

(Simultaneous speaking.)

MS. ARSE ARSENAULT: Yes.

MR. ELA: -- just me?

Okay. Jerry --

(Simultaneous speaking.)

MS. ARSENAULT: Jerry, can --

MR. ELA: -- we lost you.

MS. ARSENAULT: He might drop off. It sometimes takes a moment until.

MR. ELA: Let's give him a second here and if he doesn't, we will move on to me with tartaric acid, and then come back to him.

(Pause.)

MS. ARSENAULT: He just left. Oh, he's back.

MR. ELA: Okay.

Jerry, we lost you for a minute there, so I can't think exactly where you dropped off.

MS. ARSENAULT: Now you're on mute.

PARTICIPANT: You're muted.

MR. D'AMORE: My screen went completely blank. I can ask you, please, if you heard anything about environmental issues?

DR. DIMITRI: I heard up to IFOAM.

MR. D'AMORE: Okay, thank you very much.

And, IFOAM accepts it as a food additive with no caveats.

Codex accepts it as a food additive in plant based foods, dairy products, and dairy substitutes.

Moving on to environmental issues, left unchecked, algae farming can be harmful to near-shore habitats such as coral reefs, exasperated by the fact that the bulk of the source products come from overseas and it is most unlikely it would be, it is most likely it would be difficult to control good farming practices.

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This is further complicated because it is relatively easy and cheap to farm algae, and it can be quite profitable, even on a small scale, thus giving rise to many small and remote farming operations.

I'd like to focus a second on the environmental pluses, and that they are with good farming practices, i.e., locating in deeper waters with sandy bottoms; seaweed agriculture can be beneficial.

It can oxygenate near-shore waters and improve and remove impurities. It can buffer wave action; it can stabilize marine pH. Further, as a former food production that does not use fresh water, and reportedly has no chemical inputs.

Human health concerns. The last sunset reviewed, as well as this one did, heavily with human health concerns and early studies indicated that serious gut issues with the potential to cause cancer.

Subsequent studies have indicated that the initial studies were flawed, and that substitute, and that subsequent studies could not

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replicate the earlier findings.

In 2014 the Joint FAO-WHO Expert Committee on Food Additives, or JECFA, concluded that carrageenan is unlikely to be absorbed, and unlikely to have a direct effect on the gut.

It is important to note that during the last sunset review, the NOSB voted 10-3 to remove carrageenan from the nation list. This was with one absent, and one refusal.

It is also important to note that the NOP did not implement the NOSB recommendation.

Stakeholder input. There are about 14 stakeholder comments leading into the spring meeting. Eight were in favor of keeping carrageenan on the national list, with four opposed.

The remaining two indicated that carrageenan was not used within their community.

It has been difficult to quantify the stakeholder responses leading into this fall session as they were, as there were well in excess of 50 private testimonials that may fall in my mind, under the category of form letters, all of which

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were against relisting with nearly all citing human health concerns.

Having acknowledged these testimonials, I will put them out of the total and report that there were about 25 comments submitted for this fall season.

Several were not in favor of relisting, excuse me, seven were not in favor of relisting, 12 supported relisting, and two indicated no position.

These 21 responses were mostly thoughtful and well-reasoned.

IFAC provided a very thorough written document in favor of relisting. During the oral comment session, they also shared a statistic that I found to be quite compelling. Namely, that since 2016, 160 new products have been launched with carrageenan. Or at least containing carrageenan.

I'd like to tell you that I know exactly what the breakdown is between conventional and organic. And, I don't know. Initial indications are that there are a good number of these newly launched products that are, that are organic.

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With that, I'll open it for questions,
Steve.

MR. ELA: Okay, are there questions,
comments?

(No audible response.)

MR. ELA: Wow, okay. Mindee?

MS. JEFFREY: Thank you.

So, one commenter said that most
commercially available sources -- (audio
Interference)

MR. D'AMORE: What? I've lost you,
Mindee.

(Simultaneous speaking.)

MS. JEFFREY: And, I was --

MR. D'AMORE: I'm sorry, say again?

MS. JEFFREY: -- wondering if someone

--

MR. D'AMORE: Mindee, could you start
again? I missed that, I'm sorry.

MS. JEFFREY: Oh, sorry. Can you hear
me now?

MR. D'AMORE: I do.

MS. JEFFREY: One commenter noted that

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most commercially available sources are synthetic.

And, I would love it if someone in certification would walk me through that in this listing, as a non-synthetic allowed. What's happening with that in the sense of like are we allowing synthetics?

I'm confused by that is what I'm saying.

And, I'd love to hear somebody else's wisdom on it. And, then I have another point if somebody wants to answer that one first.

MS. GREENWOOD: Could you cast a wide net on asking that, because I would not give great satisfaction to the crowd on that one.

MS. SMITH: I mean, so I would just say again not having, this is not my day today of doing material review, but as it is listed as a non-synthetic, I would assume that MROs and certifiers are looking at the manufacturing process and prohibiting synthetic, or carrageenan made with a synthetic process, because it is prohibited and only allowed as non-synthetic.

I did also note that a couple of commenters did ask us to look at this

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classification. So, I think that is something that the handling subcommittee can take up.

But, I would say that, you know, that is part of the process to look at, of doing material review is to look at the manufacturing process, and to prohibit forms of ingredients that don't meet the processing requirements per the list.

MS. JEFFREY: Thank you. Do mind if I ask a second question?

MR. ELA: Go ahead.

MS. JEFFREY: Just this is a tough one. I definitely talk to customers about it a lot in the retail landscape, and feel the pain on all sides of it. And, it is uncomfortable with me sort of no matter which way it goes.

But right now, looking at the many sides of it, I am curious about other people's feelings on relisting and work agenda item for a reclassification, and potentially annotating it for some narrow uses where we could maybe make a graceful compromise in the dissonance.

MR. ELA: Okay. So, Mindee, I'm hearing that you maybe would vote to continue on

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the list, but then hope for a work agenda item to narrow the, to annotate it more narrowly.

Is that correct?

MS. JEFFREY: Yes, thank you for clarifying.

MR. ELA: All right. Next, let's hear Nate and then Asa.

MR. POWELL-PALM: I just wanted to upvote what Mindee just said. I think that's, hearing public comments that there is concern about the health effects of the material, and the external widespread presence, but also that it is used a lot and we don't have really clear stand out science about the health effects.

And, so I think to make everybody a little bit happy to quote Mindee, would be I think a really great work agenda item for us in the future having passed this.

MR. ELA: Then, Asa.

MR. BRADMAN: I have a couple comments. I look forward to people's input on some of things I'm going to say, and what their perspective is.

One, for me with this compound, it

partly is that you know, a previous board voted to remove it. And, of course at one point, it was also listed.

But I feel like there's a certain principle that you know, when a board made a recommendation, and even though it wasn't followed by the NOP, I feel compelled to respect that recommendation.

And, that it concerns me about having a political process where you know, we make a recommendation and then it doesn't get incorporated, or even if it does, and then you know, five years later we you know, different people try to overturn that.

So, I feel like you know, my vote on this would be to just remain consistency with the earlier recommendation out of respect for that board's deliberation.

But other concerns I have about this material is you know, the assertion in this I don't know if you could comment on this Jerry, but that you know, as a processing aid, it can be an unlabeled ingredient in, in foods.

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And, the whole notion of unlabeled ingredients you know, concerns me. I know I voted on celery powder and I said yes to it, and there are some potential health concerns with the nitrates.

But of course, there's a long you know, century long or more, use of that material, and it's also a labeled ingredient so there's an opportunity for consumer choice.

So, I'd be interested in hearing comment on the potential for this being unlabeled if it's used as a processing aid.

And, then there is a lot of consumer opposition to this. And, one kind of nugget of wisdom I got from a previous member of the board was that you know, we have a consumer seat on the board, and that's to reflect consumer interests.

And, you know, it might be viewed that there's a tension there between consumer trends and maybe on scientific issues, which you know, have been part of the debate around this, around this situation of safety that I also think we have to respect consumer views.

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But you know, without I think the assertion would be from one side that, that consumer reviews might be considered like mob rule in some cases.

But you know, I think there is a history with this material and, and that the consumer perspective also deserves respect.

So, I'd be curious to see how other people feel about those comments.

MR. D'AMORE: Could I jump in and get to you just in a second? I just got on chat, a comment how can we dismiss form letters or petition signatories when, when counting positions. No equal treatment to members of the public.

I honestly try to avoid that. I've enumerated it as being well in excess of 50 and that each and every one of them were against it.

And, the overwhelming of those were citing human health concerns.

So, I respect that rebuttal and if I didn't cover it to the sender's satisfaction, I apologize.

Thank you.

MR. ELA: And, I want to step in and not to admonish you, Jerry, at all, but while the public can use the chat, this like if we were in session in-person, we would not allow stakeholder comments --

MR. BRADMAN: Okay.

MR. ELA: -- to the board.

And, so, I think the chat is between our stakeholders but is, and while the board may read it, I would caution the board from using those comments because we would not allow that in an in-person meeting either.

So it's I almost would suggest don't pay attention to the chat so we're not influenced by that.

So --

MR. D'AMORE: Steve, I will actually accept that as an admonishment, and thank you.

MR. ELA: No, it's just that a difference in virtual versus in-person meetings. So, you know, it's hard.

We're going to go to Brian and then --

MR. D'AMORE: No, I'd like to take it

back to Asa, please. If I could.

MR. ELA: Oh, did I miss Asa? I'm sorry.

MR. D'AMORE: No, he commented and he had a number of really good points. And then one that plagues me most, and I don't have satisfaction in my own mind, is the notion that it could become a, an ingredient it would have to be on the label.

In other forms, you know, contact, et cetera, it wouldn't. And, I do see that. I want to acknowledge to the community and to Asa, that that to me is a concern.

MR. ELA: Fair enough.

So we're going to go to Brian, then Mindee, then Nate.

MR. CALDWELL: Thanks, Jerry, and thanks, Steve.

Yes, I am in one of the consumer public interest seats on the board, and I do take those comments quite seriously.

A couple of sort of question-comments. And, one is that we did see another article, sort of research summary article, that seemed to

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indicate that there still were health questions raised by the research that were not included in the ones that, you know, where they couldn't repeat the results and that sort of thing.

But there were still outstanding questions with the research. Sort of a literature review, these are really valuable for us to use.

And, the second point I want to make is that there seem to be a lot of disputes about how, what the levels of contaminants and sort of secondary compounds were in the carrageenan products. And, so that is another, and some of them are quite clearly toxic.

So, that was another thing that sort of came up to me and raised the question and I don't know the answer to it, but I'm wanting to sort of lean down on the side of public safety and the consumer confidence on this issue.

MR. D'AMORE: Could I have one point of clarification, Brian? And, what was the date on the reference publication?

MR. CALDWELL: That is a great question, and I'm going to have to --

(Simultaneous speaking.)

MR. D'AMORE: Well, it's rhetorical.
I'm sorry.

And, then I would ask on top of that,
who were the cited contributors.

MR. CALDWELL: Oh boy.

MR. D'AMORE: And, I read it. It was
a really well-balanced piece, but it was from 2018,
which is not ancient.

And there were references to you know,
to the folks that have been involved all along.
And, that's not to minimize it.

Thank you.

MR. ELA: We've got --

(Simultaneous speaking.)

MR. CALDWELL: Yes, I am looking, I'm
sorry, I am looking at it here in 2018 is correct,
and I am not familiar with any of the authors.
I really, that's out of my realm.

But it did specifically respond to the
issue that the claim that some of these studies
had been refuted because they couldn't be
replicated. And that was part of the discussion.

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MR. D'AMORE: And, excuse me for butting in again. You have honed in on for me, one of the two major points: the labeling and the human health concerns. And, you could spend a career going on the back and forth on human health concerns.

It is my opinion that in the intervening five years, that they have been not softened by the editors, but, or the writers, but softened by overall opinion.

But that's just my, that's my interpretation.

MR. ELA: All right, let's go to Mindee, and then Kyla.

MS. JEFFREY: Thank you.

I spent about a year walking Good Earth's customers through this one as it was up for review last time. Talking to people on the ground about their health concerns, and ingredients that they needed to be really careful about.

And, Good Earth was able to walk our consumers through this one, and help them find what was the transparency that they needed.

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In fact to me in the sense of the really respected fact that PCC has a prohibition on the ingredient, and that their customers support them in the prohibition on the ingredient.

So, I don't know if that helps you all, but there is a lot of dialogue going on in the retail landscape around this one.

And, I appreciate how much manufacturers have worked on this, and have solved a lot of the problems and made products available organically.

And, for me, I sort of come back to the international acceptance in that I want to try to get this one right.

And, I'm motivated to look at it from an annotation perspective, and whether or not you could limit it as an invisible processing aid and give it a couple of central uses.

I don't know if that's possible, I'm just saying in a grand scheme of compromise, I'm willing to work on it.

MR. ELA: We have Kyla, and then Sue.

MS. SMITH: Yes. I think that this

material is the one maybe that I'm struggling the most with because of all the things that you all have brought up already. The human health concerns, the past board vote, the fact that it still seems to be used for specific functionalities.

And, so I think that yes, I just want to reiterate sort of what Mindee had said in that maybe there is a way to restrict it that would be a compromise since it does seem to be still you know, used a decent amount, and you know, some, for certain very specific functionalities that we heard in the public comment process.

So, anyway, I'm really struggling with this one guys.

MR. ELA: Okay, we've got Sue and then Jerry.

MS. BAIRD: I set in when this was reviewed the last time in St. Louis, Missouri, it was when they actually had announced that I was going on the board.

The passion that we heard from the consumers at that NOSB meeting was incredible, with

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most of the consumers stating we don't want it.

I haven't seen quite the passion this time but I'm not on this committee, so perhaps I haven't heard feedback.

It's conflict of who puts out the health reports, seems to me like. Some say yes, it has a lot of health issues; others say no, that's not true.

These reports are not vetted through the scientific world, and therefore, perhaps not valid.

There's been a lot of confusion on how it should be listed. I, and yet there are processes but certainly that says we need this product.

I'm so torn on this. I was when it first came up five years ago, or the first in my life at least.

And, now we hear the same confusion and passion from those who say it causes health issues, to those who say that's not true at all.

MR. ELA: All right, thanks, Sue.

Jerry, then Carolyn.

MR. D'AMORE: Okay, well between the

last three comments, I think we really have focused on the dilemma.

And, one of the things that I didn't highlight this time around, which may have been an oversight, are those areas where there is truly distinct, unique, better than functionality.

And, I am gravitating towards the annotations being talked about. I think that they're valid.

As I told you, I've got my two top ones, which are the human health concerns even though I've come to my own position on that, and the labeling aspect.

So, I thank you all for your comments there.

MR. ELA: Okay, Carolyn.

DR. DIMITRI: I'm actually kind of stunned that this conversation has gone on so long, and that we're actually sort of talking about relisting under certain conditions, a product that a previous board has delisted.

And, I just don't think that we'd be doing anyone any favors by saying that it's okay

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even under certain circumstances.

So, I just, there's no way I would vote to put this back on the list, or whatever it's fuzzy state is.

If the NOP decides you know, to ignore what we say, well, they've done that before. And that's a whole different story.

But I just, I think maybe we don't hear consumer outcry right now because consumers think it's a settled deal.

MR. D'AMORE: A settled deal insofar as it will not be carried forward by this group.

DR. DIMITRI: No, I mean I think that consumers probably you know, don't think it's being used. I mean and that's a topic for another day.

But I just think that consumers, the board voted on it and it was, and probably in the consumer mind that just settled the whole issue and they may not you know, follow up with what the NOP does.

MR. D'AMORE: So, the other conversation I would like to have at another time because now is not at all appropriate, is the NOSB

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NOP discussion.

I don't feel we're ignored. I just think there's separate criteria, and I'd really love to have that conversation as a group.

Thank you.

MR. ELA: Yes, I want to throw in my own comments now.

I've been kind of waiting but to hear everybody else's, but I tend to agree with Carolyn on this that for me, I want to hear if we're going to change what a previous board has said, I really want to hear compelling comments about why they, why their decision was incorrect.

And, you know, some of the health effects that you know, certainly are in that. But I guess I haven't seen enough evidence.

If it comes back wishy-washy, then I tend to err on the side of caution and agree with the previous board.

On the essentiality side, you know, so many manufacturers dropped carrageenan out of their products in response to the previous board's vote.

It seems, it makes me question essentiality more.

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Not everybody dropped it out of their product and you know, I don't want to disrespect that, but you know, it seems like one of these that you know, we so cautiously add things to the national list, and I think we really struggle to delist them. This is one I lean towards the delisting because this can go on forever.

And, then just as it says you know, under the justification for vote, you know, are there other alternatives? And, you know, that comes back to the essentiality. How many manufacturers quit using it, and you know, so then I kind of say well, there are availability of alternatives.

Jerry, you mentioned I think it was IFAC with the number of products coming on to the market with carrageenan. And, I think it is important to know which ones were organic, and which ones were conventional.

Because if 115 of them were conventional, then you know, I think the essentiality comes back.

And, just so I take that number with it could be 116 organic products, too. But without

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knowing that breakdown, I have a hard time just taking that number at face value.

So, I tend to agree with Carolyn. I haven't seen compelling evidence to go against that ruling by the board.

And, in fact, I saw on public comments, you know, basically again from our stakeholders saying please take it off in general.

And, I do recognize that the letter writing campaign, you know, it all does the same thing but however many consumers took the time to let us know about something.

Yes, and so it looks like you have another comment, Jerry, and then maybe we should move on.

MR. D'AMORE: Yes, Steve.

I can't agree more with particularly the last comment that you made. And, had hoped to cover that adequately, but obviously not.

So, the only other thing that I would throw out there Steve, is the distinction between essentiality and functionality.

And, the people who got off using

carrageenan to move this, and I've done a fair amount of interviewing outside of our circle.

And, what I'm getting back is yes, there are substitutes but they're nowhere near as good.

So I'd like just to put that out there and then I'll, that's it for me.

Thank you.

MR. ELA: Let's see here. We've got, let me, there we go. Nate, and then Mindee.

MR. POWELL-PALM: I was just hoping to pose to the program if they had anything to say on why it didn't go to rule making from the last recommendation by the board.

If Jenny could speak to that at all.

MR. ELA: She may have had to drop out

--

MS. JEFFREY: That was actually my question too, because my, I have a thinly veiled recollection of the specifics that could matter to me.

So maybe Devon's on?

MR. ELA: Yes, go ahead, Kyla. I know Jenny had to drop off --

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(Simultaneous speaking.)

MS. SMITH: Yes --

MR. ELA: -- for a half hour there.

MS. SMITH: -- I mean I don't, I know what they said and can repeat that, but don't know the like, decision making that led to that final result.

So, I could at least say that that it was explained that they did a review of the public comment, and that they deemed there was sufficient evidence in the public comment to the NOSB, that carrageenan continued to be necessary for handling agricultural products because of the, anyway because of the unavailability of substitutes. So, that's what they said.

What led them there, and like why they didn't do a proposed rule to then solicit that, that would have been what I would have expected and that wasn't what happened.

So, I don't know why they didn't do that.

MR. ELA: Yes, and I guess anybody else besides Jenny that, from the program that wants to chime in on that?

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I don't know if Devon you're on the call,
I don't have a complete list here.

MR. PATTILLO: I don't know if I would
have anything to add in addition to what was
included in the notice itself when we renewed it.

MR. ELA: Okay. Thanks, Devon.

All right --

MS. HEALY: Steve, this is Erin. I
just wanted to mention Jenny's at another meeting
until about another 15 minutes. So she's meeting
with the administrator right now.

We can have her chime in when she gets
back on line though.

MR. ELA: Okay, I'll just ask the board,
do you want to defer the vote on this till after
Jenny can speak to it? Or shall we move forward?

Does anybody object to moving forward?

MR. D'AMORE: The Chair votes to move
forward.

MR. ELA: With that, I don't see any
other comments.

Jerry, is it okay to move forward with
the vote?

MR. D'AMORE: Yes, sir.

MR. ELA: Okay, we have a motion to remove carrageenan from the national list. It was made by Jerry and seconded by Kyla.

We are going to start with Mindee.

MS. JEFFREY: Of course you are.

MS. JEFFREY: Um.

MS. GREENWOOD: I think Mindee's frozen.

MS. BRUCH: She did that on purpose.

MS. JEFFREY: Respectfully, no.

Can you hear me?

MR. ELA: Yes, we got you.

MS. JEFFREY: I said no. You got me, okay, thank you.

MR. ELA: Now we've got you, yes.

Logan?

MS. PETREY: No.

MR. ELA: Nate?

MR. POWELL-PALM: No.

MR. ELA: Kyla?

MS. SMITH: No.

MR. ELA: Wood?

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MR. TURNER: Yes.

MR. ELA: Sue?

MS. BAIRD: I'm going to say yes.

MR. ELA: Asa?

MR. BRADMAN: Just confirming, yes is
to remove it from the list?

MR. ELA: Correct.

MR. BRADMAN: Okay, yes.

MR. ELA: Brian, or Amy? Excuse me,
I about skipped you there.

MS. BRUCH: That's okay, yes.

MR. ELA: Brian?

MR. CALDWELL: Yes.

MR. ELA: Jerry?

MR. D'AMORE: No.

MR. ELA: Carolyn?

DR. DIMITRI: Yes.

MR. ELA: Rick?

MS. GREENWOOD: Yes.

MR. ELA: Kim?

MS. HUSEMAN: Yes.

MR. ELA: Chair votes yes.

(Pause.)

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MR. ELA: Making the secretary do their work.

MS. JEFFREY: Yes, come on.

MR. D'AMORE: Steve, I'd just have a quick question. Was Wood on this one, too?

MR. TURNER: I voted yes.

MR. D'AMORE: Thank you, sir, thank you.

MS. JEFFREY: Nate, what did you get?

MR. POWELL-PALM: Nine to five.

MS. JEFFREY: Me, too. So, nine yes, five no, zero ARA.

The motion to remove fails.

MR. ELA: All right, thank you very much.

Jerry, back to you for the next material.

MR. D'AMORE: Could we just review what was just said about carrageenan on the vote, please?

(Simultaneous speaking.)

MR. POWELL-PALM: Yes, I --

MR. ELA: So the --

MR. D'AMORE: I didn't think you

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counted it.

(Simultaneous speaking.)

MS. JEFFREY: Wait, did I say it wrong?

I'm sorry, thank you. Please clarify.

Nine yes's, nine yes's to remove, five no's, and it needs 10, right?

MR. ELA: Correct, so the motion does fail.

MR. D'AMORE: So, moving on I'll remind the group that Wood has already done his glucono delta-lactone, and that puts us with Steve next on the tartaric acid at 205-605(a).

MR. ELA: All right, thank you, Jerry.

So, tartaric acid is made from grape wine and is used in a number of purposes, primarily as a pH adjuster.

I won't go further into the use but the comments really kind of distill, or precipitate maybe I should say, out to whether an organic supply exists.

Are there enough organic grapes in the market at this point, to make tartaric acid from organic grapes.

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And, you know, as several people noted it's kind of a chicken or the egg situation of tartaric acid won't be made from organic grapes unless there is a necessity for it. And, the only way to make a necessity for it is to remove the, the allowance for non-organic grapes to be used.

One commenter said well, you'd have to take organic grapes from making wine to making that tartaric acid. My understanding, I could be wrong, is that that it's not an either/or but it's a byproduct of the process.

So, you know, it's one of those difficult things. Is there an adequate, potentially an adequate organic supply available? That wasn't clear from the public comments.

There could be, but from what I understand, it is not there now. So I don't know what the lag time would be to make an organic supply.

I suspect it would be enough that we would be disruptive to remove it.

But you know, this really is the dilemma on some of these materials. They possibly could be made, but they're not being made now.

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So, I tend to fall on the side of essentiality that it's still needed because there isn't an adequate organic supply. But I would sure like to know more if there really could be.

So, with that, I will open it up to comments and questions.

Kyla?

MS. SMITH: Yes, thanks.

I think I brought this up I don't know somewhere during this meeting, but that there's several items on 205-605(a) that sort of already have that commercial availability clause to use organic forms, or organic substitutes for some.

And, there was definitely a commenter you know, wrote in about applying, or commercial availability more broadly to 605(a) and I found that to be interesting.

And, there's a couple of things that are being talked about today that lead one you know, in that direction and tartaric acid is one of those items. And, I think we talked about one maybe earlier as well.

So, anyway, I just thought it was

interesting and something the handling
subcommittee can talk about further.

MR. ELA: Yes, and Kyla, you probably
know better than I do as a listee, I'm going to,
as a listee wonk, that we would need regulatory
change to do that, wouldn't we?

MS. SMITH: Yes.

MR. ELA: Okay. Other comments,
questions?

(No audible response.)

MR. ELA: I don't see any.

Jerry, can we go to the vote?

MR. D'AMORE: Please do.

MR. ELA: The motion to remove tartaric
acid from the national list was made by myself,
Steve, seconded by Jerry.

And, we will start if I talk slowly to
flip the page, with Logan.

MS. PETREY: No.

MR. ELA: Nate?

MR. POWELL-PALM: No.

MR. ELA: Kyla?

MS. SMITH: No.

MR. ELA: Wood?

MS. JEFFREY: He's absent now.

MR. ELA: He is absent? Okay.

So, Sue?

MS. BAIRD: No.

MR. ELA: Asa?

MR. BRADMAN: No.

MR. ELA: Amy?

MS. BRUCH: No.

MR. ELA: Brian?

MR. CALDWELL: No.

MR. ELA: Jerry?

MR. D'AMORE: No.

MR. ELA: Carolyn?

DR. DIMITRI: No.

MR. ELA: Rick?

MS. GREENWOOD: No.

MR. ELA: Kim?

MS. HUSEMAN: No.

MR. ELA: Mindee?

MS. JEFFREY: No.

MR. ELA: And, Chair votes no.

MS. JEFFREY: So, we have zero yes, 13

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no, one recusal, and zero abstentions.

I said that in the wrong order, I apologize to the transcriptionist.

So, the motion to remove fails.

MR. ELA: Okay. One absent, no --

MS. JEFFREY: Yes.

MR. ELA: -- recusals.

MS. JEFFREY: Yes.

MR. ELA: No abstentions.

MS. JEFFREY: Zero yes, 13 no, one absent.

MR. ELA: One absent.

MS. JEFFREY: Zero recusals. Zero abstentions, zero recusals, one abstention.

MR. ELA: We got you.

All right, we're going to move on.

Jerry, it is back to you.

MR. D'AMORE: Thank you.

(Simultaneous speaking.)

MS. JEFFREY: I'm sorry, just I think it's worth noting that we're nine now for the super majority for votes, because Wood is absent unless he can call back in.

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MR. ELA: Yes, that is a good point.
Thanks, Mindee.

MS. JEFFREY: Thanks, Mindee.

Next up is Carolyn Dimitri, that's
cellulose at 205.605(b).

DR. DIMITRI: Okay, this is a
non-controversial material.

I think the comments in the fall largely
echo the comments in the spring, which are that
the people that use cellulose find it extremely
important to their operation.

And, there was one commenter that said
actually there were some adverse effects of the
production, and that it was not essential.

But other than that one comment, I think
they're overall, there is support for relisting
this particular product.

And, that's all I have to say on that.

I'm efficient in my words and also a
little hungry waiting for lunch.

Sorry.

MR. ELA: The efficiency is fine.

Are there questions and/or comments?

(No audible response.)

MR. ELA: The board is being extremely efficient here.

Jerry, shall we move to the vote?

MR. D'AMORE: Yes, Steve, please do.

MR. ELA: We have a motion to remove cellulose from the national list. The motion was made by Kyla, seconded by Jerry.

And, we are going to start with Nate.

MR. POWELL-PALM: No.

MR. ELA: Kyla?

MS. SMITH: No.

MR. ELA: Wood?

MS. JEFFREY: Absent.

MR. ELA: Thank you, I should know that. Sue?

MS. BAIRD: No.

MR. ELA: Asa?

(No audible response.)

MR. ELA: Asa, are you there?

(No audible response.)

MR. ELA: Did we lose Asa as well?

MR. BRADMAN: No, no.

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MR. ELA: Okay.

Amy?

MS. BRUCH: No.

MR. ELA: Brian?

MR. CALDWELL: No.

MR. ELA: Jerry?

MR. D'AMORE: No.

MR. ELA: Carolyn?

DR. DIMITRI: No.

MR. ELA: Rick?

MS. GREENWOOD: No.

MR. ELA: Kim?

MS. HUSEMAN: No.

MR. ELA: Mindee?

MS. JEFFREY: No.

MR. ELA: And we, help me out Mindee?

MS. PETRY: Logan.

MS. JEFFREY: Logan.

MR. ELA: Logan?

MS. PETREY: No.

MR. ELA: Okay. Thank you, I missed
a check mark. Chair votes know.

MS. JEFFREY: So, zero yes, 13 no, one

absent, zero recusals, zero -- I'm sorry, I messed it up again. I can't get.

Zero yes, 13 no, zero abstains, zero recusals, and one absent.

So, the motion to remove failed.

MR. POWELL-PALM: You nailed it, you nailed it.

MR. ELA: And, it is okay to read absent before abstentions.

MS. JEFFREY: Okay.

MR. ELA: It's not, there's nothing written in stone there as long as you say it correctly.

So, let's see, I'm looking at the time because obviously everybody is hungry.

We have, I will say everybody is acting a little tired so let's go ahead and break for lunch.

We will finish up with the handling sunsets after lunch, and I think we've got some flex time in our schedule later in lunch.

So, let's come back at half after the hour, and we'll move into the final home stretch here.

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So, all right, Michelle, you have a question?

MS. ARSENAULT: So, we are going to take an hour lunch?

MR. ELA: Yes.

MS. ARSENAULT: Is that right. Okay.

MR. ELA: Yes, I think we've got time at lunch.

MS. ARSENAULT: I obviously couldn't do math there for a moment.

Okay, thanks.

MR. ELA: Yes, so we'll start at 3:30 Eastern. All right.

(Whereupon, the above-entitled matter went off the record at 2:29 p.m. and resumed at 3:32 p.m.)

MR. ELA: All right, well, we'll get started again here with our final stretch down the track of NOSB meetings, and so, Jerry, I'm going to turn it back over to you for the final handling sunsets here.

MR. D'AMORE: Well, thank you, and I will punt back to you after I make an introduction and a comment, but next on is Asa, chlorine

materials, the first one, calcium hypochlorite.

And I understand that the preference here is to do them all at once and vote again, and I'm going to leave it to you to propose that and to see if it suits the team.

MR. ELA: So, I'll just ask if anybody has any objections to treating these four materials all at once? It doesn't look like it, so yeah, so ahead, Asa, and we'll do all four at once.

MR. BRADMAN: Okay, you know, we've voted on chlorine materials several times this week and I feel like I know for me, I've kind of said all the things I wanted to say about chlorine compounds and sanitizers in general, but just to kind of say it one more time, I feel like there's a lot of great comments in the public comment this year, this fall, and especially from last spring.

I think some of the suggestions from NOC and the Organic Trade Association are really good, and OPWC in terms of, you know, the need to, you know, have a special plant in the National List for sanitizers and disinfectants and their specific

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uses.

I would advocate for a work agenda item to address that, and I guess I'm taking up a little bit of my end of the board speech here, apologies.

You know, so specific to these substances, you know, I think we've discussed them many times. You know, they're essential for complying with food safety issues. They do raise occupational, especially occupational and environmental health concerns.

You know, I've said repeatedly I do feel there's not enough monitoring in occupational environments for exposures to these, and that may be true for other sanitizers as well.

You know, and I've argued that based on anecdotal information, we should be doing research to better assess the exposures and risks.

Then perhaps, even if we keep using those materials, there may be better ways to reduce exposures.

You know, I know from personal experience. I've been in environments where they're used and, you know, things felt fine, and

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proper, and okay to me.

I've also reviewed cases in other environments where, you know, people have experienced probably permanent lung damage and ongoing dermal and ocular issues.

So, again, I'm getting a little repetitive here. You know, we've discussed these a lot, but I'd be curious is there's any new comments that people want to make or just acknowledge as I said this morning, you know, by reference kind of incorporating previous discussion about these into this discussion for handling in particular.

MR. ELA: Are there any questions or comments? I am not seeing anything, so I think you're right, Asa. We've certainly talked about it, but I'm glad that you incorporated all our discussions, and we know it's going to be an ongoing tension between biocides and food safety.

MR. BRADMAN: Yeah.

MR. ELA: I don't expect it to resolve soon.

MR. BRADMAN: Okay, let me make one more comment that, you know, for things on the list,

some of our discussions are theoretical about how to organize the list and think about these, you know, but there's right now two sanitizers that are being petitioned right now, so how we evaluate these are very important in going forward.

For the new members and for the current members that are staying on, you know, you are going to be confronted with these issues, again especially talking about listing new materials, in particular, CPC, cetylpyridinium.

I've misplaced my notes here, but anyway, CPC, which is a quaternary ammonium, which would be a whole new class of sanitizer on the list and the proposed uses for dipping for chicken carcasses before packaging, and then peroxy lactic acid, which is another material related to some things like peracetic acid and some other compounds we have on the list right now.

So, just kind of a heads up that this is going to be an ongoing issue, and just in the next, you know, next few months, there are two that are going to be evaluated and all of us should be thinking about that.

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MR. ELA: Great. Amy?

MS. BRUCH: Asa, just a quick question on what you just said. They're being petitioned. Are they being petitioned for all the different categories or handling in particular? Do you know?

MR. BRADMAN: Yeah, no, the quaternary ammonium, which again would be an entirely new class on the National List, is being petitioned specifically for chicken carcass dipping.

MS. BRUCH: Oh, okay.

MR. BRADMAN: And the peroxy lactic acid is being petitioned also for meat wash before packaging.

MS. BRUCH: Okay, thank you.

MR. D'AMORE: So that would hit handling then is what you said?

MR. ELA: Yeah.

MR. D'AMORE: Yeah, thank you.

MR. ELA: Yeah, without -- Asa, am I correct that they're specifically for handling and would not cross over to crops?

MR. BRADMAN: Correct.

MR. ELA: Anybody else on the board?

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All right, Jerry, should we proceed? Oh, Kim has a hand up. Kim, we're not hearing you. Are you there, Kim?

MS. ARSENAULT: She said never mind.

MR. ELA: Okay, got it. Okay, we will move forward to the vote and I'm just going to combine all of them.

The motion is to remove calcium hypochlorite from the National List, motion to remove chlorine dioxide from the National List, motion to remove hypochlorous acid generated from electrolyzed water from the National List, and motion to remove sodium hypochlorite list from the National List.

All were made by Asa and seconded by Jerry, and we will start with Kyla?

MS. SMITH: No.

MR. ELA: Wood? Oh, Wood's gone, sorry. I'm got to learn this yet. Wood is absent. Sue?

MS. BAIRD: No.

MR. ELA: Asa?

MR. BRADMAN: No.

MR. ELA: Amy?

MS. BRUCH: No.

MR. ELA: Brian?

MR. CALDWELL: No.

MR. ELA: Jerry?

MR. D'AMORE: No.

MR. ELA: Carolyn?

DR. DIMITRI: No.

MR. ELA: Rick?

MS. GREENWOOD: No.

MR. ELA: Kim?

MS. HUSEMAN: Can you hear me?

MR. ELA: Yeah, we can.

MS. HUSEMAN: Okay, good. No, thank

you.

MR. ELA: Okay, Mindee?

MS. JEFFREY: No.

MR. ELA: Logan?

MS. PETREY: No.

MR. ELA: Nate?

MR. POWELL-PALM: No.

MR. ELA: The Chair votes no.

MS. JEFFREY: Okay, zero yes, 13 no,

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one absence, zero recused, zero abstain. Motion to remove fails.

MR. ELA: All right, back to you, Jerry.

MR. D'AMORE: Okay, well actually, back to you, Steve. You're up next with potassium hydroxide at 205.605(b).

MR. ELA: Woo-hoo, my final sunset, and I think that was, chlorine materials were Asa's final sunset, and I haven't kept track of Sue. I apologize. I should be tracking these things.

But just very quickly, this potassium hydroxide is used in a variety of ways, pH control, as a thickener, as a poultry scald, among other things.

It is prohibited for use in lye peeling of fruits and vegetables except when used for peeling peaches. Peaches were carved out to the difficulties of mechanical peeling of them.

I will say we did have one comment that said that peeling of peaches could be done mechanically at this point, but that was just one comment.

They were noted as widely used and

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widely needed, but another commenter noted that they're one of the most hazardous and toxic materials on the National List.

Being a lye material, they're extremely caustic, or it is extremely caustic, and if released in wastewater, it can cause environmental disruption, human health obviously. You have all kinds of issues of burning on dermal contact and eyes, and things like that.

So, while it's widely used and needed, there are issues with it, and like I say, there is some question of whether there is still need for peeling peaches.

There is some question of whether it's being used on nectarines kind of under the peach exemption, but for the peach adjustment, and the thickener, and other purposes, this is still needed.

So, one other comment is that it is used for extraction of other materials essentially as a processing aide, and --

(Audio interference.)

MR. D'AMORE: I've lost Steve.

MS. ARSENAULT: He just froze for me as well. Let's see if it comes back on its own. Such is our Zoom life.

MS. JEFFREY: So, now is a really good time for us to do our Zoom TikTok?

MS. ARSENAULT: Take it away, Mindee. Entertain us.

MS. JEFFREY: Everybody, do your TikTok on Zoom.

MS. HUSEMAN: TikTok made me do it?

MS. SMITH: Should we move to the next one then circle back?

MS. ARSENAULT: Vice Chair? Oh, we lost Steve, so Chair will come back. Nate, as Vice Chair, do you want to just hold until he comes back or --

MR. POWELL-PALM: I would think so. Maybe give it like 30 seconds. Mindee can give us some good hand dances and --

MS. JEFFREY: Well, who is the lead on potassium lactate? Should we skip?

MR. D'AMORE: If you'd like to, I am, and I'd be happy to. That's up to you.

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MR. POWELL-PALM: Yeah, if you want to proceed, Jerry, I think that we'll be able to have Steve join us when he comes back on.

MR. D'AMORE: Okey-doke, well, then we'll move onto potassium lactate, and I'd like to do potassium sodium separately, but the sodium lactate will be extremely short because they're essentially the same thing.

But before I start any of that, I'd like to make an acknowledgement and let the community know that I was challenged by NOC regarding my representation of stakeholder comments during our spring session, and they were right to do so.

I stated that there were less than 10 commentators during the session and that most were in favor of relisting. In fact, there were 10 commenters, with two opposed and three in favor.

The remaining responded that they were not taking a stance. So, please accept my apologies all the way around.

While talking about public comments, I would go right into the public comments that supported this, you know, the stakeholder comments

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that supported this fall session, and this time there were nine, and there were two of those opposing relisting and they specifically cited the synthetic nature of the product or the material.

Three supported relisting, three stating no users and not for or against, and one having users and also not for or against. So, again, accept my apologies for that and I'll go right into the material.

We are reviewing two sunsets, potassium lactate and sodium lactate. This is particularly the potassium, potassium lactate at 205.605(b) for use as an antimicrobial agent and a pH regulator only.

Potassium lactate comes as a liquid and may be added to meat as an antimicrobial. It is generally regarded as safe. The FDA does not authorize its use in infant formulas and foods.

Potassium lactate is generally produced from natural fermented lactic acid, and this is a relevant observation as I consider international acceptance.

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So, the Canadian General Standards Board has a statement that sodium lactate and potassium lactate are not listed for use in processing. However, lactic acid, the precursor substance, is allowed, therefore my emphasis leading into this.

Sodium and potassium lactate, under the EU, it is not permitted for use in food service and processing in the European Union. However, again, lactic acid, the precursor, is allowed.

International Federation of Organic Agricultural Movements, IFOAM, sodium and potassium lactates are not specifically listed on any of the appendices for IFOAM, but the precursor, again, lactic acid, is allowed.

JAS, sodium and potassium lactate are not listed in the JAS standard, and therefore not permitted.

There does not appear to be any human health concerns as provided by the 2005/15 TR, and having already reviewed stakeholder comments, I would like to put this to the board for comment.

MR. ELA: Okay, I'm back. Nothing like

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-- it's my senioritis. I'm just going to randomly
--

MR. D'AMORE: I don't know.

(Simultaneous speaking.)

MR. ELA: -- but, so are there any
comments or questions from the board on this
material? I am not seeing any, Jerry, so should
we move to the vote?

MR. D'AMORE: Would you please, Steve?

MR. ELA: So, there is --

MS. ARSENAULT: Steve, can I just have
you hang on one second? Wood joined us by phone.
I just want to get him over into the -- I don't
think I can. I can allow him to talk.

MR. ELA: Okay, why don't we -- we'll
do that. So, Wood, we know you're out there, and
Michelle will mute and unmute you as need be.

So, I'll just reiterate there's a motion
to remove potassium lactate from the National List.

The motion was made by Jerry. It was seconded
by Steve. And I don't know what happened while
I was gone, so tell me where --

MS. JEFFREY: Wood.

MR. ELA: Okay, we are starting the vote with Wood? Okay, Wood, let Michelle unmute you and we'll see what your vote is.

MS. ARSENAULT: Was that Morse code?

MS. GREENWOOD: That was two clicks for no.

MR. ELA: Maybe we will count Wood as absent here with lack of a definitive vote. We'll see if he comes up as we go around. Sue?

MS. BAIRD: No.

MR. ELA: Asa? Asa, are you there?

MR. BRADMAN: No.

MR. ELA: Amy?

MS. BRUCH: No.

MR. ELA: Brian?

MR. CALDWELL: No.

MR. ELA: Jerry?

MR. D'AMORE: No.

MR. ELA: Carolyn?

DR. DIMITRI: No.

MR. ELA: Rick?

MS. GREENWOOD: No.

MR. ELA: Kim?

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MS. HUSEMAN: No.

MR. ELA: Mindee?

MS. JEFFREY: No.

MR. ELA: Logan?

MS. PETREY: No.

MR. ELA: Nate?

MR. POWELL-PALM: No.

MR. ELA: Kyla?

MS. SMITH: No.

MR. ELA: And do we have Wood?

MR. POWELL-PALM: He texted and said
no is his vote.

MR. ELA: Okay, and then the Chair votes
no.

MS. JEFFREY: Are we counting Wood as
a no or an abstention?

MR. ELA: Why don't we count him as a
no since he is paying attention and the technical
difficulties are not his fault?

MR. POWELL-PALM: Yeah, got it. Thank
you.

MR. TURNER: No if you can hear me.
No is my vote.

MR. ELA: You're there Wood.

(Simultaneous speaking.)

MS. JEFFREY: So, zero yes, 14 no, zero
ARA. The motion to remove fails.

MR. ELA: I don't know what you did
while I was gone. Where should I -- so did we vote
on potassium hydroxide and silicon dioxide? No,
okay.

PARTICIPANT: We did not.

MR. D'AMORE: No, silicon, no. That's
Kyla's to do next.

MR. ELA: Okay.

MR. D'AMORE: And also no on yours.

MR. ELA: Okay, so was there any
discussion on potassium hydroxide we needed to
have? Okay, so should we move to the vote on
potassium hydroxide?

MS. SMITH: Were you done Steve? I
just don't remember where you like froze and left
off, so.

MR. ELA: Well, I don't know where I
dropped off. So, basically I think the main thing,
the gist of it was that it is still widely used

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and generally people were in favor of relisting, but with a very strong note of its hazardous and toxic effects, and that it would be very nice to have an alternative to it, so that would be the Cliff's Notes.

So, any further questions on that? Okay, we will go to the vote on the motion to remove potassium hydroxide from the National List. The motion was made by myself, Steve, and seconded by Asa, and we will start with Sue.

MS. BAIRD: No.

MR. ELA: Asa?

MR. BRADMAN: No.

MR. ELA: Amy?

MS. BRUCH: No.

MR. ELA: Brian?

MR. CALDWELL: No.

MR. ELA: Jerry?

MR. D'AMORE: No.

MR. ELA: Carolyn?

DR. DIMITRI: No.

MR. ELA: Rick?

MS. GREENWOOD: No.

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MR. ELA: Kim?

MS. HUSEMAN: No.

MR. ELA: Mindee?

MS. JEFFREY: No.

MR. ELA: Logan?

MS. PETREY: No.

MR. ELA: Nate?

MR. POWELL-PALM: No.

MR. ELA: Kyla?

MS. SMITH: No.

MR. ELA: Wood?

MR. TURNER: No.

MR. ELA: And the Chair votes no.

MR. TURNER: No.

MR. ELA: Yeah, we got you, Wood.

MS. JEFFREY: Zero yes, 14 no, zero
ARAs. Motion to remove fails.

MR. ELA: All right, back to you, Jerry.

MR. D'AMORE: Okay, so next in line is
potassium lactate finished and I am going to stay
with the printed schedule and have Kyla Smith next
at 205.605(b), and then I will finish up with the
sodium lactate afterwards.

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MS. SMITH: Thanks, Jerry. So, I have silicon dioxide, 205.605(b) permitted as a defoamer, allowed for other uses when organic rice hulls are not commercially available.

This is used as an anti-caking agent, stabilizer, absorbent, carrier, and defoamer. For all other uses besides defoaming, a commercial availability search for organic rice hulls is required.

There was generally wide support for the relisting of this product across stakeholders noting its essentiality for specific functions.

There were a few that didn't really take a position, but suggested rather that we relook at the annotation as it was altered in the rulemaking process.

Since we can't change annotations at sunset, I didn't take a deep dive into looking at the previous board's intent versus the actual wording.

This is something that the subcommittee can look at further and determine whether or not we want to change the, you know, ask for a work

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agenda item on that.

There was an additional annotation suggestion to limit the commercial availability search requirement to only be used for products labeled as organic and not for made with organic products. This is how yeast is annotated.

So, again, this is something that the handling subcommittee can determine whether or not to further take this up and ask for a work agenda item. That's pretty much it.

MR. ELA: All right, questions or comments? So, Kyla, just on that change of the annotation, I guess, how important do you think this is for silicon dioxide?

MS. SMITH: I'm not sure. It was suggested by OTCO, I believe, and like I said, it's how yeast is annotated, and also I believe is not codified, but the general understanding for flavors and there was one other that was noted in that bunch as well.

So, you know, for consistency's sake in looking at the commercial availability and how it applies for the different labeling categories,

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I mean, it would be nice, but I don't know.

I don't have specific, like any specific data or information on if this is like really hanging up products like going to market or anything.

MR. ELA: I would suggest to the board there's a lot of these, I shouldn't say a lot, but a few of these that come up that are technical corrections, or just annotation corrections, or listing in the wrong category.

And I'd ask those of you that are responsible for those and have noted that, I would encourage you to bring it up with the subcommittee you're on and decide whether it's worth, whether you want to pursue changing it.

Sometimes that's very quick and not very controversial, sometimes it's more so, but we always forget after, you know, after the meeting when we get to the next subcommittee call and it's like we knew there were some things out there, and so I'd encourage the leads to just remember that and the subcommittee can decide whether they want to go through the process of trying to change it.

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So, any other questions or comments for Kyla? Jerry, is it okay to go to the vote?

MR. D'AMORE: It certainly is. Thank you.

MR. ELA: There is a motion to remove silicon dioxide from the National List. The motion was made by Kyla and seconded by Kim, and we are going to start with Asa.

MR. BRADMAN: No.

MR. ELA: Amy?

MS. BRUCH: No.

MR. ELA: Brian?

MR. CALDWELL: No.

MR. ELA: Jerry?

MR. D'AMORE: No.

MR. ELA: Carolyn?

DR. DIMITRI: No.

MR. ELA: Rick?

MS. GREENWOOD: No.

MR. ELA: Kim? Kim, are you there?

MS. HUSEMAN: I'm here. Can you hear me?

MR. ELA: Yes.

MS. HUSEMAN: No.

MR. ELA: Okay, Mindee?

MS. JEFFREY: No.

MR. ELA: Logan?

MS. PETREY: No.

MR. ELA: Nate?

MR. POWELL-PALM: No.

MR. ELA: Kyla?

MS. SMITH: No.

MR. ELA: Wood?

MR. TURNER: No.

MR. ELA: Sue?

MS. BAIRD: No.

MR. ELA: All right, the Chair votes
no.

MS. JEFFREY: Zero yes, 14 no, zero ARA.

Motion to remove fails.

MR. ELA: Go ahead, Jerry.

MR. D'AMORE: Yes, sir. Directly
prior to Kyla who has just presented silicon
dioxide, I took the team through potassium lactate.
We took it to a vote.

At that point of presentation on

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potassium lactate, I told the team that sodium lactate is virtually the same thing and that I would make this very brief, so sodium lactate at 205.605(b) for use as an antimicrobial agent and pH inhibitor, regulator, excuse me, only.

So, with your approval, I'd like to leave it at that and have folks ask questions if they need to, make comments, and if you don't approve, I'll be happy to go through it again.

MR. ELA: All right, any questions, or comments, or desire for Jerry to talk about that again? Jerry, I think you're off the hook. Is it okay to go ahead and vote?

MR. D'AMORE: Carry it away, Steve.

MR. ELA: All right, there is a motion to remove sodium lactate from the National List.

The motion was made by Jerry. It was seconded by Kim, and we will start the voting with Amy.

MS. BRUCH: No.

MR. ELA: Brian?

MR. CALDWELL: No.

MR. ELA: Jerry?

MR. D'AMORE: No.

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MR. ELA: Carolyn?
DR. DIMITRI: No.
MR. ELA: Rick?
MS. GREENWOOD: No.
MR. ELA: Kim?
MS. HUSEMAN: No.
MR. ELA: Mindee?
MS. JEFFREY: No.
MR. ELA: Logan?
MS. PETREY: No.
MR. ELA: Nate?
MR. POWELL-PALM: No.
MR. ELA: Kyla?
MS. SMITH: Sorry, no.
MR. ELA: Wood?
MR. TURNER: No.
MR. ELA: Sue?
MS. BAIRD: No.
MR. ELA: Asa?
MR. BRADMAN: No.
MR. ELA: And the Chair votes no.
MS. JEFFREY: Zero yes, 14 no, zero ARA.

Motion to remove fails.

MR. ELA: All right, it looks like to me that that finishes the sunsets, but Jerry, I know there was one other comment that Kyla wanted to make, so I'll let you turn it over. I'll turn it over to you and --

MR. D'AMORE: Sure.

MR. ELA: -- you can turn it over to her, I guess.

MR. D'AMORE: No, by prior arrangements, we all agreed that Kyla could give comment to ion exchange to the community, so, Kyla, I will turn it over to you.

MS. SMITH: Thanks. Yeah, we're going a little off script, but as I stated in my introduction, I really value transparency between the programs at NOSB and all stakeholders.

So, with that in mind, I just wanted to give a brief verbal update on ion exchange resins so that the stakeholders are kept informed on the progress of this topic.

As you all remember, during the spring meeting, the board passed the ion exchange proposal and included in the cover sheet a request that the

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program move forward to determine the status of ion exchange resins with regard to the National List through a legal opinion or in consultation with FDA and report back to the board on the progress made.

The NOP did respond to the full board with a memo with the results of their discussions with FDA. After the conclusion of this meeting, the Handling Subcommittee will evaluate this memo further and determine next steps. So, progress is being made and I just wanted to state that for the record.

MR. ELA: Thanks, Kyla, and thank you for being willing to take this on. Scott and I worked on it, and of course Scott left it completely to me and I'm glad to pass it on to you, and you can look back through all the notes, but I think you're pretty familiar with them, but, yeah, thanks for that update and for the Handling Committee to decide if or if not you want to proceed any further with this.

Anything else, Jerry? All right, Jerry, you're on mute.

MR. D'AMORE: Okay, there's the panic.
No, Steve, thank you very much. Thank you to the entire team. I enjoyed this session and all of our groups, so thank you.

MR. ELA: Great. According to my agenda item, we're supposed to go to lunch now, so.

MR. D'AMORE: See you.

MR. ELA: See you, exactly. We're going to move onto the final subcommittee, the Compliance Accreditation and Certification Subcommittee.

And I'm glad you put that up, Michelle, because I always know it as CACS and I have to really think to come up with all of the verbiage, but Nate, we're going to turn it over to you as the subcommittee chair.

MR. POWELL-PALM: Fantastic. Thank you, Steve. It's an exciting time in CACS right now. We spent a lot of good work leading up to the spring meeting on human capital.

And there's been a lot of really invigorating updates from the program about the

resources put out to the certification inspector training and overall human capital component of certification in the form of an RFA, and so there's a lot of good projects going on as a result of the work that CACS did.

And a big shout-out to Sue on the paper she wrote in the spring. And I realize that with her going away, her work is going to live on, which is really exciting, in the form of all of these inspectors we're going to train and different policies we're going to establish.

We have to papers to discuss today though. The first is going to be headed up by Carolyn, and thank you for the slide, and I'll just let Carolyn take it from the beginning. If you would just introduce and then we can open it up for discussion, Carolyn, if you're ready?

DR. DIMITRI: Absolutely, thank you. I just, I will -- I guess one thing people will learn about me is I don't talk as much as some of my colleagues on the board.

So, I'm going to give you a short background to, you know, where we're thinking, or

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maybe more specifically, what I was thinking as this letter came through.

So, I'm going to put my professor hat on for a few seconds here and just remind everyone that USDA has a very long history of supporting farm income and providing incentives to the agricultural sector that have made food in the United States extremely inexpensive. This dates back to 1933.

But as we know, the external costs of food production are very high, and I won't give you the entire list, but a few of the most obvious ones are the environmental degradation from the conventional farming practices, biodiversity loss due to synthetic use, and greenhouse gas emissions which contribute to climate change.

So, these costs are external to the farm production systems, so they will not be fully addressed by efforts of the private sector, and in fact, it's unreasonable to expect anyone in the private sector to tackle them.

I mean, I think it is true that some farms and some businesses do alter their practices

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to try to address some of these external costs, but from a social welfare perspective, the private sector really won't push us as far as we need to go for society and agriculture throughout the future generations.

So, USDA's recognition of the importance of a climate smart strategy in agriculture was extremely welcome news and it inspired this letter to Secretary Vilsack.

So, in writing this letter, we first strove to be concise and needed the letter to be very short because the Secretary and his people are not going to spend hours and hours reading our work.

And we relied directly upon scientific peer-reviewed literature rather than some industry or other pieces of gray literature, and we also did our best to avoid advocating for any specific position.

We appreciate the many comments made by stakeholders in the open docket and more recently in the public comment, and we incorporated as many of these comments as we could fit into the letter.

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Our primary goal is to remind USDA that organic farming systems are an important tool for climate change mitigation.

In particular, we emphasize the farm system since we did not want USDA to misinterpret us and promote individual practices or uncertified farms that may call themselves sustainable.

We did not want these to be promoted as being equivalent to a certified organic farm with an organic system plan that really strives to consider the agro ecosystem in every aspect of production.

So, with that, I will turn the mic back over to Nate and open the floor for discussion.

MR. POWELL-PALM: Any thoughts or questions for Carolyn to get started? Amy?

MS. BRUCH: Yes, thanks, Nate. Thank you, Carolyn, for your initiative on this.

It's important to highlight and keep in the forefront organic industry's contribution and leadership to these climate smart agricultural practices, and I just wanted to reinforce a couple of points that are in the proposal just as they're

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very important to farmer stakeholders.

The first one is supporting new and better markets. Yeah, it's true we're a \$60 billion-plus industry. However, transitional markets are really important just to support farmers. It's very costly to convert operations over to organic, so just trying to identify transitional markets would be very helpful.

And then expanding market opportunities for these rotational crops, we talked a lot about that yesterday and the prior days about the importance of rotations.

But some of the rotations that farmers are choosing, it's the right thing to plant just to have more robust crop rotations, improve our nutritional content and our soil, and reduce stress and disease, but these rotational crops have very limited outlets, so a focus on that would be very important as well.

The second point in the proposal was leveraging existing USDA programs and really highlighting the RMA or risk management agency programs to have more of an extensive review and

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stakeholder input to incorporate more realistic and practical solutions for risk management for organic farmers.

Both form a unique tactic standpoint.

We deploy many different operations such as intercropping, roller crimping, that sometimes go against us as we look at insurability of some of the crops that we're producing, and then also just updating actuarial data so the coverage that we can get actually reflects our yields.

That's very important, and there's just so many risks and barriers that organic producers take on, and to just have a little more attention to them. Thank you.

MR. POWELL-PALM: Thank you, Amy. That was great. I think that's something that I know -- it's so many moving pieces, and so I realize -- I appreciate Carolyn's brevity in this paper, but realizing that we have a lot of work to do yet to really nail this. Asa?

MR. BRADMAN: I just want to comment briefly on your reference, how the food system encourages cheap food and it doesn't therefore

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incorporate externalities into the price, and I think that's a really important concept.

Another aspect of this which we often hear with organic in particular is that organic does some of those externalities and therefore it costs more, and that, you know, that extra price we pay is valuable and important, both for the environment and for the living of people who are producing that food.

Another side of that too of course though is that accessibility, and things wouldn't cost more. They're harder for people to reach without money. We have very unequal income distribution in our society.

And although we may talk about the higher costs as being justified and important because it really does incorporate those external costs, there's a lot of people that just don't have the money, and so that access, even if it serves a higher goal, is not there.

So, I guess when we talk about those external costs and we talk about accessibility, we have to, you know, just consider how we can

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improve accessibility.

And, you know, I know there's programs to make, for example, farmer's markets eligible for, you know, SNAP and other food support, but I think the more we can think about that, the better.

MR. POWELL-PALM: I'm really hoping that we can actually make that a work agenda item this next round, so I really appreciate that, Asa. That's a really brilliant point.

MR. BRADMAN: Can I just make one more? I know. I'm sorry. I'm one of those people that need to talk more, so I apologize.

But just as an example, you know, I've worked in the Salinas Valley for many years and, you know, we find among the participants in our studies, you know, 20, 30, sometimes 40 percent food insecurity, and in some cases, food insecurity with hunger among people who are farm workers and producing the food that we eat, so, you know, just kind of a real concrete example of how we have unequal distribution of income and access to resources.

MR. POWELL-PALM: I appreciate that,

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yes. Thank you.

MR. ELA: And Nate, you had jumped over Jerry, so.

MR. POWELL-PALM: Sorry?

MR. ELA: You had jumped over Jerry.

MR. POWELL-PALM: I'm sorry, and I was just -- I don't know how you do it, Steve, keeping track of everyone, because I just look at the row, but, yes, sorry, Jerry. Go ahead.

MR. D'AMORE: No problem at all. Let me turn on my camera if it will take. Carolyn, it's taken me to reach the age of 72 to have the opportunity to give praise to a professor. It's never happened to me before.

DR. DIMITRI: It was Asa too.

MR. D'AMORE: Sorry?

DR. DIMITRI: Asa deserves some praise too.

MR. D'AMORE: Yeah.

DR. DIMITRI: He's a cool professor also.

MR. D'AMORE: Yeah, I thought the work was very well done and the message was spot on.

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I'd like to support fully your comment to the cost of food. I spent 35 years of my life supporting a family overseas and I'm really familiar with the costs of food --

(Audio interference.)

MR. D'AMORE: -- in other words, disposable income that goes to food every place I've ever lived, and it's been quite a wide range of places, they don't even come close to what we can do with our dollar in terms of getting food.

I'm tempted to tie that in with Asa's comment because it is apropos, and I'd caution everybody not to get a leaning from me out of what I'm going to say in terms of social politics and all.

In those same countries though, there is a safety net that sort of mitigates what Asa was talking about, so obviously I'm talking about more socialized, you know, economies where healthcare and education, et cetera, are already taken care of.

So, I think Asa's point was extremely well taken, so I actually consider that to be a

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double whammy really for us.

And my last one is having acknowledged that I think the letter that you wrote was spot on, I wonder and I have wondered right from its inception as to whether or not that has long-term implications for the NOSB in terms of what we might maybe call upon as criteria for evaluation.

MR. POWELL-PALM: Is that a question for Carolyn?

MR. D'AMORE: Oh, it's a question for anybody that's concerned. Are we simply positioning ourselves, and I think very, very accurately as, quote, sort of already there on a lot of things, or are we going to seek the position of actually making some of our decisions predicated on the friendliness of what we're doing to climate change?

MR. ELA: Carolyn, you've got your hand up and you hand your hand up before, so --

DR. DIMITRI: Yeah, I have a couple of -- great, thank you. I just have a couple of thoughts, one to Rick and one to Asa.

So, I mean, I'm sorry, Jerry. Jerry,

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I do -- like in my view, I feel like part of what I would like to see the NOSB do is support these larger visionary ideas that I think organic represents.

And I feel that, you know, the materials and the sunsets or the National List, I mean, it's all very important, but it just seems to like dominate the work agenda, and so not everything.

I mean, I do think that the biodegradable, the biobased mulch sort of brought in a lot of these questions, but I just think it's really important for us not to lose sight of what really matters here, and I think what matters is the health of our planet and the health of our people.

And I think the way organic can contribute to our food supply is by damaging the environment less, and I think we could do a better job with helping, you know, on the social justice issues, but anyway, the Organic Foods Production Act doesn't really incorporate social justice elements, so I don't know where that leaves us.

And then, Asa, it's funny that you

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mentioned food insecurity because that's what we talked about in class the other night, and so like I also think like just the use of the word food insecurity makes us like forget that there are people behind it. It's like such a sterile phrase and it's just like easy to put everything in a box.

And I do think that organic food does cost more to produce and to distribute, but I don't think that should hold us back. I think that maybe it would embolden us to somehow improve our social policies, which I know is not in our control or even my control, so, but these are my wishes on my wish list. Okay, thank you.

MR. D'AMORE: And thank you. I couldn't find argument with anything that you've said. You know, and I would welcome, at a later date, greater conversation on this.

I see the organic seal as something very special. I know it's a seal that many would like to have as an umbrella, and I have for some time thought that sometimes we are too giving of having that umbrella become available.

So, that was a lot said with no depth, and I again am hearing everything you're saying, agreeing with every word you said and would enjoy hearing a lot more. Thank you.

MR. POWELL-PALM: Sue?

MS. BAIRD: This is such an important topic, Carolyn, climate change initiatives is, and pointing out the importance of organic foods, carbon sequestration, soil fertility.

All of these questions, all of these points are very, very important, and I agree with you, Carolyn, that social justice is not part of our office, unfortunately. We missed that point, you know.

IFOAM has it written in their standards.

We never got that far, and we've tried to catch up with humane standards for animals and all of these other things we've tried to add to, to catch up to where IFOAM was all along.

But I guess Asa and now Jerry have brought to my heart what I've been focusing on. For the most part, my focus has been for insecurity in foods, but Jerry, I commend you for overseas.

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I'm there in those downtown urban kids that have never seen anything but a 7-11, literally some of them. You know, they have grown up on the streets, concrete. They live on concrete until they go to prison, and then they go out and then they're on concrete.

And the fact that they can't buy organic food is a given because many times they can't buy regular food, conventional food, and I do think that we've got to do something about that. It's become a real passion in my life.

And as much, as important as climate changes are, and it's very important, I would hope that maybe whoever is going to carry on this after I leave would add social justice.

And I know that NOC has been real, an advocate mainly for the colored sector of our farming community, but I think we need to think about those urban kids.

MR. POWELL-PALM: I would just, if I could, jump in here. I would also say I think we need to think about rural kids too.

I think that I've spent most of my life in rural America traveling around it's actually pretty unique to find an organic item on one of these sort of, you know, rural grocery stores that are, to your point, lots of times doubling as gas stations.

And I think as an organic community, sometimes we are so surrounded by organic that we forget that it's a real privilege to be in an organic-centric world, and when you go out into, you know, more under-resourced places, organic is a real luxury still.

And I think it's an incredibly important goal, I hope, of the community to figure out how to make organic the rule and not the exception, and how to build that marketplace presence across all incomes and make access to everybody, not just as a premium product. Mindee?

MS. JEFFREY: Yeah, the work here is so amazing and I'm really appreciative of -- thank you, Carolyn, for all of this work and perspective.

And I just wanted to say that for me,

we have so far to go in so many areas around social justice, but the organic food system being a part of the USDA and coming from where it comes from, it's a transparent, consensus-based democracy.

And that is progress in social justice and we are stewards of the future of social justice inside this system as far as the food system's concerned, especially when we start thinking about how can we get better food into schools.

Like, my hope is that the USDA is our pathway for democracy and better food in school by allowing organic vendors to be vendors in school districts.

So, I just want to say that while it's not enough, I don't want to lose the view that the history of this movement into a functional democracy is social justice, just not enough.

MR. POWELL-PALM: Amen. Thank you.
Sue?

MS. BAIRD: Yeah, maybe Mindee articulated what I was feeling and, yeah, it would be incredible -- we have cost share for farmers, for organic farmers, but -- I mean, we're dreaming

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here right now, so what if we proposed some cost share for a way for organic foods to get into schools? There is --

MR. POWELL-PALM: The Farm Bill is coming up, I hear.

MS. BAIRD: Do what?

MR. POWELL-PALM: The Farm Bill is coming up, I hear. I hear a Sue project right here.

MS. BAIRD: Hey, I could actually be compelled to do some of that work because it is my passion. Yeah, but wouldn't that be incredible?

Because, you know, farm to the school table is incredible opportunities for farmers to get their food in schools, but what if there's -- and they wouldn't because they --

I'm sorry. I'm backtracking myself and I do that. Carolyn, I'm not nearly as concise in my speaking as you are.

But wouldn't it be incredible if you could get some kind of an extra cost share help to get organic foods into schools? There's so many studies out there that shows that organic foods

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and foods without chemicals actually lowers crime rates and troubled children in the schools. I don't know.

MR. ELA: I'm going to redirect here a little bit. These are great discussions, but --

MR. POWELL-PALM: No, I was going to say --

MR. ELA: -- we do want to keep it on climate change.

MR. POWELL-PALM: Going back to Carolyn's point, I think they're all very tangential and very, you know, they kind of grow the scope.

We're talking a lot about, I think a very key point, which is demand. We need a lot of demand and we need a lot of folks eating organics to grow organics and to realize that climate solution potential.

Jerry, did you have anything else to add there or I think we are -- is it time to vote?

MR. D'AMORE: Okay, I put my hand up and down three times out of consideration for time.

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What we're talking about here is equity as well as anything else. You know, who can afford what?

I think the coming together of feeding the world and organic systems is a heavy but worthwhile lift, and I'd like to see this continue to be part of our discussion.

MR. POWELL-PALM: Absolutely. Thank you for that.

MR. ELA: And I want to make one final comment myself if I can. Carolyn, you know, I've heard you question sometimes why, you know, what your contribution is to the board, and I think this is such a great example of where your background in ERS and everything else comes together with all the rest of us on the board.

You know, some of us are very crop centric and you provide a very different perspective that is so needed, and I'm so glad to see you jump on the climate change issue.

I think as you noted in your letter, we are so uniquely positioned already to contribute. We're already an established program.

We don't need to be made up and started from

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scratch.

You know, we heard Jenny Lester-Moffitt already, you know, note about how we can contribute, but I think it's so good to keep this in front of the Secretary and work through a sector that already exists.

So, I just applaud you, and as -- you know, I guess all of this discussion also makes, if the board picks a couple bigger items to work on, you know, the sky is the limit and, you know, whoever is the next chair, I think, is going to have to really keep the board on a couple of things and that's going to be hard.

But, you know, one of them, if it's climate change, you know, just keep driving that down the road, Carolyn, and thank you for bringing it up and thank you for also using the open docket to, you know, garner some input on this.

We have not done a good job of that and this was a perfect example of a timely document that needed to be taken care of at this meeting and using the open docket to make it better, and so good on you.

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MR. D'AMORE: Hear hear.

DR. DIMITRI: Thank you, Steve.

MR. ELA: Are we -- Jerry, I see you've got your hand up.

MR. D'AMORE: No, no, that's -- I actually turned the whole thing off, so I'm sorry.

MR. ELA: No, sometimes I forget to lower them, so. Nate, are we ready to go to the vote?

MR. POWELL-PALM: I think we are, yes.

MR. ELA: All right, so we are going to start. Well, the motion is to accept the proposal on the letter to the Secretary regarding climate change initiatives, and we start with Brian, I believe.

MR. CALDWELL: It's an emphatic yes.

MR. ELA: Then Jerry?

MR. D'AMORE: Yes.

MR. ELA: Carolyn?

DR. DIMITRI: Yes.

MR. ELA: Rick?

MS. GREENWOOD: Yes.

MR. ELA: Kim?

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MS. HUSEMAN: Yes.

MR. ELA: Mindee?

MS. JEFFREY: Yes.

MR. ELA: Logan?

MS. PETREY: Yes.

MR. ELA: Nate?

MR. POWELL-PALM: Yes.

MR. ELA: Kyla?

MS. SMITH: Yes.

MR. ELA: And I know Wood did have to leave, so he will be an absent. Sue?

MS. BAIRD: Yes.

MR. ELA: Asa?

MR. BRADMAN: Yes.

MR. ELA: And the Chair definitely votes yes.

MS. JEFFREY: Amy?

MS. BRUCH: And Amy votes yes.

MR. ELA: Did I miss Amy? I'm sorry, Amy. I was looking at my votes like did I do that or not, sorry.

DR. DIMITRI: And don't forget Amy wordsmithed that letter too.

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MR. ELA: Yes, exactly.

MS. BRUCH: Thank you, Carolyn.

MS. JEFFREY: We are unanimous.

MR. ELA: Can you read the vote total just so the transcriptionist has it?

MS. JEFFREY: Yes, 13 yes, zero no, zero abstain, zero recused, one absent.

MR. ELA: Great. All right, Nate, back to you.

MR. POWELL-PALM: All right, fantastic. If we might advance the slides? Thank you.

So, I'm going to hand it over to Amy who has just done some really incredible, I think, you know, work on thinking -- oh, sorry, I'm just clicking my keyboard all over the place -- thinking about the tools that we need to really make sure that we're able to manage this wonderfully growing industry that we have, and I'll give it over to her to introduce the discussion document and we'll dive into it.

MS. BRUCH: Thank you, Nate, for that introduction, and Nate, as a co-collaborator of

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this document, feel free to jump in anytime as well.

And then I have a very brief presentation. It's very limited slides, just a few, because I didn't want to disappoint Steve on his last meeting, so anyway, just a couple here to walk through the initial background.

I'm grateful truly to have this opportunity to work on this important agenda item, oversight improvement to deter fraud, and more specifically, modernization of supply chain verification, which aims to build upon the work of the SOE-proposed rule, which we all heard should be at least debuting hopefully for you in 2022, and the ongoing work of human capital improvements.

MR. POWELL-PALM: I think you're on mute, Amy.

MS. ARSENAULT: Amy? You clicked mute.

MS. BRUCH: Oh, sorry. I have to do that once a meeting, I think. Anyway, sorry.

As discussed in the document, there's a lot to celebrate with the organic industry's current system and robust growth and development.

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The public-private partnership between the USDA and the broader organic community really has created a solid foundation for integrity.

The organic industry exceeded \$60 billion in sales and continues to grow rapidly, adding new participants both domestically and internationally to keep up with demand.

The participation for support and candor through the written comments and oral comments was invaluable. I really appreciate the stakeholder comments there.

Today, we'll work to summarize some of that feedback, but know that we'll digest the full range of comments in our future subcommittee work.

And then just to move onto slide two, there's only three, so this slide in particular shows the proposed SOE-defined four integral concepts.

We're here to explore the resiliency of tools at hand and consider future tools to answer the call for technology integration to support the proposed added term 205.2, supply chain verification.

And one specific comment about supply chain verification, there's a comment in the proposed SOE that I noted was that AMS anticipates that electronic tracking technologies will allow AMS to achieve its goal of complete supply chain traceability and foresee incorporation of electronic tracking systems into future enforcement strategies.

And that's the ability, with supply chain traceability, is to really go front from our entire supply chain source to consumption and backwards from the consumption to the source.

And then the final slide that we have before we get into these comments, I just wanted to say that overall, the comments in general, stakeholders were very supportive of the subcommittee's proactive work exploring the ways for integrated technology.

In terms of how we're going to get there, there was a wide diversity of thoughts and comments that were really helpful and provided some ideas, some questions, and then just further thoughts to kind of consider.

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So, to summarize a few general comments first before we dive into these seven questions, one commenter supports the -- or one commenter stated that they support the development of innovative practical strategies to support inspectors and certifiers in the increasingly complex work of identifying and confronting fraud in the organic supply chain.

Another mentioned IFOAM's concept paper. To successfully address the challenges of the 21st century, a combination of social, ecological, and technological innovation is essential.

Two common themes that we have heard through public and written comments throughout our time together has been adding tools to the toolbox.

In this particular subject, that was mentioned, and it's adding the tool to the fraud prevention toolbox, and then indicating that continuous improvement is the better of organics.

There were several conscientious commenters as well and I wanted to bring up a few comments that said we need to definitely keep in

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the forefront the barriers and not overburden the industry, and also that data verification is only one piece to fraud prevention.

So, I encourage the board to keep that in mind, as well as the globalness of our organic marketplace, and when we reflect our points and comments, let's think both domestically and international for the considerations.

And with that, I think we'll kind of adopt Mindee's format. She had a great format where we just went through each question, summarized some comments, and then had board discussion, and then we'd move onto the next one.

MR. POWELL-PALM: Yeah, that sounds great.

MS. BRUCH: Okay, perfect. So, for question number one, how can technology efficiently and effectively be deployed to enhance supply chain traceability?

MR. ELA: I do want to note that Brian had his hand up before we started this question. So, Brian.

MR. POWELL-PALM: Sorry about that. Thank you.

MS. BRUCH: Perfect. Thank you.

MR. POWELL-PALM: Yes, Brian, do you want to go ahead?

MR. CALDWELL: Well, I was going to sort of speak in relationship to a question, to Point Number 1 there, Question Number 1, but it's really an overall point, and that is, Amy, your first slide showed sort of the inside of a warehouse somewhere.

The images that I have in my world of organic farming are farmer's markets, food co-ops, CSAs, and small farms.

I think that -- I just hope that whatever we come up with here can be targeted wherever the problems are and not hit everybody who maybe isn't part of the problem with extra burdens. So that's my only point.

MR. POWELL-PALM: Thank you. Yes.

MS. BRUCH: Yes, thank you, Brian, for that. That is definitely important and that was really unanimous across the stapler community that really to be cognizant of burdens that any additional system could inflect across the whole supply chain and also maybe even targeting more of a risk management type approach.

MR. CALDWELL: Mm-hmm.

MR. POWELL-PALM: I think Jerry had his hand up real quick.

MS. BRUCH: Yes?

MR. D'AMORE: Yes. Just keying on Brian's comment. My question broadly would be where do we envision this starting and stopping?

In my world it would start with cut to cool and finish at retail and everything in between is critically important. Most of everything in between is federally

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mandated through food safety and traceability programs.

I think there is a wealth of information there that we could use to dovetail this initiative with some things that are already in place.

But the question still remains in the vision of this document where does this supply chain management start and where does it stop?

MS. BRUCH: Sure. That's a great question, Jerry. And that's, you know, why we are proposing this discussion document really as an exploratory process, to get the right range of where the system needs to start and stop.

What was mentioned in the discussion document is really capturing those business-to-business transactions, so it would essentially start at that first point of transaction and then there would be records essentially for every subsequent transaction.

MR. D'AMORE: Mm-hmm.

MS. BRUCH: And that's really to get that bi-directional lookback, but definitely, again, there isn't a concrete form that we have. This is more just exploring different options.

There needs to be a system that can really be adaptable to the uniqueness of every single sector within the organic community.

MR. D'AMORE: Right. If I could just add to that?

MS. BRUCH: Uh-huh.

MR. D'AMORE: You know, we talk about the cost to the farmer and that is something we understand I think in terms of inputs and P&Ls, et cetera.

The thing that I have dealt with a lot in my life, a whole lot in my life, is

the reality that everything along that continuum of field to fork if it goes wrong that too comes back to the ranch.

That's probably one of the biggest dilemmas I have seen in my career is for, you know, Brian mentioned the warehouse, the cold chain, all of this, if it's not done right, and so I applaud you for this initiative, but these costs come back to the ranch.

If something is not sold, not your fault, still your problem. I'm sorry.
That's it.

MR. CALDWELL: Great point.

MS. BRUCH: Yes.

MR. POWELL-PALM: I'm looking at --

MR. ELA: And it looks like --

MR. POWELL-PALM: I'm sorry.

MR. ELA: Well, I'm just going to do a little bit of a time check with seven questions.

I don't want to cut anybody off, but I also, we want to make sure and finish this in the next like 15 minutes so we leave time for other things.

MR. POWELL-PALM: Okay.

MR. ELA: Maybe 20 minutes, but no longer than that. So I'll just let you all organize that timeline.

MR. POWELL-PALM: Thank you, Steve. Let's jump to Logan real quick. And then if it's all right, everybody, I'll have Amy just kind of finish up a brief summary of the public's input on the questions and then we can have discussion after that if

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that's all right.

MS. PETREY: Great. Thank you.

MR. POWELL-PALM: So, Logan.

MS. BRUCH: Okay. Yes, thank you. Quick question on the transaction level, does that include brokers as well that actually never touch the product?

(Simultaneous speaking.)

MS. BRUCH: Originally what we had in the discussion document was just any business-to-business transaction.

MS. PETREY: Okay. So --

(Simultaneous speaking.)

MS. BRUCH: But with that brokers would be involved.

MS. PETREY: Awesome. Thank you.

MR. D'AMORE: Yes, federal markets, brokers, it's all there.

MS. BRUCH: Mm-hmm.

MR. POWELL-PALM: Yes. That's -- And we're -- And Amy so accurately described this, but it's really an augmentation and sort of a celebration of SOE to figure out what actual tools do we need to be adopting technology wise in order to make SOE maximized.

And so that broker question is really apropos to SOE as well, Logan, so thank you for that.

MS. PETREY: Okay. Yes.

MS. BRUCH: Yes, and that's definitely, I mean that's a component that

the SOE is going to address with additional inspections, but we need to look at these complex supply chains and brokers and importers are a component of those.

Just to try to get to the finish line here in the timeframe that we have, to look at Number 1, how can technology efficiently and effectively be deployed at the community.

Along with Jerry you had mentioned, you know, there is some good benchmarking that we can do. The community offered several different avenues, including FDA, you had mentioned that, along with some other organic communities, both in European Union and India that have some organic traceability tracking systems.

So there is definitely others that were brought up by the community, but that's a good first step to just look at barriers for implementation and what has been done prior.

Moving on to Question 2, and we can open it back up to the Board, is just what form does an organic link system need to take to not be burdensome, kind of getting at Brian's point, to stakeholders and certifiers, inspectors, handlers, operations, importers, et cetera.

And one idea from the community was just looking at existing ways this information is already being captured. As farmers, you know, we are capturing yields, we're reporting them maybe to different bodies, such as FSA or RMA, and we are reconciling annual reports.

So maybe there is a component within the system that is not necessarily duplicating work that is already done but just capturing work that is already done. Working

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across different agencies is also an idea that was mentioned.

Modifying organic system plans, there is a portion of our organic system plan that is more static and one that is dynamic, so looking at maybe integrating some of these tools into that.

And then I will open it up to the Board for any other ideas on Question 2.

MR. POWELL-PALM: I would say we can probably keep cruising.

MS. BRUCH: Okay.

MR. POWELL-PALM: The only thing I was going to add to that is Question 2 is really where I am hoping the community sends us more ideas and forms this discussion more because we do have these existing systems and trying to figure out how we work with existing certification, existing OSPs, and make it so it really is that we can plug in rather than come from a top down approach as far as data collection and data sharing. But please proceed.

MS. BRUCH: Okay. And, three, the challenges for implementation, and that really gets after some of the burdens and, again, Brian, to your comment about how do we block and tackle so this can be available to all people.

There was strong comments on this both from a time human capital toss, equality and accessibility to technology that we'll be digesting.

There was some information in the discussion document that tried to hit some of these components head on, but definitely the idea is not to overburden the industry but to make things more efficient so we can capture needed information.

Number 4, is there value in AMS certifiers and inspectors getting more

granular. This kind of gets after -- The community's response was more of a risk-based approach and I really liked, there were some comments on how maybe the hierarchy of risk could be assessed.

I know that in public comments it was mentioned. There is some information within I believe ACA, that organization, that certifiers are using.

Is there additional comments from the Board in regards to Number 4?

MR. POWELL-PALM: I think -- Like I think you've said this before, so I mean I will try to do a good attribution, but the idea that we need data in order to have really robust risk assessments and further figure out how can we flag fraud. I will call on Kyla next.

MS. BRUCH: Yes?

MS. SMITH: Yes. Thanks, Amy, again for going through all this. Some of the comments in particular on this, you already mentioned the like risk type of approach, which I liked as well, and so far as our, sort of our, you know, do we not so that's comfortable for most.

It was also just the distinction between what we call like the annual inspection and like an investigative type of inspection and I just appreciated sort of some of the call out in the comments for those two different types where granularity in certain scenarios might be more advantageous than in all so you can like apply risk in different, also in different areas.

So you can apply it like to the operation specifically or also, and then also like what activities you conduct at an operation.

MS. BRUCH: Mm-hmm. Yes, I think that's good. I am going to

throw that question back at you, Kyla, actually in regards to do you believe that data is needed or a small component of doing a risk assessment to make it more robust?

MS. SMITH: Yes. I just feel like there is, you know, probably a good balance to not maybe have to go so deep at every inspection all the time, otherwise like inspections are going to be -- I mean they already I feel like are, should be longer in some instances, but, anyway, it's just that balance between time and depth.

MS. BRUCH: Mm-hmm. Thank you.

MR. POWELL-PALM: Carolyn?

DR. DIMITRI: This is so fascinating. I really appreciate all of the work that you have done on this, Amy.

One thing is I just want to caution people not to reinvent the wheel. So there is a lot of economics literature that talks about like frequency of inspection, like how often you need to have random inspections, to keep people from cheating.

So I mean I don't know if you have had a chance to consult with any expert in that area, because I don't know really what you mean by risk assessment.

But in any case I am just throwing that out that there is a lot of economic research that looks at fraud prevention and, actually, there is a guy that works for AMS who used to work with me at ERS that might be useful to talk to. I can send you his name.

He has done like, written lots of papers on fraud at the border and how to deter it.

MS. BRUCH: Mm-hmm. Oh, yes, that would be great, Carolyn. That is kind of Phase 2 with this.

We have received some initial feedback, but definitely going to do a deep dive and look at some of the existing programs out there and see and evaluate those.

So, yes, if you have some additional information that would be great.

DR. DIMITRI: Sure. Absolutely.

MS. BRUCH: Okay. Combining five and six, they are very similar, what methods exist for enhancing transparency and are there additional areas that need to be considered for improvement to prevent fraud or react to fraud.

Some of the summarized comments from the community discuss further coordination between USDA agencies and the U.S. Customs and Border Protection, expand the scope of the import certificates, which is a composition of the SOE.

We'll soon know all the components of the SOE here in the near future, but one point that was mentioned on the import certificates was just getting that aggregated operations data from what that import was potentially. For grain, for example, there could be many different operations in the vessel.

Trademark status for USDA organic seal to increase enforcement authority, HTC codes, yield data, both domestically and internationally, and that was a comment to just aid and better mass balances that could take place.

For five and six I'll open it up to the Board for any additional comments.

MR. POWELL-PALM: I think just tacking on that, what other methods exist for enhancing transparency. This I think feeds into a lot of the other questions of what is the current infrastructure and how do we plug into that current infrastructure rather than to Carolyn's point, reinvent the wheel.

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Very quickly, the reason I think organics is just so cool from a farmer point of view is that we do record so much data via our OSP and our recordkeeping.

And so figuring how to leverage that data and put it into somewhat of a more shareable format between certifiers and regulators would be an awesome opportunity. Kyla?

MS. SMITH: Yes. I think along with that, which is already, you know, sort of on the table, but I will just double down, is just, you know, increasing inspector training around this topic and like working on all of the things in regards to like auditing but also really developing like soft skills around, and like different approaches again for different types of inspections.

You know, I know PCO commented on this topic and our comments had to do a lot with that sometimes fraud really like lives in between the things that are, it's like hard to like suss out, and so, yes, all the data in the world might not -- I don't know.

It's just like sometimes it like lives in between the data type of thing and so you have to like use the data as a tool but like it's not the only thing.

You also really need highly qualified and trained inspectors who know what questions to ask and the threads to follow and cooperation among the certifiers.

MS. BRUCH: Mm-hmm.

MR. POWELL-PALM: I think that's a great point, yes, and hopefully something that will be somewhat addressed by the human capital projects that are forthcoming.

MS. BRUCH: Yes. Thank you, Kyla, for bringing up that point for

sure. Definitely a multifaceted approach is needed here.

So moving on to the final question, and I appreciate all of the comments so far, should the industry require the registration of land 36 months before certification. The comments on this one were probably the most mixed and diverse.

So in terms of in favor of it, clarity is needed for consistency, it could stabilize the market and enhance risk assessments, allows for better mass balancing, helps farmers understand in the future what crops maybe they need to rotate into.

And then there were some concerns centered around this just about rented or leased ground, is this going to increase barriers to entry, staffing, how will this be implemented, verified, and enforced.

And, again, this is more of an exploratory question and I am really happy on the contributions that were provided to us. Is there any Board comments on this one in particular? Sue?

MR. POWELL-PALM: Oh, you're muted, Sue.

MS. BAIRD: Actually there is written in the OSP before transition but it was never really implemented.

There would be opportunity perhaps for marketing if the land was transitioned, but I think we have tried that and it hasn't gone over really well.

So I see this as if we required the land to be registered, transitioned for 36 months, then there is going to be more cost to the farmer.

They are not going to get any return on that cost, because we really tried to get that market established and we haven't been able to do it.

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Now perhaps if we did create a new label or, you know, if we created a new label in transition that might help to get a market, in my world at least most farmers who are grain farmers who are transitioning have sold their grains as non-GMO and they get a little bit of premium for that, not nearly an organic premium, and maybe not -- And I think, oh, boost Tim Daley's fruit -- Old Farm maybe tried to get a medium, a little bit more than non-GMO but less than organic premium to the farmer. It didn't work.

So I don't think that we could ever require something that is not in the regulation. I don't know how you could do that and I don't think that there is justification for the farmer to have to pay for registration if they are not going to get a return for that investment.

MR. POWELL-PALM: Jerry?

MR. D'AMORE: Yes. I would like to respond to Sue's comment. I agree with you entirely.

I spent six years of my life with an internationally recognized marketer breaking my teeth on exactly that, trying to establish a value for transitional properties and foods. It met with no success.

We could not get, garner value at retail for that effort.

MR. POWELL-PALM: Real quick, Amy, on -- Oh, sorry. Brian?

MR. CALDWELL: Yes. I think again from a similar standpoint as from before, here in Central New York a lot of land is sort of actually fallow or sometimes only marginally in agriculture and to require a farmer who might be able to rent, you know, a new 5-acre field or something like that, to register three years in advance would, you know, when

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it's essentially, you know, there hasn't been any inputs in it for the last three years and, you know, it's basically ready to go, but they don't know that this land is going to become available because, you know, it's just not on the market and then all of a sudden it is for rental.

So, anyways, just again, you know, targeting where the problem is I think is really important and I get that business-to-business eliminates the lap, the final sale to the consumer, that's great.

But we just have to be thinking about this stuff all the time to not really hit people hard that are not the targets.

MR. POWELL-PALM: Thank you. Amy, would you speak a little bit to kind of this idea of the more data we have on transitioning land the more ability I think, and possibly confident farmers could have that, that there is a market opportunity to get into organics.

If it's a black box it seems like -- And I think, yes, I have experienced this a few times myself of when folks are asking about transition oftentimes they'll be like, okay, where do I send my soil samples to prove that my fields are ready or, you know, what all information do you need.

On the whole it's signed affidavits, a sworn affidavit, and I am often like I feel for the farmers who are saying you don't need more than that, like there's nothing else to it.

But I was wondering if you could speak to that a little bit, Amy, and address I think this idea of like what more data on transition means for the market in your opinion.

MS. BRUCH: Mm-hmm. Sure, Nate. And I appreciate, Brian, your comments and opinions. In my area and in a lot of farmer's areas we are transitioning ground that actually had had prohibited substances on it.

So there are a lot of questions by farmers as to the process and it's a little, it seems almost a little unofficial because you are supposed to essentially farm with organic practices but we don't have that relationship with a certifier and then at 36 months down the road you begin that partnership.

So it is a little just uncertain for farmers that are making that first conversion just without some of the knowledge on the regulations, so having that official start point.

We have to capture that initial, or that, I'm sorry, I said initial, the last herbicide, restricted use herbicide, you need to capture that and that's when that clock starts for the 36 months for ground that has actually been conventional.

So having a little more rigor I think would help folks that are transitioning land that had had prohibited substances on it.

I think from an international standpoint also getting a better pulse rate on what is going to be showing up and that's the thing we see large swings happening with acres coming onboard that is organic, so having a little bit more of a runway of understanding for farmers that are organic.

The amount of acres that are going to be transitioning in the next few years is also helpful. And then for that first year farmer that has no organic land there are some requirements and deadlines to get things certified and inspected before you harvest that

crop.

Otherwise, you actually might have to go through a 48-month transition instead of a 36 if you weren't adhering to certain inspection timeframes.

So those are a few points. I can see definitely everybody's viewpoint on both sides of this equation. I think that is in general why the stakeholder community was pretty split on this question.

MR. POWELL-PALM: I think I just -- In honoring Steve's point about time, I am wanting to finish up here.

The only other thing I would add to this is this is really a call for information, it's a call for ideas, from the community, so I think it doesn't need to be prescriptive but rather we want to solicit the best ideas out there for how we make this work. Sue and then Kyla.

MS. BAIRD: Yes. To follow up with what I said, there is some reasons for some farmers to become transitionally registered or certified or whatever you call it.

NRCS, EQIP, and CSP have -- NRCS has two different programs, CSP, Conservation Security, and then EQIP. If they register into those programs as transitioning to organic then those farmers actually have some financial reason for being, to pay to be transitioning, a certified transition.

MS. BRUCH: Mm-hmm.

MS. BAIRD: So that is -- And maybe we need to get that word out.

MR. POWELL-PALM: Great point, yes.

MS. BRUCH: That's a good point. And then in addition the agencies of FSA and RMA were having to declare that we are through the transition process as well.

So there is already agencies under the umbrella of the USDA that are requiring this up front knowledge on registration. Kyla?

MS. SMITH: Yes. I have two quick things. So I just wanted to put a plug, this isn't like totally related, it's sort of maybe tangentially related, but during public comment I, you know, had, OKWC had, you know, put forth their comments in regards to upping the handling standards.

And so, again, I think that that's like another option that the Board could look at to just enhance those standards and look at what data we can glean out of that industry as well.

And then the other thing I just was going to, wanted to say, just broadly, and I have mentioned this in the subcommittee, so I'll just say it again here as well, is that on this whole topic, so whether or not we're talking about this 36-month transition or any of the requirements, like anything that will be required, just as a reminder that we are talking about a standard that has to be applied to all farm types and all like, you know, globally across the country with very different technology capabilities and, you know, all of the things, right, that we are sort of size and scale neutral and like have to be broad enough, which as a certifier is infuriating because we have to like, you know, figure out like the details part of it. We love our details.

But that's really important, and so I do think that whatever we come up with, again, has to be workable for all operators to be able to apply within their farm system

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and/or production system or whatever, and that we need to then use our tools, whether that be through risk assessment or guidance or whatever, to get into the nuanced thing that applies directly to that operation.

MR. POWELL-PALM: Absolutely. I think that's a great place to call it, but I think that could be applied to probably a dozen other things we have talked about today, how do we apply these ideas in a federal program that applies to all operations both big and small. So I really appreciate that point, Kyla.

All right. I think, Steve, that is it. We are not going to vote on the discussion document so back to you.

And thank you, Amy, that was just -- It's a pile of work and thank you so much for the collaboration with the whole team. That was incredible. So props to you.

MS. BRUCH: Thank you. Thank you, everybody. I really appreciate it.

MR. ELA: Thank you. That is a ton of work and so very much appreciate to all you put into it. I know it's not the end of the discussion by any means.

So I am trying to figure out here -- Jenny has to go to her mobile phone at 5:30 Eastern Time and so I think what I would like to do before we go to officer elections, and I do want to just note that, hey, good job to all the subcommittees. You guys are awesome.

You know, it's a long day or days and all the work that goes in is just impressive. So I am going to -- I think we'll go to Jenny for just a bit here and then we'll see where we, kind of how we finish up the meeting here, but I want to make sure we give Jenny her chance before she has to step out of the office.

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So, Jenny, I am going to turn it over to you.

DR. TUCKER: Okay. And so, I suggest as a process check. I was thinking we were moving to farewells, is that correct, or is there anything else --

MR. ELA: Yes.

DR. TUCKER: -- you want me to comment on before I --

MR. ELA: No, I --

DR. TUCKER: -- move to that?

MR. ELA: Well, if you have any other comments, go ahead. But farewells was my intention. But since you're going to have to go mobile, feel free to also say anything else you want to, unless you want to wait for the very end when you're on your phone.

(Laughter.)

DR. TUCKER: You know, I will say, I appreciated Steve's comment today about, you got to be careful not to peek at the community, sort of texts, during the meeting because in the room they would be whispers in the hallway.

But I do think there were a couple of comments of noting how the collaborative and deep and intellectual discussion by the Board is so valued as a model. And as a model for how democracy works.

So I was very moved by the discussion about, that this process itself, we take the process for granted. And well, how do we do motions and blah-blah, blah-blah, blah-blah.

But when you set that aside, what we are trying to do here is social

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justice, it is democracy, it is collaboration. And the tone that you guys use with each other, and have used with each other this entire meeting, is a real tribute to what democracy can look like.

So, I thank all of you for engaging so thoughtfully in that way even when it's hard and controversial. So thank you. I really admire that process these three days, so thank you.

And I think, actually, that kinds of leads into, I'm going to get a little teary through these things because the three people we're saying goodbye to actually were among the first folks that I started working with when I became deputy administrator.

In fact, I met Sue the very first time. So I'll start with my goodbye with Sue. And I'm looking right at her.

And I flew out for the mid-west organic conference. And it was literally like the second week after the last administration had started.

And so, any administration change is going to be just, wow, it's a whole new group. And so, it's a priority strategy, even when it's the same party.

But it was clearly a different party coming in and I just remember being really nervous about, I don't know what I'm supposed to say and that. This was a brand new experience for me.

I've been through lots of administration changes in the government, but also as a consultant, but it was the first time I had gone as sort of a, show up and speak for NOP. And we had just appointed Sue to the Board and Sue came over and she gave me a big hug and she said, I'm just so happy you're here.

And it just, it just changed my whole feeling about the event. And so, to be able to meet her at the beginning of her service and to have her just amidst everything happening in just everything. It was so nice to have a friendly face.

And I have found Sue's comments, particularly from the inspector perspective, just so on point throughout her time here. She always thinks about the farmers.

And she's told lovely stories about the high school kids who just need a chance. And they have found it through agriculture. And I just, that is social justice. And that is the actions of everyday.

And so, Sue, I will always admire you and hold you close for those memories, so thank you. And so I think they sent you a plaque. Do you want to hold up your plaque? Oh, that's pretty.

MS. BAIRD: It is beautiful and I thank you so much. And, Jennifer, thank you for such wonderful words. I, wow.

DR. TUCKER: It's lovely.

MS. BAIRD: You want to take pictures now?

DR. TUCKER: Who is taking pictures? Yes, hold on.

(Laughter.)

MS. BAIRD: Yes, I'm trying to get the glare off of it.

DR. TUCKER: Okay, I have one, but hopefully a couple of other folks got it too, just in case.

MS. BAIRD: Thank you.

DR. TUCKER: Excellent. Okay. Phew, okay.

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And now I'm going to move to Asa, who I feel as strongly about because the first time, one of the very first board meetings that I went to, again, these three folks who are leaving coincide with my first really coming into my new role and kind of finding my feet. And I feel like I kind of, they and I have kind of grown up together on the board.

And so, the first board meeting that I went to, sort of in charge, I actually sat next to Asa. And we had, I thought just the most thoughtful conversation about public health, about children's health, about sort of the grand scheme of what we live in. And the philosophy of care and the philosophy of next generation, the philosophy of the precautionary principle.

It's like the exact kind of deep intellectual, philosophical dinner that I love. And there were all these people all around us, but I just recall that for a good part of the dinner we were just going into all of that.

And there is nothing I love more than that kind of intellectual thoughtfulness and really thinking about the world, the planet, the people, the meeting. And so, I've really held to that.

So when Asa talks about these things during these public meetings I always thinking back to that dinner and how close he really does hold all of this to his identity and his heart. And so, Asa, I'm going to miss you a whole lot. And so I hope we keep in touch too.

MR. BRADMAN: Thank you. I appreciate your comments. My plaque is upstairs so I'll have to send it separately.

(Laughter.)

DR. TUCKER: Okay. Congratulations, Asa. And again, thank you for everything.

So no picture? Are we going to take a picture of, so, Asa, smile, we're going to take a strange shot of you too. Okay. We'll PhotoShop in the plaque for you. Let's see.

MR. ELA: He can go get it in a few minutes and you'll get a picture with it.

DR. TUCKER: We can take a picture. Okay, that sounds good.

MR. BRADMAN: All right.

DR. TUCKER: Okay, cool. And then, Steve, that means you're next.

And so, okay, so my story of Steve has to do with an elevator. So, Steve was, had been on the board for a while and I think Steve is really, both in his knowledge of his farm and the dynamics, but also the dynamics of humans and politics.

I have never seen somebody work politics as gently as Steve without appearing to be working politics. And so, take notes folks because he's really good at it.

And I think Steve was, and I mean that in the absolute most positive way.

I know politics has a bad connotation sometimes but that's not, but politics is about how you use power to some desired end.

And I think that Steve understands the ends that we're all trying to get to, and understands the means to get there. And so I think Steve was getting to a point where it was clear he was going to be the chair, but he had not been voted the chair. But it was kind of clear that that was Steve's trajectory.

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And he, again, I was still new getting used to the role, and Steve walks up to me as I'm going to the elevator, and thanks, Steve, for doing it on the way to the elevator, not the lady's room, which is how it usually works at public meetings. And so, that was good.

And so, Steve walked up to me and said, yes, I wondered if we could just grab a few minutes or a cup of coffee and just chat. And it was such a lovely way of leaning into that relationship.

And so, we did find time later that day or the next one and we sat, it was in the lobby of the hotel. It was one of those ones in the basement.

But we just sat in these chairs and we talked about the board dynamics and where the board, the hope of the board and the promise of the board. And the realities of what USDA faces and the realities the National Organic Program.

And it was such an open, thoughtful conversation about all the people involved and who was supportive of what and what areas people felt strongly about. But it was all incredibly respectful that this person represents this view. And this is where they add a whole lot of value and this person balances that.

And it was just, it's such a beautiful sense of the team dynamic. And so I have, in the last couple of years, been able to talk to Steve, pretty much on a monthly basis, that he and I get together monthly.

And that same thoughtfulness and grace and humanity and compassion and passion and empathy. And Steve has gone through some stuff with his farm that I think directly relate to some of the things we've been talking about with these agenda items with climate change.

And the things he's gone through, I think people would be surprised at what he has gone through and yet been able to continue to do his service to the board. It's really quite stunning.

So, Steve, an honor. A true, true honor to be with you, to know you and to work with you. So, thank you.

MR. ELA: Well, and you don't know how nervous I was to sit down for that first meeting.

DR. TUCKER: Never showed. Yes, never showed. Never showed.

MR. ELA: Well, it was pretty much there. Thank you so much.

DR. TUCKER: Do you have your plaque that you can hold up? There it is. All righty. And so, let's see if we can get a screenshot here. That's a nice smile, Steve. Hold on. We're all getting good at this whole screen shot stuff. Okay. Okay, got it.

So, really, thanks to all three of you. I wish you all the best for all the free time you're going to have. And to the next generation of leaders and to board members.

This is, as I said at the very beginning, this real powerful group. And your ability to move the planet moves me. So I look forward to working with you in the years ahead.

MR. ELA: Thank you, Jenny.

DR. TUCKER: Back to you, Steve.

MR. ELA: All right. Well, I think all three of us have very much enjoyed working with you so I hope you know that. And you're right, we did cut our teeth

together. And I hope you will continue to cut your teeth in what is also a very graceful style.

With that we are going to jump back to our agenda. We're going to do the officer elections and then look over the work agendas coming up. And then I know several of the board members going out want to give their own thoughts.

So, officer elections. This is a challenge in the virtual world because we have always honored that the officer elections are anonymous. Nobody knows what the vote count was, except I guess for the two people that count up the pieces of paper.

Unless you all really good at making paper airplanes that fly across the country, it's a little hard to write down, write on pieces of paper at this time.

So you all should have received three SurveyMonkey links in your email last night. So why don't you take a minute, including myself and, so the results are going to come to Asa and me. They are anonymous, but we will see who prevailed in the number of votes and we will announce that.

And again, we don't announce the vote count at all. However is elected is elected by the whole board. And we all proceed from that.

Let's see, I'm finding it myself here so give me a second. Everybody gets to vote. Obviously everybody gets one vote.

And what we're going to do is we will, and so there are three surveys, use each one independently. One for chair, one for vice chair, one for secretary.

And first we will have to nominate people. And when you do vote, make sure you only vote for those people that are nominated.

So, I'm sorry, I'm a terrible, not a get multitasker here so I'm trying to find

my own links here. Okay.

So, I will open the floor to nominations for chair. Sue?

MS. BAIRD: Yes. I would like to nominate Dr. Carolyn Dimitri.

She has been a leader in the organic world for 20 years I know because she's been around before I was around.

She has a great working relationship from USDA. She actually came from the USDA ERS. I would like to give her, something I have never told her, but I would like to tell her that her work with the data with ERS and within the research organic actually, probably was one of the major help for me, assistance, to open up Organic Missouri.

As many of you know, Missouri is a home of Monsanto and we really fought a horrible fight at the beginning trying to get organic into Missouri. Her data made all the different in convincing people that there was a real future for organic in Missouri.

She has a wonderful relationship. She is on the faculty now. She has a relationship with academia.

And she just, her thoughtful concise words, Carolyn, more than mine, really brings, I just have a great respect for her. So I want to nominate her.

MR. ELA: All right. Is there a second? Kim?

MS. HUSEMAN: I'll second the nomination.

MR. ELA: Okay. So there are two, makes a motion. Kim seconds.

Are there other nominations? Mindee?

MS. JEFFREY: I'd like to nominate Nate. The depth and breadth of his understanding of how organics works, on so many fronts, has really inspired me.

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MR. ELA: Okay. Is there a second for Nate?

MS. GREENWOOD: Yes, I'll second.

MS. SMITH: I'll second.

(Laughter.)

MR. ELA: I heard Rick first, so we will do that. So nomination for Nate by Mindee and seconded by Rick. Are there others?

I would like to nominate Rick.

(Laughter.)

DR. DIMITRI: I second that.

MR. ELA: Rick, you would make an outstanding chair.

MS. GREENWOOD: I appreciate that, Steve, and I appreciate the seconds, but I really can't commit the time to it so I would like to have at least the other two garner my votes. But I really appreciate that, thank you.

MR. ELA: You are welcome.

DR. DIMITRI: And I don't think I've been around long enough to be the chair, I'm sorry. I'm blown away by that generosity of that offer, but I feel like I'm still getting my feet on the ground here.

MR. ELA: So is that a withdrawal, Kim?

DR. DIMITRI: Yes. I don't think I would be a very good chair. I've only fooled you, so --

(Laughter.)

MR. D'AMORE: This is Jerry.

DR. DIMITRI: I love that I have. I felt so pleased with myself for that. Yes.

MR. D'AMORE: Do you have the time, is my question?

DR. DIMITRI: Do I personally have the time? I think I'm just too early. And this is just the end of my first year and I am just really learning. Maybe this is the first meeting where I feel like I kind of understand what's going on.

And as a non-farmer and as a non-certifier I just don't think I have like command of some of those nuance things about like handling products and growing food. I think that would be a real handicap.

MR. ELA: Okay, we will withdraw Carolyn's name. But I know both Rick and you, Carolyn, would do great jobs. As well as Nate.

So any other nominations for chair?

DR. TUCKER: I'm glad, Carolyn, I had the chance to say thank you for your work.

DR. DIMITRI: Thank you so much for telling me that. I appreciate that. I like to make a difference in the world.

MR. ELA: All right. I am not seeing any other nominations, and since there is only one nomination left standing I'll ask for the Board to accept, by unanimous consent, Nate as chair. Any objections?

All right. Nate, congratulations. And welcome to the chairperson ship.

MR. POWELL-PALM: Thank you, everybody. I just want to say that

it is with deep admiration for Steve that I think that the tenor and the style that he brought to being chair is something I hope to emulate. And so I really appreciate the vote of confidence.

MR. ELA: All right. We are going to move to vice chair. And so, I will entertain motions, or nominations, excuse me, for vice chair. Nate?

MR. POWELL-PALM: I would like to nominate Mindee. I think the level of detail that she is able to keep on top of, and her connection to both the consumer community but also materials on the whole. And just some of the glimpses we got and how she can explain the relevance of a lot of the work we do to the lay audience I think is going to be an essential communication tool for keeping NOSB relevant to the community.

MR. D'AMORE: This is Jerry, I'd like to second that.

MR. ELA: Okay. We have a nomination for Mindee made by Nate, seconded by Jerry.

Are there other nominations for vice chair? All right, I am not seeing any others so I will ask, since there is only one nomination for vice chair, I will ask the Board if anybody has any objections to unanimous consent?

All right, congratulations, Mindee. Welcome to the vice chair position. I think you two will do a great job.

Okay, one more position. You're making the job for Asa and I very simple here. But let's, I'd like to entertain nominations for secretary.

MR. D'AMORE: This is Jerry. I'd like to nominate Kyla.

MR. ELA: Okay. Is there a second?

(Off microphone comments.)

MR. ELA: Did I hear a second, I wasn't quite clear on that?

MS. BRUCH: I'll second it.

MS. GREENWOOD: Yes, I'll second it.

MR. ELA: So was that Kim seconding?

MS. BRUCH: Amy. I'll second that. Kim, whoever.

MR. ELA: All right. I have a hard time hearing. So, there is a nomination for Kyla by Jerry and seconded by Kim. Other nominations?

MS. PETREY: I'll nominate Amy.

MR. POWELL-PALM: I'd like to second that.

MR. ELA: Okay. So nominate by Logan and seconded by Nate.

Other nominations? Sue, I see you have your hand up.

MS. BAIRD: Well, I'm going to try to get Carolyn on the track anyway. I'm going to nominate Carolyn.

MR. ELA: Okay.

DR. DIMITRI: I appreciate that but I hope someone else wins.

(Laughter.)

MR. ELA: All right.

MS. BAIRD: We always do.

MR. ELA: I didn't hear her withdrawing her name, is there a second?
Is there a --

MR. BRADMAN: I'll second.

MR. ELA: Okay, Asa has the second. Other nominations? Nate,
you have your hand up.

MR. POWELL-PALM: Sorry, I didn't take it down.

MR. ELA: Okay. Yes, I probably didn't lower it as well.

DR. DIMITRI: Do you think we should nominate a guy for this?
How about Rick? I mean, let's not make it all gendered about women and secretary.

(Laughter.)

MS. BAIRD: Ah, good point.

MR. ELA: I will vouch that in my term, with the exception of Mindee,
that it has always been men.

MS. JEFFREY: Hey, I'm gender-free so I still count, right? Like --

(Laughter.)

DR. TUCKER: Gender parity.

(Laughter.)

MR. ELA: That is fair. So there is no history of this being, in my time
on the board, as male or female.

So, Rick. Is there is a second for Rick?

MS. GREENWOOD: Can I withdraw my name even though, know that
we know that it's gender --

DR. DIMITRI: You don't want to be the token man, come on?

MS. GREENWOOD: It's already gender neutral so I'd like to withdraw.

MR. ELA: You're a tough cookie, Rick.

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MS. GREENWOOD: I know.

MR. ELA: Any other nominations for secretary? All right, I don't see any others so we'll close the nominations.

So if you would all open up your SurveyMonkey link for secretary and make your vote, Asa and I will look at them and we will announce who will be the new secretary.

Okay. As ever, I'm clicking between links here, I'm sorry. Asa, are you seeing --

MR. BRADMAN: I'm trying to log on and see the results.

MR. ELA: Yes, that's fine. We'll give you a second here. It looks like everybody has voted.

MR. BRADMAN: Let's see, SurveyMonkey is trying to make me join. Do I need to join?

DR. DIMITRI: Horrors of SurveyMonkey.

MR. BRADMAN: Can you share your screen? I guess you have to share your screen.

MR. ELA: Yes.

MR. BRADMAN: Yes.

MR. ELA: Just a second here, I'm trying to have it open for me.

MR. BRADMAN: Or we can do it by cell phone too.

MR. D'AMORE: That might be safer.

MR. ELA: Yes. Okay.

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MR. BRADMAN: When I log on to the results thing it's asking me to log in, and I can create it quickly but I don't have one.

MR. ELA: Well --

MR. BRADMAN: Because I'm at the wrong place.

MR. ELA: Right.

MS. GREENWOOD: That's the problem with monkeys.

MR. ELA: Yes.

MS. SMITH: Steve, do you want to take a screen shot and email it to Asa? Maybe that's like a second eyes confirmation. I trust you as well, so.

MR. ELA: Yes.

DR. DIMITRI: Steve, you don't look happy, that's all I can --

MR. ELA: Well, I'm trying to think of the procedures here, I show a tie.

DR. DIMITRI: Well, I'll tell you what, I'll withdrawal my name and then you can re-vote. Unless the tie is between the other two and then --

MR. ELA: Well, we won't --

DR. DIMITRI: -- in that case it doesn't help.

MR. ELA: I don't want to say it, but okay, if we want to do that, why don't we re-vote. We will have it between Amy and Kyla. And let's use the vice chair survey link since we did not use that.

DR. DIMITRI: Okay.

MS. BAIRD: Use the vice chair, okay.

MR. ELA: Yes.

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MR. CALDWELL: So I actually did the vice chair one thinking that maybe that it would be necessary to actually have the vote --

MR. ELA: Okay.

MR. CALDWELL: -- so it won't let me do it again.

MR. ELA: Okay. Let me then, has anybody voted for the chair one?

DR. DIMITRI: You could also just text your vote to Steve --

MR. ELA: Well, let's --

DR. DIMITRI: -- and then Steve doesn't, that way we can preserve it in case there is another disaster.

MR. ELA: Well, let's go ahead and use the chair link if nobody else has used it.

MR. CALDWELL: Well, yes, and I'm sorry, I did the same thing for that. I thought maybe the votes would be necessary.

MR. D'AMORE: Because you opened it, it's not available for you to use it?

MR. CALDWELL: Right. Because I already basically voted for Nate and Mindee.

MR. ELA: Brian --

MR. CALDWELL: Why don't I just email Steve and Asa.

MR. ELA: Yes, that would be great. So go ahead and use the vice chair link for everybody else, and Brian will let us know.

And let's see, I have to get back. I'm sorry, I have not used

SurveyMonkey before. You can tell.

DR. DIMITRI: I have just submitted mine.

MR. ELA: Okay. Trying to get back to the, okay.

MR. BRADMAN: So, I am logged in now but I'm just seeing that, the number of people who voted but I'm not seeing who they voted for.

MR. ELA: If you go to analyze results, Asa.

MR. BRADMAN: Okay.

MR. ELA: Let me look at Brian's here. Hold on a second.

MR. BRADMAN: Okay, I see it. Okay. But I'm looking for --

MR. D'AMORE: Secretary.

MR. BRADMAN: Should I be looking --

MR. ELA: Look under vice chair.

MR. BRADMAN: But there is one person who is voted for who is not running for vice chair.

MR. ELA: I understand. I think we'll just have to take that as a --

MR. BRADMAN: That might be Brian's vote.

MR. ELA: Oh, that could be. That could be. Now my phone is --

MR. CALDWELL: Yes, it probably is so eliminate that one.

MR. ELA: Okay. My phone does not want to load new emails. Asa, did you get the, there we go.

MR. BRADMAN: Should we have it?

MR. ELA: Okay.

MR. BRADMAN: Should there be an email from Brian?

MR. ELA: I've got it. Yes, I've got Brian's now.

MR. BRADMAN: Okay.

MR. ELA: Oh, for Pete's sake, I think --

MR. BRADMAN: So we have a tie? That's what I'm seeing at least.

MR. ELA: Yes. So somebody didn't, oh, because we don't have, nope. Somebody, I only show 11 votes.

MR. BRADMAN: I'm showing 12.

MR. ELA: Okay. But we should have 13.

MR. D'AMORE: One of them is a text or email.

MR. ELA: Well, I show 11 on the screen, Brian makes 12, but we should have 13 votes. And that might, without disclosing anything, it might be important.

(Laughter.)

MS. ARSENAULT: Steve, did you vote?

MR. ELA: I did. I'm pretty sure I did. Wow, you all are not making it easy.

DR. DIMITRI: I think that you could just flip a coin, right?

MR. ELA: Well, we just need one more vote.

MR. POWELL-PALM: Should we just email you, would that be easier?

MR. ELA: Sure. Let's do a re-vote. And just, if you would all email Asa and myself we will make sure we have this.

MS. SMITH: Amy and I could just rock, paper, scissors.

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MS. BRUCH: Yes. It's the same --

MR. ELA: Usually we don't disclose how close it is but I think you might be able to guess. At least --

MR. D'AMORE: Nothing wrong with close, Steve.

MR. ELA: Nope, not at all. So, we know what Brian's vote is, but if you would all send Asa and I an email we will tally it up.

DR. DIMITRI: This is very funny by the way.

MR. ELA: It is.

DR. DIMITRI: I was teaching my class I would consider this like a failure.

(Laughter.)

DR. DIMITRI: Like my students would write in their course evaluations like, you know, Dr. Dimitri couldn't even get a vote.

(Laughter.)

MR. ELA: Yes, we're not going to go towards the failure side here.

DR. DIMITRI: I know.

MR. BRADMAN: We don't want any echoes of presidential elections here.

MR. ELA: Right.

DR. DIMITRI: I know. I know.

MR. ELA: Yes. It's hard on the meeting to have a hanging Chad but, and I promise to delete all of these as soon as we finish.

DR. DIMITRI: And of course they would be wonderful so it doesn't really matter who does it, right?

MR. ELA: That is the bottom line.

DR. DIMITRI: Yes.

MR. ELA: Okay.

MR. BRADMAN: And of course, we're assuming everyone's email gets here on time.

MR. ELA: Yes.

DR. DIMITRI: You guys are so far away it probably takes forever to get an email from New York.

(Laughter.)

MS. BRUCH: We've got the back up though, rock, paper, scissors.

DR. DIMITRI: That's right.

MR. ELA: Okay. I'm going text Asa something here, so, Asa, look for a text.

MS. HUSEMAN: Everybody close their eyes except for one person.

(Laughter.)

MR. ELA: I am doing Asa directly here.

MS. SMITH: In the chat someone suggested we could do Squid Game to decide the winner and I respectfully decline.

(Laughter.)

MS. BRUCH: I'm not sure what that is but it doesn't sound good.

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MS. JEFFREY: I just need to know where to send all my colored pens.

(Laughter.)

DR. DIMITRI: That's so funny.

MR. BRADMAN: Okay.

MS. JEFFREY: Just kidding, I don't think you could get me to give up
my colored pens.

MR. ELA: All right, so, let's see. So --

MS. BAIRD: I want a tutorial, Mindee. Assumed tutorial on use of
colored pens.

(Laughter.)

DR. DIMITRI: Do you have like a whole pack of colored pens, Mindee,
or do you have one of the ones with the clickers?

MS. JEFFREY: Every color of colored pen is my least sustainable life
decision.

DR. DIMITRI: Nice. How many does that mean? Like 20, 30, 40?

MR. ELA: All right.

MS. JEFFREY: I have 11 sitting on the desk.

DR. DIMITRI: That's not bad at all.

MR. ELA: Just a second here. Sorry it takes so long everybody, this is
new.

DR. TUCKER: This is Jenny, I have to say, I admire Carolyn's ability to
kill time here. That was very nice.

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(Laughter.)

DR. DIMITRI: I am good at the idle chit chat. Especially because I don't really like to talk, but --

MS. HUSEMAN: Anybody missing Scott about now because I think he was the guy that had this all figured out last time around.

MS. ARSENAULT: I actually invited him to come guest poll. To be the guest poller.

MS. HUSEMAN: The guest poller --

MS. ARSENAULT: He turned me down.

MS. HUSEMAN: -- that would be a great idea.

MR. POWELL-PALM: What's wrong with him. How could he go and decline that offer.

MS. HUSEMAN: Maybe he has PTSD.

(Laughter.)

MS. JEFFREY: I think maybe his boss was like, no, I can't --

MR. BRADMAN: Can everyone hear me?

MR. ELA: Okay, we do have an announcement. Asa is going to announce.

MS. JEFFREY: I'm too excited.

MR. BRADMAN: Oh, you know what, I'm having a, let me turn my sound back on, sorry.

(Laughter.)

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MR. BRADMAN: Okay, can everyone hear me?

MR. ELA: We can, Asa.

MS. GREENWOOD: No, no, I can't.

MR. BRADMAN: So, the final count, so Kyla is our new secretary.

And it's basically a split vote, but Kyla is the new secretary.

MS. BRUCH: Congratulations, Kyla.

MR. ELA: Yes, congratulations. And all I can say --

DR. DIMITRI: Mindee, you got lucky.

MR. ELA: -- is we wouldn't generally know that, but thank goodness we didn't have somebody else on the call. It could have gone on forever.

MR. BRADMAN: Can I make a pitch for something?

MR. ELA: Yes.

MR. BRADMAN: Having attended the executive committee meetings sometimes, and those of you who are not a chair of a subcommittee or in a leadership role, but specifically, everyone can go to the executive meetings. It's a great place to get more depth and breadth of planning. So, just thought I would mention that.

MR. ELA: Yes, I think that's great. And I would, I guess I would encourage Amy and Carolyn to attend as many ExComs as you can because, obviously the Board invites all of you.

(Laughter.)

MR. ELA: Well thank you for working through a somewhat excruciating process, and tolerating us with a little less, maybe non-anonymity than I would

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like, but I will delete all of those emails, and I'm sure Asa will too. So they won't accidentally go out to anyone else.

And yes, congratulations, Nate, Mindee and Kyla. What a great Board and what a great group of people. So I look forward to seeing you, seeing you all work together.

DR. TUCKER: This is Jenny. I just want to add my congratulations. On behalf of the program, we look forward to working with all three of you in the year ahead. So congratulations from the NOP.

MR. ELA: With that, we are going to go to the NOP work agenda.

DR. DIMITRI: Yikes.

MR. D'AMORE: Yikes is right.

(Laughter.)

MR. ELA: And you know what, not my problem.

(Laughter.)

DR. DIMITRI: You so aren't happy about it, Steve.

MS. JEFFREY: Officially.

MS. BAIRD: I second that, Steve.

MS. ARSENAULT: It will be up on the screen momentarily. Here it has to swift to a document.

MR. ELA: Yes.

MS. ARSENAULT: I think.

MR. ELA: For those of our stakeholders that are out and still hanging

on with us, I do want to point out that there were some public comments about, that the field and greenhouse container production work agenda item had been pulled off. And that is not the case, it is still on our work agenda list.

It was on, it may have been on a different tab in the work agenda, but it is there. It was still on the hold list where it has resided, but I don't want, I want to make clear to everybody that was not arbitrarily taken off our work agenda, it is still there.

But we do appreciate that you all pay attention to what we're doing. I think that's awesome. Thanks for pointing out things, that there were errors.

So, we'll spin through this pretty quickly. Obviously, as you all know, we try and project what our most optimistic work agenda item is.

So if we think we could go to a vote, we're going to say vote. But know that sometimes, for various reasons, that can get demoted to a discussion document or kicked to another meeting.

So, under CACS we still have the deter of fraud that Amy and Nate presented. And then supporting the work of the NOSB in human capital management is coming up as well to a vote.

We already voted on ammonia extract, but carbon dioxide got sent back to the subcommittee as a petition. And then it is the various sunsets that are coming up under crops. So at this point only one proposal petition coming up for a vote.

And I do take, and actually, under ammonia extract that may not be the best listing at this point but it does refer to the last motion of the three to one ratio. And so that would be the highly soluble nitrogen fertilizers. Some more work on that.

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So I didn't mean to say ammonia extracts disappeared but at least one aspect of the highly soluble nitrogen fertilizers is still there.

So the various sunsets for crops. And then let's go ahead and scroll down until we get to handling. Handling has several petitions out there.

CPD, phosphoric acid and PLA. I think, I'm going to skip to the abbreviations of those. There is L. malic acid, which has been hanging around for a little bit.

And ion exchange filtration, which Kyla introduced. And then a bunch of sunsets for handling.

And we can scroll down. Livestock, at this point, just has sunsets. And I have told Kim, or whoever becomes that subcommittee chair that just make sure they have enough work. I'll find some material that's really dicey to submit a petition for just to make them work. But at this point livestock is in, just on sunsets.

And then under materials, they do have the petition on tall oil. Mindee has continued work on excluded methods, and then discussion document on research priorities, which will, that discussion document will turn into a proposal for the fall.

And PDS still has, on their agenda, the public comment process, which is, we've talked about already.

So, does the Board see any changes or additions or anything that has fallen off? Sounds good.

And then I'll just, there are all the discussion, the items such as containers and aquaculture and several others that are on hold, but they are still in our work agenda. And I don't think we have those up right now, but if you do look on our, the website with our

work agendas those are there.

All right. Any other items on the work agenda for the Board? Okay.

With that, we are going to, we already Jenny give her farewell remarks. As Michelle in the program, and Jarred, I'll note, we don't actually get to go until January 23rd. But I will be happy to quack, quack, quack all the way out as a lame duck.

So, I want to turn it over to both Sue and then Asa to give any final remarks that they would like to give, while they have their chance. So go ahead, Sue.

MS. BAIRD: Thank you. It's been a humbling experience. I've felt so inadequate many, many times. I've always tried to remember that I'm there to represent my small family farms, and that's what I've tried to do all along.

Again, as you know, my passion by now, you know, is for the children and the health of the children. And I have grandchild, I don't have any great grandchildren yet but it's getting there.

I want to see our earth preserved for them. We've lost so much from the time that I was a child to now.

And even from the time that my children were children till now. We just continually seem to be hellbent, I might use that word, for destroying our earth. That's the reason Carolyn's paper is so important. That we recognize.

My grandmother was Cherokee Indian and she would take me down into the woods and set me down on the stump and she'd say, Suzie Q, because I was a little hyper back then, Suzie Q, sit here and let the earth talk to you. And I tried to remember that the whole time that I have been an organic inspector in the organic world because when I

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found organic I found my grandmother's teachings again.

I would just caution everyone to remember that, really, the movement started for the health of the people in Silent Spring, pesticides, those types of things. Social justice, animal welfare. Those are the hearts of our consumers and our customers. And the hearts of the organic industry.

I love all of you. I just am so at awe of the minds of this Board.
Thank you.

MR. D'AMORE: We'll miss you, Sue.

MR. ELA: Does anybody want to say anything to Sue? No need to, but certainly, or actually, I'm just going to wait and leave it open to the Board for, to say anything to anybody. Asa?

MR. BRADMAN: Yes. I just kind of want to repeat everything that Sue just said and just say, it's really been such a privilege and honor to be on the Board and to work with so many just brilliant people. It's been really a great experience, and I appreciate the trust that people have put on me to participate.

And I apologize if I talk too much. I did have a couple things more though to say in terms of, about the program.

I just want to highlight the depth of public comment. I'm just in aw at the amount of work that goes into the public comments. And the guide posts often provides for, both NOSB thinking but also for the program in terms of policy and program development.

And I mentioned the list 4 and the sanitizers. And I think we have a lot of really great suggestions in the public comment. But also we don't have enough time to

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really give it the attention they deserve in the NOSB setting.

And I was actually going to suggest somebody at the agency take those comments and pull them out by topic. Maybe list 4 sanitizers and setup a big PDF and keep that on their computer as they work on policies.

I've been pained about the hydroponics issue and would like to see the container and hydroponics addressed in a way that is problem solving. I think, when I look back on the votes that I've participated in, I wish I knew what I knew now and what might have been possible.

I do think that there is some discussion on that. I do think there should be an opportunity to grow organic foods on urban areas that were formally hazardous waste sites or locations where you can't put stuff in the ground. And it would be great to have a consensus guideline on that.

One thing I've thought about is, say, for situations where there is active farm land and somebody wants to build a facility that covers the ground, like potentially a hydroponic facility, that there be a ten year transition period to organic. The same way we have with, suggested for native ecosystems.

So there is kind of a disincentive to convert farm land into a different kind of production system so that if we do have container systems that they're focused on the areas where there is no other alternative.

In terms of process, I think we could be more efficient on the Board. My first job was with the State Health Department in California.

I staffed a community on lead poisoning. And my job was to write the

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documents, and the people on the committee reviewed and approved them and added to them. And I think that could be a more efficient use of our time.

Especially for some sunset renewals that are kind of, I hate to use this word, but perfunctory. Some especially, really we know are just going to get approved. And I think that would improve efficiency.

Another example might be USDA funding, a position in EPA to manage the list 4, list 3 revisions. When I worked in the State Health Department the agency that oversaw lead testing in kids funded somebody in my program, which is the lead poison prevention program, to coordinate policy development and medical care services to those kids.

And I think that model would apply here. And maybe it's been done in some ways.

I think the social justice things are really important. I talked about food insecurity earlier, access to medical care.

There is some great farmers in California who, and their workers get health insurance. In the studies I've done, the vast majority of farm workers, both in the organic and the conventional sector, don't get health insurance.

And they get services through the state of California because there is good policies here to provide well child care and well pregnancy care. But that's an enormous subsidy to the Ag industry that's really unquantified right now.

I think to the extent that we can develop a social justice framework for organic that can only strengthen our contributions to the environment and public health.

Anyway, I just want to say it's been such a joy to work on this committee and I hope to stay involved in the future and I look forward to seeing everyone going forward

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as well.

MR. ELA: Thank you, Asa, and Sue. As outgoing chair, maybe it's outgoing chair at this point, I can only say to you two, what a treat to get to know both of you.

And I just respect your input to the Board so much. You each bringing different perspectives, and I think that's so important about this whole Board of bringing different perspectives. So, I could go on about you two but I just want to say what a treat.

And for my own spill at the end here, I had the soapbox at the start of the meeting. But I just, we had a couple of really difficult topics this meeting.

And the cohesiveness of the Board is just, I so appreciate the outreach to everybody and that it's communal, even when we disagree. And I just, the number of people I've met, stakeholders, Board Members, the engagement I'm going to miss. It's been really nice.

And then I'm just going to say that I think my love of organics, and love of being a farmer, organic farmer is, versus the conventional farmer I was, is just the ecosystem approach and the fascination with how well the ecosystem works.

And that's, in our deliberations, I think we get so caught up in materials and specifics that I hope we can always keep that higher level sense of environmental ecosystem services forefront in our thinking and use that as the higher level goal of OFPA, the originators of the organic program.

Our farm has had one of the researchers who has done the COMET model for carbon sequestration and modeling across the country with NRCS. He's looked at our farm and we're just darn close to zero, zero carbon, and I'm really proud of that. And

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that includes going to farmers market's six hours away, with the fuel costs there. And we're also zero food waste, which we're pretty proud of.

And that, to me, that's also organic. All of the things that go into organic.

And climate change, yes, it's going to hit all of us. And so, that's a big one. But thank you, everybody, really appreciate it.

Okay, anybody have anything else? Well, I do have one thing. Thank you for, I've received some gifts, and thank you. Very appreciated.

So, anything else?

MR. BRADMAN: Never better deserved, Steve.

MR. ELA: Wow.

MS. ARSENAULT: I got you until January 23rd, don't forget.

(Laughter.)

MR. ELA: Yes. I'll show up at some meetings and be quiet.

(Laughter.)

MR. ELA: So, anything else before we close this meeting?

I don't know if Jenny wants to, or anybody from the program wants to say anything else before we adjourn?

MS. PETREY: Steve, I thank you all absolutely. I'm sorry, I didn't raise my hand, I just didn't want to lose the strength. But thank all of you for advising us and getting us there and for being so passionate and devoted and I appreciate it. I don't want to take up everybody's time, so.

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MR. ELA: Okay. And I will open it to any other Board Members who want to say anything.

MS. JEFFREY: I just want to acknowledge that the three of you came in on hydroponics and went out on a pandemic during the Trump Administration. Thank you. Thank you, thank you.

MS. PETREY: And ammonia extracts.

MR. ELA: Ammonia extracts, yes. Sometimes --

MS. PETREY: Went out with a bang.

MR. ELA: -- hands, Logan.

(Laughter.)

MR. ELA: Kyla.

MS. SMITH: I just wanted to say quickly, thank you all for your service and I really do hope that since I have gotten to meet some of you as an audience member, but didn't get to connect with you all due to the pandemic, except over Zoom, which has been sort of unfortunate, and so I really do hope that even though you're cycling off that we can connect in the future in a non-Zoom way.

So here's a plug for Crystal City Board Reunion and hope that you guys can all come, because I'd really like to, yes, get to know you all a little bit better, not in this format. So anyway, thanks all for your service.

MS. GREENWOOD: And, Steve, I'm obviously going to, you knew it was coming, no, you've done great for an apply guy but I'm left in the lurch because I don't know if go after leafy green people or soybeans, just somehow it's going to be tough.

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(Laughter.)

MS. BRUCH: I know you'll get it figured out, Rick.

MS. GREENWOOD: Thank you.

MR. ELA: Well, Rick, on that note I do have one thing. We have sparred and I, you know, as I've said I'm a moderate and I like to find middle ground, and so, I really think I have found the answer to what we're doing and it's this.

(Laughter.)

MR. ELA: It's shaped like an avocado when it's green --

MS. BRUCH: It's a pear.

MR. ELA: -- but it's also a pome fruit, which is like an apple. So if we can bury the hatchet and both agree that pears are the best we can move forward. It's the hybrid of the two.

(Laughter.)

MR. D'AMORE: No, you guys don't need a compromise, you did this well.

MS. GREENWOOD: Yes, that's a setup if I ever saw one.

(Laughter.)

MR. ELA: Anybody else?

MS. BRUCH: I was just going to say, Asa, Steve, Sue, thank you so much for your leadership setting such a good example for our freshman class. The bar is set pretty high. We have a lot to learn, but thank you guys so much for everything.

MR. POWELL-PALM: Also, thank you, Steve, for being chair two.

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Two years. I mean, I am so grateful. Yes.

MR. ELA: Well, Tom Chapman set the standard on that, so I hope it doesn't happen to too many people, but thank you. Brian.

MR. CALDWELL: You know, this experience on the Board is so much more congenial and positive than I thought it was going to be when I started. And I really think it's a reflection of the leadership of you three.

And especially, Steve, I think is an amazing leader. And I really appreciate that. And I wish I had more years to enjoy that.

MR. ELA: Thank you. I will laugh that Jenny says she thinks I'm a good politician because that is as far away of things I want to be, but I'll accept it. But anybody else?

All right. Well, thank you all for the kudos, and on behalf of Asa and Sue and myself.

Anything else from the program before we adjourn?

MS. ARSENAULT: Yes. Steve, I just have two last slides so folks can see where, two things.

We have one more nomination this coming year, so some time in the Spring of 2022 we'll send out the announcement. And that is Rick's seat. Rick will be the one rotating off in January of 2023. Is that right? 2023.

And so that should hit the street in the spring of 2022. That announcement.

And I have the next several meetings on the book so folks can see.

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And I hope to get that up on the website pretty soon.

But of course, in April of 2022 will be in Crystal City, Virginia. I think this is our third attempt to be in Crystal City, Virginia.

And then we moved Sacramento, which we should have been sitting in right now, to the fall of 2022. Still working on spring of 2023.

And then we pushed the Providence, Rhode Island meeting for those who saw that we were supposed to be in Providence out a year. So in the fall of 2023 we'll be in Providence, Rhode Island. For some future planning there.

MR. ELA: All right. Anything else? All right. Well, with that, I will turn things over, after we adjourn the meeting, to Nate, Mindee and Kyla. Best of luck to you. And I will be following what all you do and excited for what this Board has the capabilities of.

So at that, I will adjourn the meeting. And we will see you, or I won't see, but next spring the Board will see everybody.

And thanks to all the stakeholders for hanging with us here. It's a great community.

MS. ARSENAULT: Thank you, all.

(Whereupon, the above-entitled matter went off the record at 6:08 p.m.)