UNITED STATES DEPARTMENT OF AGRICULTURE

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NATIONAL ORGANIC STANDARDS BOARD

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FALL 2018 PUBLIC COMMENT WEBINAR

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TUESDAY,
OCTOBER 16, 2018

The webinar was held via telephone at 1:00 p.m., Tom Chapman, NOSB Chair, presiding.

BOARD MEMBERS PRESENT

TOM CHAPMAN, Chair
HARRIET BEHAR, Vice Chair
SCOTT RICE, Secretary
JESSE BUIE
SUE BAIRD
ASA BRADMAN
A-DAE ROMERO-BRIONES

LISA DE LIMA

STEVE ELA

JAMES "RICK" GREENWOOD

DAVE MORTENSEN

EMILY OAKLEY

DAN SEITZ

ASHLEY SWAFFAR

STAFF PRESENT

DR. PAUL LEWIS, Ph.D., Director, Standards Division, National Organic Program

MICHELLE ARSENAULT, Advisory Board Specialist, National Organic Program

DEVON PATTILLO, Materials Specialist, Standards Division, National Organic Program

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

1:00 p.m.

MS. ARSENAULT: Hi, everyone, welcome. This is Michelle from NOP. My clock says 1:00 straight up, so I think we'll get started.

We're going to -- a little bit of housekeeping at first. If you are on the line with us, you should see an instruction slide. Hopefully, everyone can see that. It says welcome, and it talks a little bit about ReadyTalk and how do dial in on the phone versus using your headset.

If you're on your headset, just make sure your mic is muted. We -- it's -- the reason we get feedback on the line is when you're -- your mic is live and your speakers are on and you can tell that I'm not technologically savvy enough to explain that to you guys. If we get feedback, we'll make an announcement and have everyone check their lines there.

So noise is our biggest challenge. It's much easier if we can have you guys self-

mute than if we have to mute and unmute the whole group. So we'll ask that you do self-mute yourself on the phone.

If you have -- you're on a phone that doesn't have a mute button, you can hit star-6 to mute yourself and star-7 to unmute.

All right, so as a participant on the call, you should be able to -- you have some limited functionality. You should see a chat box and a raise your hand box.

We're asking people not to raise their hand. If you are signed up to speak, then you'll be called on when it's your turn, and we won't be responding to any raised hands that aren't board members.

So Tom is going to run through some logistics with regard to the timer, but we are using a timer to limit people's comments to three minutes, and we'll demonstrate that for you in a little bit so everyone can hear what it sounds like on the phone.

And if you're having any technical

problems, ReadyTalk has a really good customer service line. If you go to readytalk.com, you'll see a phone number, you can call them, and they're usually really quick about getting you fixed up.

All right, I'm going to turn it over to Paul Lewis now to actually officially open the October 2018 NOSB meeting public comment webinar.

DIRECTOR LEWIS: Thank you, Michelle, and good afternoon. I am Paul Lewis, Director of Standards Division of the National Organic Program.

I want to welcome NOSB members and the public to today's National Organic Standards Board Public Comment Webinar, and I appreciate the NOSB members' participation in this call and for all your work serving on the Board.

This webinar provides the opportunity for the public to provide comments to the Board as part of the upcoming face-to-face public meeting scheduled for October 24th through 26th in St. Paul, Minnesota. Please consult the NOP

website for further information about the face-to-face meeting.

The meeting that we're having today, just like the meeting we'll be having later on this week is another public comment webinar, and the meeting next week in St. Paul all operate under the provisions of the Federal Advisory Committee Act.

And I am looking forward to hearing comments from the public today and Thursday and at our meeting next week to assist the Board in preparing their recommendations to USDA in response to National Organic Standards Board board agenda items.

I also want to personally thank my colleagues here in the NOP Standards Division for their help behind the scenes to bring you today's teleconference.

I'd like to close now by turning to Chair, Mr. Tom Chapman, Chair of the NOSB. Tom, thank you for leading this webinar today.

CHAIRPERSON CHAPMAN: Thank you, Paul,

and thanks to the NOP staff, particularly Michelle and Deb, for helping accommodate this webinar.

On behalf of the Board, I'd like to welcome everyone to the public comment webinar prior to our fall meeting. Public comment is a vital part of the NOSB process, and I appreciate all folks who have spent their time getting us their thoughts.

Michelle, if you'd be so kind to take roll of the -- a roll call of the Board members present?

MS. ARSENAULT: Thanks, Tom.

Tom Chapman?

CHAIRPERSON CHAPMAN: Present.

MS. ARSENAULT: Harriet Behar?

MEMBER BEHAR: Present.

MS. ARSENAULT: Great. Scott Rice?

MEMBER RICE: Present.

MS. ARSENAULT: Thank you, sir. Jesse Buie?

MEMBER BUIE: Present.

MS. ARSENAULT: Thanks, Jesse.

Sue Baird? Sue, if you're talking, you're on mute. I see you on the line.

MEMBER BAIRD: Present.

MS. ARSENAULT: Okay, thanks, got it, thank you. Asa Bradman?

MEMBER BRADMAN: Present, I may leave about two minutes early to go to a class.

MS. ARSENAULT: Thanks, Asa.

Lisa de Lima?

MEMBER DE LIMA: Here.

MS. ARSENAULT: Hi, Lisa, thank you. Steve Ela?

MEMBER ELA: Present.

MS. ARSENAULT: Great. I'm going to interrupt myself here and ask that if you are not speaking to please mute yourself, we're getting some beeping noises.

Dave Mortensen?

MEMBER MORTENSEN: Present.

MS. ARSENAULT: Hi, Dave.

Emily Oakley?

MEMBER OAKLEY: Present.

MS. ARSENAULT: Hi, Emily.

A-dae Briones? A-dae, did you --

MEMBER ROMERO-BRIONES: Present.

MS. ARSENAULT: Excellent, you were able to join. Thank you.

Eric Schwartz?

MEMBER SCHWARTZ: Present, Michelle.

MS. ARSENAULT: Thank you.

And Ashley Swaffar?

MEMBER SWAFFAR: I'm here.

MS. ARSENAULT: Hello there.

And I'm just going to check, Dan Seitz, were you able to join?

Okay, Dan, is going to join us a little bit late today. And Rick Greenwood is not able to be with us today, so he won't be on the call. So we have 13 of the 15 Board members with us on the call at the moment. All right.

CHAIRPERSON CHAPMAN: Thank you, Michelle.

MS. ARSENAULT: Thanks, Tom.

CHAIRPERSON CHAPMAN: There are 13 of 15, that's a quorum, and we'll look to have Dan join us a little bit later. So, next, I have some logistical items to go over and then we'll get into the public comment time.

First off, like Michelle has mentioned already, please keep yourself on mute. If folks individually mute themselves, it's usually easier than muting across the board. We often get some background noise if people are using a speaker phone or their computer. So please keep that in mind as well.

Star-6 to mute, star-7 to unmute.

We'll start public comments in the order of the list that Michelle has provided for the commenters. If a commenter is not present at the time we call upon them, we'll skip them but come back to them at the end as time permits.

We will call on the next speaker -- I will call out the name of the next speaker who is up as well as the next one or two names on deck.

The program and I try to ID the

commenters via the phone number you've provided prior to make sure the speaker is present. If I cannot ID a phone number, you might hear me ask you to comment into the staff so that we can find your phone number.

When called upon to speak, we ask the speaker to give their name and relevant affiliation for the record. We ask that you disclose all relevant affiliations pertaining to matters of business before the Board. If members of the NOSB want further clarification, I encourage you to ask questions after the public commenter has finished their comments.

Comment time will be three minutes per commenter. After that three minutes, a buzzer will go off.

Michelle, are you able to play an example of that buzzer?

MS. ARSENAULT: Indeed, here we go.

CHAIRPERSON CHAPMAN: There you go.

MS. ARSENAULT: Is that okay?

CHAIRPERSON CHAPMAN: -- the buzzer,

out of respect for the Board and other commenters, I ask that you try to finish as close to that three minute mark as possible or when you hear the buzzer.

I will then facilitate questions at that point from the Board, if there's any of them. And then after that's completed, we'll move to the next commenter.

We don't take questions from the public for other public commenters, only questions from the Board. Board members, if you have a question, either speak up when I ask if you have questions or message me via the message box.

Keep public -- all public commenters are allotted only one time slot either in person or at the webinars. And there will be a transcript of these calls after the entire meeting bundled together with the meeting transcripts.

Michelle, did I miss anything?

MS. ARSENAULT: No, I think you

covered everything, Tom, thanks.

CHAIRPERSON CHAPMAN: Okay. We are still getting a lot of feedback from folks, so, again, if people could self-mute, that would great.

And we'll get started. So first up we have Amalie Lipstreu followed by Harold Austin and then Percy Hawkes.

Amalie, are you on the line with us?

MS. LIPSTREU: Yes, I am. Can you hear me okay?

CHAIRPERSON CHAPMAN: Yes, we can. If you'd start with your name and affiliation for the record and then proceed with your comment?

MS. LIPSTREU: Good afternoon, this is Amalie Lipstreu. I'm the Policy Coordinator for the Ohio Ecological Food and Farm Association. Thank you for the opportunity to share our input in an open forum.

OEFFA has provided oral and written comments on energy infrastructure impacts to organic farms for several years.

To be perfectly clear, we are talking about prohibited substances being used during construction and operation of energy infrastructure. Many farmers and certifiers aren't aware of the use of prohibited substances and processes that can put certified organic production in jeopardy.

OEFFA approaches this subject with abundance of caution as we hold the integrity of the National Organics program paramount.

The NOSB and the NOP have the choice of being proactive or reactive on this issue. But the reality is these impacts will make themselves known when farms being decertified, noncompliance is a media story.

Please add a study of energy system infrastructure on organic farms to the NOSB work agenda.

Regarding the proposal on genetic integrity transparency of food grown on organic land, we appreciate the efforts of the Board to begin looking at levels of contamination starting

with organic corn seed. We heard from many producers that will no longer grow food grade organic corn due to the difficulties in maintaining purity of products from seed to delivery. An ability to maintain organic integrity to ensure next production and supply should not be a limiting factor.

Also, with regard to testing, the equivalence of in-house and PCR testing is not certain. Many of our growers that have used non-PCR tests have had loads rejected, and companies that use PCR find levels of contamination that are higher than the on-farm testing indicated.

The issue of GE contamination at many levels has been longstanding, and our farmers are looking for solutions. But as the proposal moves forward, please consider the feasibility of what's being asked of organic producers.

The social, financial and environmental challenges, especially for organic grain farmers, many of whom are an island within a sea of conventional agriculture, are

considerable, and we must take great pains to ensure that we do not add an inordinate burden and responsibility on them.

Thank you.

CHAIRPERSON CHAPMAN: Thank you. Any questions from the Board?

MEMBER BEHAR: Yes, this is Harriet.

CHAIRPERSON CHAPMAN: Go ahead, Harriet.

MEMBER BEHAR: Hi, Amalie. I'm wondering, so do you feel that the proposal on genetic integrity is implementable as written?

MS. LIPSTREU: We feel very strongly that it should move forward because it has been such a longstanding issue. We do hope that some of the matters are addressed just as I have spoke to the equivalence of testing, some of the financial burden, and training for conducting those tests be considered as the proposal does move forward.

MEMBER BEHAR: Okay, I think at the in person meeting, I'll be able to answer some of

those questions.

MS. LIPSTREU: Great, thank you.

MEMBER BEHAR: And then on the infrastructure -- Tom, can I ask another question?

CHAIRPERSON CHAPMAN: Yes.

MEMBER BEHAR: So I am just wondering, in the work plan, to help us figure out how this would work, would this also include some sort of testing protocol for inputs, water and the contaminates those might have, as well as the mitigation plan, which I know you've spoken about? Are you looking at kind of a two-pronged effort here?

MS. LIPSTREU: Sure, thanks for the question, Harriet. And, no, I would not project about testing of water or anything of the like at this point. We really feel what would be best would be to start with a discussion document, invite a panel of experts to break down the issue and develop a better understanding of what the most burning issues are and what issues really

are within the scope of the Board to be able to address and then move forward from there.

And I would say that this mitigation plan, as I've said previously, it has been implemented successfully with not just the producers we work with, but with the Federal Energy Regulatory Commission, as well as some of the pipeline companies.

So it really is a tool that's worth taking a look at and considering how that might be used proactively. Does that answer your question?

MEMBER BEHAR: Yes, thank you.

MS. LIPSTREU: Thank you.

CHAIRPERSON CHAPMAN: Any other questions?

MEMBER RICE: -- Scott.

CHAIRPERSON CHAPMAN: Yes, Scott.

MEMBER RICE: Hi, Amalie, thanks for your comments, and we, as you know, have been discussing the impacts of the extraction activities. I just wonder, back to sort of

scoping what a work plan item or product would look like, you mentioned, you know, a discussion document and the panel of experts.

But do you -- what is your -- what would you see as your ideal result of that work? What would the end product from NOSB look like?

MS. LIPSTREU: Thank you, again. Well, I think, ideally, we would see some kind of guidance or instruction developed by the NOP that would provide some resources that could be shared with certifiers who could also share those resources with producers.

One of the things that we've come to realize over the past several years of working on this issue is the critical nature of everyone having as complete information as possible as early on in the process as possible so that, you know, as many mitigation measures can be put in place that protect farmers and their resource base they depend on.

MEMBER RICE: Thank you.

MS. LIPSTREU: Thank you.

CHAIRPERSON CHAPMAN: Any other questions?

Hearing none, thank you for your time, and we'll go on to the next commenter, Harold Austin, followed by Percy and then Ted Auch. Ted Auch, if you're on the line please comment in because we haven't identified your phone number yet.

Harold, if you can start with your name and affiliation please?

MR. AUSTIN: Thank you, Tom. Harold Austin, past member of the NOSB, an organic consumer, and the current Chair of the Northwest Hort Council's Organic Subcommittee.

Good day. First, I'd like to thank all of the members of the NOSB for your service on behalf on our organic community and the various stakeholders that each of you represent. This can be very time consuming, so I truly appreciate all that you do on our behalf.

I support the sunset materials currently under review and up for vote as

presented by the Crop Subcommittee. Please see my written comments for specific detail.

I also support the position of the Crop Subcommittee on the proposals with the exception of allyl isothiocyanate. I think adding this material to the National List would be of assistance to organic growers for coming into compliance with federal and state phytosanitary requirements for nursery stock which currently can only be accomplished by the use of substances not currently allowed for use in organic crop production.

In reading other public comments, I fully support the comments on this material that were submitted by the Organic Produce Wholesalers Coalition. They framed this very well.

As a past Chair of the Handling Subcommittee, I support all of the sunset materials currently under review and up to the subsequent vote as presented by the Handling Subcommittee.

These are materials that I've been

involved with for previous sunset reviews, and I see absolutely no reason why they should not continue to be allowed as currently listed on the National List because the majority of them are still quite necessary for organic handlers.

I especially want to thank and comment and let you know how much I appreciate the hard work of this Subcommittee.

Materials Subcommittee, a couple things to mention. First, regarding the marine materials discussion document, this is a complex subject, and I appreciate the hard work put in to it thus far by the Subcommittee. However, this is in no way ready for prime time nor do I think it will be any time in the near future.

As an organic community, we must find a way to farm in a true sustainable fashion while at the same time protecting and/or enhancing the environment and our natural resources each and every day. This document, while it frames some of the concerns, I feel it creates more questions than provides answers.

And, thus, I urge caution as you try to move this very complex issue forward. I would support the formation of a working group to look at this issue. I also question if the NOP is actually the appropriate governmental agency to provide oversight for such a process. I would ask the NOP and the USDA to weigh in on that.

Secondly, I question the need for the proposed work agenda item for sanitizers. I do not see a valid rationale for this to be included in the Subcommittee work plan as an action item. Each material is currently listed for a specific use for each of the appropriate Subcommittees.

The need, the use, the necessity will vary for each material. And if they're lumped into a single category, seems pointless, especially when there are so many other things that you, the members of the NOSB, could be spending your time on.

No one on any of the Subcommittees will be able to truly frame all of the variables that an organic handler or producer must take

into consideration.

Thank you.

CHAIRPERSON CHAPMAN: Thank you. Any questions for Harold?

(Simultaneous speaking.)

MEMBER ELA: Tom, I have one -- go ahead, Emily.

MEMBER OAKLEY: Sorry.

Thank you, Harold, for your comments. And I wanted to ask you specifically in regards to marine materials, we found a very difficult time in identifying an internationally recognized and agreed-upon definition of sustainability or something similar in terms of harvest of marine materials. And I was wondering if you had any specific suggestions or knew of any other avenues that you would -- that we pursue as we try to address environmental concerns of those materials? Thank you.

MR. AUSTIN: Thanks, Emily. You know, that's a difficult question that you're trying to take and figure out the scope of. As you know,

while I was still on the Board, we looked at the marine materials and the classifications and sustainability.

And, likewise, what you're now encountering, we also encountered at that time, the extreme difficulty by nature of what this encompasses. And that's why I question how to move it forward. It's going to be an extremely complex process, and this is a difficult topic.

And we know there's environmental concerns. We also know that there's concerns by the organic stakeholders that rely on these materials. And how do we frame that? What does that look like?

That's where I think stepping back, forming a committee, a working group to look at all of the specifics, to analyze and to go out and research that very -- the scope of what you just posed I think makes the best sense.

Take the time, make sure that, as you take the approach to it, that we're looking at environmental concerns. We're also looking at

the feasibility of this and also the impact on the organic stakeholders as well. I hope that helps.

MEMBER OAKLEY: Yes, thank you. Is it okay to do a quick follow up, Tom?

CHAIRPERSON CHAPMAN: Yes.

MEMBER OAKLEY: Do you feel that using the wildcraft standard for organic certification would not adequately address environmental concerns? Or what is your concern about applying that standard to address the environmental issues? And that's my last question. Sorry, thanks.

MR. AUSTIN: You know, I don't know if I can give you a full answer on that, Emily. I think that's where having a working group really look at having that apply to this.

What are the impacts? What does it cover well? What doesn't it cover well? What are the other issues that that might take and bring into play?

So I think really taking and having a

working group that can really dig into the weeds on this, so to speak, I think behooves us all to take a step back, be a little bit cautious about it, because this is going to have an impact. We definitely want something that's sustainable. We want something that's going to protect the environment.

But I think putting together a working group of the various different perspectives, different agencies, different, you know, consumers, environmentals, organic stakeholders that use these materials, looking at all the impact that this is going to have. Because this covers such a tremendous scope, I just urge caution as you move forward with it.

CHAIRPERSON CHAPMAN: Other questions for Harold?

MEMBER ELA: Tom, this is Steve, I had a question.

CHAIRPERSON CHAPMAN: Steve, go ahead.

MEMBER ELA: Harold, just wanted to follow up on your comments on AITC and your

recommendation that we move forward with that.

Could you expand a little more on that? Because we're certainly wrestling with its application, I mean, not being all that different from other broad spectrum fumigants and such versus, you know, it's not -- it's a little more specific and a little more potentially appropriate for organic.

So I'd like to hear a little more detailed thoughts on that from you.

MR. AUSTIN: Cool, yes, Steve. I think compared to the other materials that we have on a conventional side, which we know, I mean, essentially, we're coming in and we're fumigating, you're sterilizing the soil, you know, for the planting stocks.

But there are phytosanitary requirements that we have to meet in order to take and provide -- be able to provide those planting stocks to the grower.

Organically, you know, pretty much, we have to take and look aggressively at

conventional stock rather than organic supplied stock, especially when we're dealing with like -- crops -- tree fruits, specifically.

I think utilizing this material, we could take it and give something that's very close to the natural sources, but we can use it in a more confined, more defined application technique. You know, we've all dealt with, a lot of us, with the mustard seeds, the natural, the mustard plants, working them in. That encompasses broad spectrum.

Where on this specific, we could utilize this material because it hits site specific so that we're minimizing the impact that it might be having on a broad spectrum. So I think there's a lot more benefit if we have this material, especially when we're dealing with planting stock, wood stock, for phytosanitary -- to meet the phytosanitary requirements that we're trying to accomplish.

I think it give the organic community a tool that they could use, and we could provide

-- and we could begin to provide those planting stocks from an organic source rather than a conventional source.

MEMBER ELA: As a follow up to that, Harold, would you then be in favor of an annotation that would restrict it to planting stock versus other more widespread use?

MR. AUSTIN: I wouldn't be opposed to that at all.

MEMBER ELA: Thank you.

MR. AUSTIN: Thanks, Steve.

CHAIRPERSON CHAPMAN: Other questions for Harold?

Okay, thank you, Harold.

Up next, we have Percy followed by Ted. Ted, we still haven't located your phone number, so please comment in if you're here. And after Ted, Julia Barton, you're on deck.

Percy, if you could start with your name and affiliation?

MR. HAWKES: Yes, can you hear me?

CHAIRPERSON CHAPMAN: Yes, we can.

MR. HAWKES: Okay, yes, this is Percy Hawkes, and I'm the Regulatory Affairs Specialist for Protena International, and we are petitioning that sodium citrate be included on the list of synthetic substances allowed for use in organic crop production.

Sodium citrate is commonly used as an anticoagulant to facilitate the processing and handling of blood collected in slaughterhouses. And it acts as a chelating agent in fresh blood, the citric ion binding with and removing calcium ions which are needed to coagulate blood.

Sodium citrate is the anticoagulant of choice for the following seven reasons. First, it is made from citric acid which is easy to manufacture resulting from the fermentation of organic starch components and the addition of sodium hydroxide or sodium monohydrate.

Second, sodium citrate and its precursor, citric acid, are widely used in the food industry with many uses already approved in the production of organic food products.

Third, sodium citrate is one of the three USDA-approved anticoagulants for processing slaughterhouse blood. The other two are citric acid and sodium tripolyphosphate.

Fourth, sodium citrate is the most readily available anticoagulant for handling slaughterhouse blood.

Fifth, food grade sodium citrate is not known to have any negative effects on the environment nor on human or animal health. It is rapidly degraded in the soil and is free of heavy metals.

Sixth, sodium citrate used as an anticoagulant produces a more uniform and quality product than the alternative method of mixing the blood with agitators. Agitators or mixers cause hemolysis of the red blood cells and the formation of fibrin residue, ruling out its use in further processing blood byproducts.

And, seventh, citric acid is already approved as a processing aid to lower the pH of liquid fish organic fertilizer. And by lowering

the pH, it forms citrate salts.

Therefore, sodium citrate becomes one of the ingredients in organic liquid fish fertilizer resulting from the use of citric acid to adjust the pH. We believe that sodium citrate should be approved as a processing aid, anticoagulant for organic blood derivative fertilizers. Thank you.

CHAIRPERSON CHAPMAN: Thank you. Any questions for Percy?

MEMBER BEHAR: Tom, this is Harriet.

CHAIRPERSON CHAPMAN: Yes, go ahead.

MEMBER BEHAR: Would you say that the vast majority of dried blood meal is -- has sodium citrate in it now?

MR. HAWKES: Yes, that is the anticoagulant of choice that basically all slaughterhouses that process blood use.

MEMBER BEHAR: And one other question. Did you have a certifier tell you that blood meal would not be allowed if you had used the sodium citrate as the anticoagulant? Is that what

precipitated this petition?

MR. HAWKES: Yes, we assumed that we had to get sodium citrate approved as an ingredient just as it has to be approved by other countries. Does that answer your question, or am I missing the question?

MEMBER BEHAR: I know that blood meal has been allowed without that review of the processing aid of sodium citrate in the past, so I was just wondering if you had a certifier tell you that they would no longer allow blood meal as a natural product because of the presence of the sodium citrate, the small amount of residual.

MR. HAWKES: Well, some blood meal is just processed from raw blood directly. And other -- other plants that process plasma and hemoglobin use the hemoglobin portion as a blood derivative organic fertilizer.

So I guess my previous answer, you asked if all blood meal has sodium citrate, if they process plasma, yes, it will have sodium citrate in the hemoglobin portion as well as the

plasma portion.

If they don't -- if they just use raw blood that is not -- does not have -- does not need to have anticoagulant because they don't process plasma, then it wouldn't have the sodium citrate. Does that answer the question?

MEMBER BEHAR: Yes. You did mention that overseas that you've been asked to have this approved by other governmental organic oversight agencies, is that correct?

MR. HAWKES: Yes, we are not aware that it's approved.

MEMBER BEHAR: Okay.

MR. HAWKES: Could you give me the -- I guess I need the reference of what you're referring to. I mean, we know blood meal is approved, but is blood meal that contains sodium citrate approved? We were told that it was not, that it would have to be approved, and that's part of the process that we had to go through at your request.

MEMBER BEHAR: Okay, thank you.

CHAIRPERSON CHAPMAN: Any other questions for Percy?

All right, thank you, Percy.

Up next, we have Ted Auch followed by Julia Barton and Doug Raubenolt.

Ted, are you here?

MR. AUCH: Can you hear me?

CHAIRPERSON CHAPMAN: Yes, you're a little light, Ted, but we can hear you. If you could start with your name and affiliation for the record?

MR. AUCH: Sure, my name is Ted Auch. I work with a nonprofit called The FracTracker Alliance -- work in Cleveland, Ohio and I also teach adjunct -- environmental science -- and the reason that I'm on this phone call is, well, I'm a recovering soil scientist, that's what I have my PhD in, but it's been a while since I've got my hands dirty in the soil science profession.

But, at the nonprofit that I work at, FracTracker, we do a lot of work analyzing and looking at the impacts of unconventional oil and

gas production processing and transport and that kind of thing.

And, we do a lot of mapping of this industry, the unconventional oil and gas industry with respect to their water impact, their waste impact and their land use impact.

And I was talking to Amalie Lipstreu at Ohio Ecological Food and Farm, and she suggested I get on this call, and the only thing that I'd really like to add to this phone call is I've talked to a lot of people, a lot of organic farmers, whether it's Tony Driac up in Jackson County, Wisconsin or some other folks who I've met here in Ohio.

And what I'd like to stress on this phone call is that this -- your organization, it's critical that you pay attention to and really get a sense for the magnitude of unconventional oil and gas development in the United States and really broaden what -- how you define that and its impact on your constituents.

Because, what the oil and gas industry

has been really good at doing in my six years of looking at them is constraining how we define fracking, what we define as fracking to the well pads in North Dakota, Pennsylvania and Ohio.

But this is an organism spread out across the United States, and it's having a dramatic impact on the landscape, on watershed -- on surface water, subsurface waters, hydrologic cycles, and it has everything from there's -- it's having impacts whether it's the sand mines up in Wisconsin and their impacts on dairy farmers and beet farmers, or it's an injection well in Ashtabula County, Ohio, which is having an incredible impact on small farmers in that county and everything in between.

I think that -- I think it's important -- it's just critical that everyone understands that fracking includes a tremendous amount of infrastructure, a tremendous amount of transport of stuff, whether it's brine hauling or sand movement or whatever the case may be. And all of that is going to trickle back down into the

people that are on this phone call.

And we've mapped that impact, the potential impact of these -- the full exploitation of these shale plates across the United States, and you can find that at our website, www.fracktracker.org.

We've worked on that project, mapping the potential impact on the agricultural sector in the United States, organic and otherwise.

So I just wanted to kind of give my two cents as to what I've seen on this topic and just convey to the audience on this call that fracking is having a quiet and a very loud impact on farming when we really understand that this is not just a well pad, there's all sorts of other stuff going on.

So that's all I kind of have to contribute.

CHAIRPERSON CHAPMAN: Thank you, Ted.

MR. AUCH: Sure.

CHAIRPERSON CHAPMAN: Any questions for Ted from the Board?

All right, Ted, I'm not seeing any questions or hearing any. Thank you for your time today.

MR. AUCH: Sure.

CHAIRPERSON CHAPMAN: Up next we have Julia Barton, followed by Doug and then Jo Ann Baumgartner.

Julia, if you could start with your name and affiliation for the record?

MS. BARTON: Yes, can you hear me?

CHAIRPERSON CHAPMAN: Yes, I can.

MS. BARTON: Okay, thank you.

Good afternoon, my name is Julia Barton with the Ohio Ecological Food and Farm Association. Thank you to the Board for your service, to the program for your work, and for the opportunity to offer public comment over the phone.

You heard just now from my colleagues Amalie Lipstreu, Ted Auch and from 32 organizations in a group letter submitted to the docket regarding our ongoing request to the Board

and the program to please add the topic of energy infrastructure development on organic farms to the work agenda.

It sounds like from your questions to Amalie that you may be considering how to scope such an agenda item. To fuel that conversation, we have several real-life examples, some of which we've shared over time of organic farmers impacted by this development.

This development, we know, is not going away, so we think it's important to work together to add consistency and transparency to the way we understand and address this issue in the organic realm.

As an example, from a certifier perspective, we at OEFFA have identified some prohibited substances that are commonly used in pipeline construction, foam breakers which are used as soil bands in the trench to hold up and stabilize the pipes and are buried in the trench right along with the pipe when construction is finished, are one example of a prohibited

substance.

Similarly, foam balls consisting of prohibited materials are used on sloping land to prevent gullies which could destabilize the pipes. Another commonly used material called Black Magic is a sand which sounds innocuous enough, in the sand blasting guns. It contains, however, acrylic and recycled glass material. This material is used because the pipes come off the pipe yard with paint on them and the contractors have to blast that coating off to then weld and put a latex rubberized coating over the pipes to connect the pipes together to move the gas around.

OEFFA requires that the welding area must be blanketed in order to prevent the material from contaminating the soil. The application of these prohibited materials would require an OEFFA certified farm to retransition which leads us to the experience of the producer.

If, say, the producer did not engage in an ag impact mitigation plan, I should note

ahead of construction or if, say, that plan was not followed, then they're in a situation of de-certification and the need for retransitioning.

So the producer is then left to figure out how to, for example, meet dry matter demand or manage a pasture rotation requiring them to repeatedly cross a pipeline strip that's 100 feet wide that's in transition and make sure the cows don't eat anything out of that strip that's being retransitioned while they're moving back and forth.

Maybe they need to get to the parlor or access water or shade that's not accessible in the pasture that they're grazing that day as part of a rotational grazing system. So this gets complicated from producer perspectives, too, which is another reason we're requesting the Board's help.

Finally, the inspectors are being forced to handle these situations differently according to the policies or lack thereof of various certifiers. This is an untenable

position for inspectors, and you'll be hearing from one of OEFFA's best inspectors, and most experienced in this arena, here in just a moment.

Thank you for your time.

CHAIRPERSON CHAPMAN: Thank you, Julia. Any questions for Julia?

I'm hearing and seeing none, so we'll move along. Thank you, Julia, for your time.

MS. BARTON: Thank you.

CHAIRPERSON CHAPMAN: Up next is Doug, followed by Jo Ann Baumgartner and then Corellia Johnson.

Doug, are you on the line with us? Doug, are you there? If you're speaking, you are on mute.

MS. ARSENAULT: I just unmuted him, Tom. So, Doug, can you hear us? Can you talk? Say something so we know you're unmuted.

MR. RAUBENOLT: Yes, I'm here now. Can you hear me now?

CHAIRPERSON CHAPMAN: Okay, Doug, we hear you.

MR. RAUBENOLT: Okay.

CHAIRPERSON CHAPMAN: If you could start with your name and affiliation for the record?

MR. RAUBENOLT: Yes, my name is Doug Raubenolt. I'm an IOIA-accredited inspector from Ohio. I've been an organic inspector for 13 years and have performed inspections in 24 states for six different certifiers.

Most everybody knows that Eastern Ohio and Western Pennsylvania are in the middle of an oil and natural gas boom which has now led to huge pipeline construction projects dissecting both states, and many organic farms are located in their pathway.

Organic farmers have been given the option through mitigation agreements to have all pipeline construction activities monitored by an on-site IOIA-accredited organic inspector to ensure their farm's organic status remains intact. I have served in this capacity for four different pipelines, and three of those have just

occurred in the last 12 months.

Prohibited inputs in normal pipeline construction include the use of polyurethane and polyphenylene foam products used for pipe stabilization and water breakers, sand blasting materials using recycled ingredients, welding and grinding residue, paint, contaminated dozer and trackhoe tracks, buckets, and blades from conventional farms, and boring fluids for construction under roads and streams.

Alternative plans have been agreed upon by pipeline companies for most of these activities, however, the NOP regulations are unclear on the following four issues. Number one, top soil replacement. Pipes settle and erosion events occur which result in the need to bring in off-farm topsoil to fill these voids, always confused as an inspector whether it needs to be organic or whether prior land use documentation suffices.

Number two, rock formations, they require drilling and blasting by the companies

using dynamite and nitroglycerine, and our question has always been, once this substance is exploded, is it still prohibited?

Is there a -- number three, is there a depth where a prohibited input is not going to take a -- for instance, polystyrene pillows are formed and lay under pipes at about 15-foot deep to be used as rock shields.

And, number four, if an organic farmer voluntarily pulls his right-of-way strip from certification exchange for a three-years crop compensation from the pipeline company, they've got a lot of money, they don't care, they'll write big checks, would the toxic products used during normal construction be an issue in granting -- certification after 36 months?

Some certifiers are really scared to death about these foam products and are not sure whether that can ever be recertified again, all -- a concern for me, as an inspector.

So there's one thing I hear in common from all pipeline companies, we ain't seen

nothing yet. The pipelines, there's going to be lots of them coming through here. The pipeline sites -- involved in only represent about 20 percent of what they're got tapped.

Thank you very much for hearing me out, and those are the concerns that I have as an inspector. Thank you.

CHAIRPERSON CHAPMAN: Thank you, Doug. Any questions for Doug?

MEMBER BEHAR: This is Harriet. I just want to say thank you for those four points there at the end.

CHAIRPERSON CHAPMAN: Okay, Doug, not seeing any questions. Thank you very much for your testimony and your time today.

Up next, we have Jo Ann Baumgartner followed by Corellia Johnson and then Steve Etka.

Jo Ann, are you on the line with us?

MS. BAUMGARTNER: Yes, can you hear me?

CHAIRPERSON CHAPMAN: Yes, I can. And can you start with your name and affiliation?

MS. BAUMGARTNER: Okay, thanks. I'm Jo Ann Baumgartner with the Wild Farm Alliance. We promote a healthy, viable agriculture that protects and restores wild nature.

Thank you, again, to NOSB for passing the proposed rule to eliminate the incentive to convert native ecosystems to organic production. Over 1,200 organic consumer comments supported that proposal. The NOP should now begin moving this recommendation forward to rulemaking.

With the help of organic and conservation experts, we are putting together a draft guidance for this rule that can be used by the NOSB or the NOP as a starting point. It will help operators and certifiers -- information needed to determine whether or not a native ecosystem has been converted.

Specifically, there are examples of organic systems and questions that can be asked from the desk and from the field and will also provide other examples of land that has not recovered enough to become a native system.

Now, for marine materials, any seaweed that is used in organic production should adhere to the wild caught standard that ensures no destruction to the environment. All certifiers should require documentation from operators for monitoring efforts that show they are protecting the environment.

Last year, we conducted a survey of 42 to 48 OSP new site certifiers in the U.S. The majority allow visual assessment for the NOP monitoring requirement. There were some certifiers that required photographs or written documentation because they felt like that was the only way that they could really verify what the operator was doing as they say they are. This should be the norm.

Visual assessment alone is not enough. Documentation should occur before and after each marine vegetation harvest for all biodiversity. But, the seaweed itself, the by catch from the harvest and the wildlife that uses seaweed as purchase for hunting and cover for predators.

For seaweed, documentation of the three dimensional structure in the seaweed bed against the height and bio mass should be conducted. For bio catch, they can take a photo of what's left in their boats. The wildlife documentation should include a survey of birds and marine mammals using seaweed.

We are in support of establishment of a working group whose members include marine biologists and other conservationists, land owners who are impacted by seaweed harvest, companies that harvest the seaweed, the producers that use the seaweed, and consumers.

The creation of a wild marine vegetation harvest guidance is critical for uniform compliance. Thank you for listening to my thoughts today.

CHAIRPERSON CHAPMAN: Thank you, Jo Ann. Any questions for Jo Ann?

MEMBER BEHAR: So this is Harriet. Hello, Jo Ann.

I was wondering if you had heard

anything from certifiers or inspectors or anyone about the protecting the native ecosystem proposal that we passed? Either concerns or, you know, pleasure that it was passed and looking forward to implementation? Have you heard anything?

MS. BAUMGARTNER: Well, we have not specifically outreached to them. We're still working internally with this -- draft guidance. So I will just say that, you know, there was a lot of really good comments submitted in your last meeting, if you'll recall, from certifiers in support.

CHAIRPERSON CHAPMAN: Any other questions?

Hearing none, thank you, Jo Ann.

MS. BAUMGARTNER: Thank you.

CHAIRPERSON CHAPMAN: Up next is Corellia Johnson followed by Steve Etka and then Ari Davis. Ari, we have not found you on the line, so if you're on the line, if you could comment in to the Chairperson, that would be

appreciated.

Corellia, are you on the line with us? Corellia, if you're speaking, we can't hear you.

MS. ARSENAULT: I don't see her name on the line, Tom, but there was someone from the same area code, but I guess it's not her. Thanks.

CHAIRPERSON CHAPMAN: Yes. All right, Corellia, not hearing you on the line. Give you one more shot, otherwise, we'll skip over you and move on to Steve Etka. So, Steve, are you there?

MR. ETKA: I am. Can you hear me?

CHAIRPERSON CHAPMAN: I can, hold on one sec, Steve.

So after Steve is Ari. Ari, we haven't found you, so please comment in if you're here, Ari Davis. And then after Ari is Nathan Brown.

Steve, if you could start with your name and affiliation?

MR. ETKA: Sure, my name is Steve Etka, and I'm Policy Director for the National

Organic Coalition. The Board's work is important to the integrity of organics, so it's important that you all be aware of the latest news in the larger organic policy arena as well.

In that context, NOC is pushing hard for Congress to pass a new Farm Bill. The 2014 Farm Bill and funding for key organic programs officially expired on September 30th without any action by Congress to finalize a new Farm Bill or pass a short term extension of the old one.

Both House and Senate versions of the Farm Bill include positive organic provisions and bad ones. From our perspective, the bad provisions include inappropriate statutory changes to the NOSB authorities which NOC strongly opposes.

We're pushing for a new Farm Bill that keeps the good organic provisions and gets rid of the bad. Fortunately, both versions of the Farm Bill improve organic import fraud enforcement.

Related to enforcement, we are concerned about the lack of reliable USDA organic

data collection, particularly for organic acreage data. USDA's Economic Research Service and National Agricultural Statistics Service used to collect organic acreage data through the Organic Certifier Survey. And we no longer have this data because in 2017 the responsibility for collecting organic acreage data from certifiers was transferred to the AMS without the appropriate infrastructure to collect meaningful and complete data.

And, as a result, there will be a multi-year gap in meaningful organic acreage data as well as other -- organic data stretching from 2015 until the procedures for collecting and inputting data via the NOP's organic integrity database are strengthened. These gaps greatly impede the organic community's ability to deter fraud, especially through the use of mass balance audits.

NOC believes that NOP should make product and acreage reporting mandatory for certifiers through the organic enforcement

rulemaking in spring of 2019, but should also adopt a sound and sensible approach to ensure that for certifiers working with small diversified producers that it can be captured in a reasonable way. We're also urging AMS to hire some qualified statisticians to maintain and analyze the data.

I also want to address the 606 exemption approval process. It should not be enough for a petitioner, in our view, to show that they are unable to source an organic farm of an ingredient. Petitioners should have to show that they have exhausted efforts to work with farmers and suppliers to have the ingredient produced organically.

Too many times, the 606 exemptions become an impediment to farmers who want to produce an organic product but have no market for the product because buyers have a 606 exemption.

The organic industry has grown enough that we should be able to produce most things organically. Thanks for this opportunity to

provide testimony.

CHAIRPERSON CHAPMAN: Thank you, Steve. Any questions for Steve?

MEMBER BEHAR: This is Harriet. Thank you for bringing that up about 606. I think that is something that we, NOSB members, do get a little frustrated with. So we're going to see if we can deal with that somehow in an up-front petition question as well as maybe a checklist that we can look at. Thank you.

MEMBER GREENWOOD: Tom, I had a question.

CHAIRPERSON CHAPMAN: Go ahead, Rick.

MEMBER GREENWOOD: Steve, could you just clarify what data had been collected prior to 2015 that is no longer being collected?

MR. ETKA: So prior to that time, originally, the USDA's Economic Research Service did an Organic Certifier Survey. That transferred over to NASS, the National Agricultural Statistic Service at USDA, a number of years later.

And that survey was done in a way where USDA employees actually, when needed, would go out and work individually with each certifier to get the data, and as a result of that process, they had near-universal compliance with providing that data.

But what we have seen is now that AMS has taken over that function, and it's supposed to be part of the Organic Integrity Database, that process has been slow to get started, and the complexity of what certifiers are supposed to be providing has meant that there has not been good compliance with providing that data.

And as a result, we just don't really even know how much organic acreage we have anymore. The last -- we have was back in 2015.

So it really causes a lot of problems. We can't track production trends. It makes it harder for putting together risk management tools. It makes it very difficult to do mass balance auditing as part of the effort to crack down on particularly import fraud, but also

domestically.

So it's a problem in a number of different areas. And we like the fact that the Organic Integrity Database has been -- is real-time, but there's some problems with it that need to be addressed so that we can get back on track in getting the data.

MEMBER GREENWOOD: Thank you, Steve.

CHAIRPERSON CHAPMAN: Any other questions for Steve?

Steve, you said that small producers -- acreage data about small producers should be captured in a reasonable way. What -- how would you -- what would you suggest as reasonable?

MR. ETKA: Well, one example we laid out in our written comments would be for certifiers working with producers would grow on small acreage and have like mixed -- diversified vegetable operations, for instance.

You know, they may have a number of hundred foot rows and, in certain cases where you're dealing with a small producer, it may be

sufficient to capture the data as mixed vegetables on 2.5 acres, for instance, as opposed to having to list, you know, seven or eight different tiny amounts of individual vegetables.

You know, in other areas where you have certain high risk crops like where we've seen some of the fraud like corn and other things, it may be really important to gather that data, but for small, diversified operations there may be some sound and sensible way to do that that would discourage the inputting of that data.

CHAIRPERSON CHAPMAN: Thank you. And then on the 606 issue and your comments about farmers not being able to find a market for some 606 items because of the exemption.

I mean, we've seen several examples of items coming off that list with operations, you know, developing in organic farming and petitioning the Board to have it removed.

So it's worked in some cases and not -- and I'm taking from your comments that you're thinking it's not working in other cases. What's

causing that difference? Why does it work sometimes and not the rest of it?

MR. ETKA: You know, I'm thinking back a number of years to the hops example where there was kind of a big fight about whether or not that could come off the 606 list. And what we're hearing from producers is that they really felt like they could and wanted to produce hops organically.

But because of the complexity of the crop, often it's done under contract, and because buyers didn't need to use organic forms, it just dried up that market.

So it's not only the question of whether it comes off, it's also the question of whether it goes on and whether there's the due diligence up front by a petitioner to not just determine that it's not available right now, but also to see if there's a way that could work with suppliers and farmers to make it available before they go through the 606 or have to go through the 606 process.

I mean, we're certainly aware that time is of the essence for many buyers, but I guess we also wanted to point out that the 606 process is not a fast process either, as you all know. It's sort of -- the NOSB process, but then it has to go through the USDA rulemaking process which is quite timely and cumbersome in many ways.

It would just be easier for a buyer to be kind of proactive in the market in trying to work with farmers and ingredient manufacturers to have it provided organically.

CHAIRPERSON CHAPMAN: Okay, thank you, Steve. Any other last questions for Steve?

MEMBER SWAFFAR: Hey, Ashley here. I just want to say one comment. Steve, I think you are spot on on your comments about the data collection for small farmers.

It's my experience that those people don't care to let you take the time to figure that out. They always call me in the most random times and never have that data available. So I

like that of a mixed vegetable idea. Good idea.

MR. ETKA: Thanks.

CHAIRPERSON CHAPMAN: Okay, thank you, Steve. Up next we have Ari Davis followed by Nathan Brown and Jessica Shade.

Ari, are you here? Not sure if we've been able to identify your phone number yet.

Ari, if you're speaking, we can't hear you. Ari, going once, going twice.

Okay, we'll move on down the list. Up next is Nathan Brown. Nathan, are you here?

MR. BROWN: Yes, I'm here.

CHAIRPERSON CHAPMAN: Okay, Nathan, we can hear you. Hold on one second, Nathan.

Up after Nathan will be Jessica Shade followed by Jaydee Hanson.

Nathan, if you'd start with your name and affiliation?

MR. BROWN: My name is Nathan Brown, and my family has Amaltheia Organic Dairy. I've been past Chair of the Montana Organic Association and on the Farmer Advisory Council

for the Organic Trade Association.

I'm commenting today on the paper pot transplanter, and I'd make a recommendation from the NOSB to extend the December 2018 deadlines for its use until the NOSB has a chance to review the material and vote on the petition.

I've used this paper pot transplanter for one year. I got it about a year ago to do winter greenhouse growing. And, it's totally changed my farm. I can now do crops like lettuce mix. I've transplanted beets, all of the onions and shallots, bok choy using one person this year did all of my seeding and all of my transplanting.

A typical 250-sub-bed took about an hour where it would take four to five people probably three hours before to transplant that bed. It's just been remarkably efficient for us.

And, it has obviously affected the quality of my produce as well. All of my onions and shallots are more uniform than they've ever been. It also almost doubled my yield in the

same growing area from previously doing onions.

It has also -- we can reuse the trays. We can use less potting soil and I think all of these obviously impact small farms like myself.

One of the things I guess I'm most, I guess, proud of and the biggest impact I would say is we've been able to pay employees more because we've been able to increase our income because we're not having to pay employees to do basically back breaking transplanting on our small farm.

We're too small for a water wheel transplanter. And so, I guess, years past, the highest I've paid is $13 an hour and this year, I'm paying two of our experienced employees $15 an hour.

And, I'm in Bozeman, Montana which is a fast growing, very expensive place to live. And, it has been harder and harder for us to find candidates for employment, so this has really helped out as well.

Thank you for your time.

CHAIRPERSON CHAPMAN: Thank you, Nathan. Thank you for your comments.

Any questions for Nathan?

MEMBER OAKLEY: This is Emily. I just wanted to let people know that we've discussed this quite extensively across the Committee.

And, I wondered if Steve and or Paul might want to share a little bit about our most recent conversation and especially in terms of the possible extension of the December 2018 deadline.

Do either of you want to comment on that?

MEMBER ELA: This is Steve, I can jump in. I was actually going to ask a question.

And, again, the NOP, I think is going to talk about this at the meeting in St. Paul as well. But, one of the big issues, there's not really much debate, I think, on this, on the efficacy of paper pots and what they -- the time and labor savings and all those things.

I think the real the problem we're

having is that since they used virgin paper -- well, there are a number of issues, but one of them is that the virgin paper and virgin -- and the current guidelines are recycled paper such as news print.

And then, also, the issue of the uncertainty of the adhesive use.

And then, that puts the Board and the NOP in a real quandary of recognizing that this is a really valuable item, but also of not -- as how do we extend a deadline for something that is potentially synthetic without prior approval of that?

And so, that's the quandary that we're in at this point. We certainly I think that the Crops Committee is really sensitive to what you're saying on the plight of these growers using the paper pots.

And, it's also kind of a Catch-22 not wanting to set precedent, but we're going to have to -- but if something's petitioned, we're just going to allow it to be used without complete

review.

So, that's kind of the cliff notes of some of our dilemma at this point. But, Paul, if you want to add anything, go ahead.

CHAIRPERSON CHAPMAN: Paul or Devon?

MS. ARSENAULT: Paul may have dropped off the call, sorry.

CHAIRPERSON CHAPMAN: All right.

MEMBER ELA: So, Tom, maybe I'll just ask a question of the commenter.

Given that, what would be -- I mean, we're, of course, we're trying to deal with the OFPA criteria and not allowing the use of synthetic on a farm until it's actually formally petitioned or approved.

Given that problem (inaudible due to telephone interference)-- how we address that issue?

(TELEPHONE INTERFERENCE)

MR. BROWN: Sorry, I guess I'm (inaudible due to telephone interference)

MS. ARSENAULT: So, I just muted

Steve, but it did not stop that noise. I'm not sure where we're getting the feedback from.

DIRECTOR LEWIS: Michelle, can you hear me?

MS. ARSENAULT: I can hear you, yes. Who is this?

DIRECTOR LEWIS: Great, this is Paul. So --

MS. ARSENAULT: Hey, Paul.

DIRECTOR LEWIS: Yes, I was on.

So, let me try to add some commentary to this. Yes, so, just to paraphrase what Emily spoke about, we had extensive conversations, obviously, at the subcommittee level and also at the exec committee.

Dr. Tucker, the Deputy Administrator, will be talking about this in more detail, Emily, at the NOSB meeting next week and really outlining the issue that Steve spoke about in terms of the issue of paper and the classification of paper.

And then, obviously, the other issue

in terms of the use of adhesives and paper pots. So, she'll be talking about that in more detail at next week's meeting.

CHAIRPERSON CHAPMAN: Okay. Steve, did you have a question that you wanted to repeat? I don't think it was heard.

Thank you, Paul.

MEMBER ELA: Sure. I was just going to ask the commenter how he would prefer we deal with -- I mean, the Crops Committee, obviously, is very sensitive to this. But, given the issues of virgin paper and adhesives and the potential use of a synthetic on organic farms before it's fully approved or added to the national list, how we should handle that?

MR. BROWN: Well, I guess from what everybody has told me that there is the -- the glue is in other paper products, cardboard and compost ingredients that people can use right now in organic production. It's the same ingredients.

And, I've not heard anybody say that

there was a synthetic in the ingredients list. That, I've not ever heard. If there was, I would definitely take a different tone.

But, I would say, you need to figure out exactly what's in the ingredients and if it's the same ingredients that we're already able to use in compost making, that goes right into the soil as well.

I've had no issues with them breaking down in our soil at all. When we harvested the onions, there wasn't hardly any paper left when we harvested.

(Simultaneous speaking.)

MEMBER ELA: Yes, I think the issue is that the -- oh, I was just going to follow up, Emily, real quick.

The issue is that the --

MEMBER OAKLEY: Yes, Steve.

MEMBER ELA: -- adhesives themselves are synthetics and they or may not be used in paper already.

And then, the current listings for

recycled papers, not virgin paper. So, and those two issues are kind of key to the problem we're facing.

MR. BROWN: Yes, I understand that. I think they just need time to come up with an alternative is the other big issue. I know they're working on it, they just need time to implement it.

And, I guess I've also -- yes, it's the first -- I'm going to call it the first I've heard that it is a prohibited substance in the ingredients list.

CHAIRPERSON CHAPMAN: Emily, do you want to say one last thing or a question and then we'll need to move along?

MEMBER OAKLEY: Yeah, no, it's basically what Steve said. I mean, there are several adhesives that bind the paper together. And, they are synthetic adhesives, but at least one of them is in newspaper and at least one of them, we're having a hard time determining if it currently is in newspaper or cardboard or other

current allowed recycled materials.

So, I completely empathize with and understand your perspective. But, we just want to let know that I think probably, I mean, personally, that the current situation revolves around the adhesive.

But, we will discuss at the meeting any possible options for extension of that deadline and look forward to hearing from Dr. Tucker about that.

Thank you.

CHAIRPERSON CHAPMAN: Al right, thank you Board members and thank you, Nathan, for your comments on this item. Clearly, it's an item that is important to a lot of farmers and a lot of Board members.

Up next, we have Jessica Shade, followed by Jaydee Hanson and then Amber Pool.

Jessica, are you on the line with us?

MS. SHADE: Yes, I'm on the line.

CHAIRPERSON CHAPMAN: Hi, Jessica, if you'd start with your name and affiliation?

MS. SHADE: Hi, I'm Dr. Jessica Shade, the Director of Science Programs for the Organic Center. We're a nonprofit that communicates research of interest to organic stakeholders and then we also collaborate with government and academic institutions to conduct research when we find gaps in our knowledge.

So, first, I want to say, we really appreciate the time that the Material Subcommittee spent on its recommendation on research priorities. We really like the creation of the research priority framework and the efforts of each Subcommittee to set their research priorities for 2018.

And so, I just have a few comments on them. So, first, I want to say that we're especially happy to see that you included organic no-till practices, plant disease management, strategies for controlling invasive insects and production of celery for celery powder yield in nitrate sufficient for cured meat.

Because, we're actively involved in

conducting and communicating research on those topics. And, we think that the NOSB prioritizing them will really help us secure funding to continue the work.

So, for example, on the organic no-till practices, the organic is collaborating with Dr. Kate Tully at the University of Maryland to look at practices that improve soil health on organic farms.

And, one of the areas that we included was the comparison of no and low till in organic production versus standard tillage in organic production.

And, overall, the surface level for organic carbon levels are higher in reduced tillage plots comparted to standard tillage plots for organic.

But, we also found that reduced tillage in organic was associated with significant reductions in yield.

So, basically, while organic farmers could improve carbon sequestration by reducing

tillage, we really need to have more research to support farmers that want to use conservation tillage to make sure that it's a viable and economically feasible option for a wider variety of crops.

So, we're really thankful that the NOC included that because it'll help encourage research and provide really needed tools to help organic farmers realize the benefits of reduced tillage without threatening their yield.

We've also been working on several aspects of plant disease management that are directly called out in the 2018 research priorities.

So, for example, we addressed the research priority alternative to antibiotics for fire blight in a project we did a couple years ago with the University of Washington.

We worked on -- we're currently working on integrative pest management strategies for organic rice. We're also working on a project that looks at organic solutions to

citrus screening.

But, before I use all my time talking about projects that we're currently doing, I also wanted to touch on additional research needs. So, one thing we're continually doing is collecting information on research needs and we think that --

CHAIRPERSON CHAPMAN: Jessica, that's your time, but --

MS. SHADE: Yes.

CHAIRPERSON CHAPMAN: -- there might be a question from the Board for you.

MS. SHADE: Oh.

CHAIRPERSON CHAPMAN: Any questions from the Board?

MEMBER BRADMAN: Yes, this is Asa.

CHAIRPERSON CHAPMAN: Go ahead, Asa.

MS. SHADE: Hey there.

MEMBER BRADMAN: Hi, Jessica, if you would just finish what you were going to say and tell us about the -- what you contend the needs are.

MS. SHADE: Sure. So, soil health, climate change and then pathogen protections for uses with with raw manure should be considered. Those are the three things that I think might be additionally beneficial for including in the research priorities.

CHAIRPERSON CHAPMAN: So, I got climate change, the pathogen protection, what was the other one?

MS. SHADE: Soil health.

CHAIRPERSON CHAPMAN: Soil health. So, climate change, specifically, what would you want to be included there?

MS. SHADE: So, there are two aspects of climate change that I think need a lot more research.

One is mitigation, so best practices for mitigating climate change on farms.

And then, also, adaptation because, regardless of how well we do with climate change adaptation, we are seeing much more frequency and --

MS. ARSENAULT: Sorry, that was me, I accidentally muted Jessica. Sorry, Jessica, could you repeat your last couple words?

MS. SHADE: Oh, I was saying increasing frequency and intensity of extreme weather, so how organic can adapt to those situations.

CHAIRPERSON CHAPMAN: Okay, thank you, Jessica.

Any other questions for Jessica? All right, thank you for your testimony.

Up next, we have Jaydee Hanson followed by Amber Pool and then Ronald Gonzales. Ronald, we haven't been able to identify you, so if you're on the line, please message us.

Jaydee, are you on with us? Jaydee, if you're talking, we can't hear you.

MS. ARSENAULT: Tom, can I interrupt for just one second? We're getting a little background noise. So, if you could please mute yourself if you're not talking, I appreciate it. Thanks.

CHAIRPERSON CHAPMAN: Yes, Jaydee? Is Jaydee here? I know we've kind of missing you here. We see you on the web portion, but we're not hearing you.

All right, Jaydee, we'll come back if you're just having a technical issue.

Amber, are you on the line with us?

MS. POOL: I'm here.

CHAIRPERSON CHAPMAN: All right, Amber, you'll be up next, give me one second.

After Amber is Ronald Gonzales. We haven't identified and then after that is Jamie Barron who we haven't identified. And, there's actually about another four or five names that we haven't identified the person on the line yet. So, if you're Ronald Gonzales, Jamie Barron, Timothy Opiela, Tonda Fernando, Harold Lyles or Jean Marie Gore Traore, please message in and let us know your phone number.

I guess, and if you're after those names on the list, you might be coming up quickly.

So, Amber, if you could start with your name and affiliation for the record?

MS. POOL: Hi, this is Amber Pool and I work for CCOF in the Farm Certification Department.

I want to thank the Board for, once again, giving us this opportunity to speak and comment through the webinar.

CCOF is a nonprofit organization governed by the people who grow and make food. Started in California more than 40 years ago, to be our roots, spread the breadth of North America.

We are supported by an organic family of farmers, ranchers, crop dusters, retailers, consumers and policy makers.

Together, we work to advance organic agriculture for a healthy world.

After working with certified organic growers at CCOF for more than 12 years, I wanted to let the Board know that the color requirements for adding the USDA organic seal to packaging is

a financial hardship for farmers.

In modifying Section 205 bringing 311 in to allow the USDA organic seal to be used in any foreign color, not 5A, it improves the use of this seal when considering the cost of compliance for farmers.

The current limitations to only black in terms of the one color printing is the USDA seal is not or cannot be used on plastic or a package that is not black.

To place the seal, certified operations must upgrade to two colors. This limits the use of the USDA seal on many produce cartons and other boxes.

The modification of 205.311 to allow any single color would reduce the cost in the production system in crops that meet the certification and represent a reduction in regulatory burden for farmers.

Thank you and those are my comments.

CHAIRPERSON CHAPMAN: Thank you, Amber.

Any questions for Amber? Hearing none, thank you.

Jaydee Hanson, have you been able to call back in yet?

MR. HANSON: I have.

CHAIRPERSON CHAPMAN: All right, Jaydee. Hold on one second, I'm going to run through the list again of folks after you, but we do have you on the line now.

So, after Jaydee, I'm going to turn through a long list because we haven't confirmed about the next seven or so folks. So, will the next after Jaydee is Ronald Gonzales, then Jamie Barron, Timothy Opiela, Tonda Fernando, Harold Lyles, Jean Marie Gore Traore, Inita Patton.

The next one, we have confirmed on the line, so just to give a heads up, Suzanne McMillan, just so you know, you might actually come up really quick.

With that, Jaydee, can you start with your name and affiliation for the record?

MR. HANSON: I'm Jaydee Hanson, Senior

Policy Analyst at the Center for Food Safety.

You have extensive comments from us. I'm just going to focus on two parts. First, silver dihydrogen citrate.

The Center for Food Safety urges NOSB to reject Pure Bioscience's petition to add silver dihydrogen citrate to the national list.

Even with the recommended annotation, we have substantial concerns regarding nanoparticles as well as the environmental and human health impacts of the over use of silver antimicrobials in food and farming.

We think that silver dihydrogen citrate is incompatible with the sustainable agriculture and should not be allowed.

While the company states their specific product does not contain silver nanoparticles, we iterate our concern that citrate is typically used in combination with silver for the purpose of controlling the size and shape of silver nanoparticles which increase the efficacy of the silver ions into microbial

properties.

In fact, just last week, I heard Dr. Timothy Duncan, an FDA research chemist raised this question on the effects of citrate in silver compounds at the national nanotechnology leadership meeting on environmental effects of nanoparticles.

So, even if the particle size of the specific product is at that size that the company claims, we still think it's incompatible with our organics because of the way the citrate will interact with the ion silver.

We provided in our April 2018 comments a longer discussion of this.

Basically, silver nanoparticles work to slow the release of ionic silver and increase its efficacy, in effect, make it a more powerful pesticide.

The potential discharge or spread of silver in the environment will negatively impact microbial life in waterways. Moreover, research at Duke University meets another thousands of

plants dosed with nano silver demonstrates that some plants are especially prone to damage from nano silver.

So, basically for two reasons, we're urging the --

CHAIRPERSON CHAPMAN: Thank you, Jaydee, we're at the agreement. We'll see if we have any questions from the Board.

Any questions for Jaydee?

MEMBER BRADMAN: This is Asa.

I had a couple questions about the -- is there any evidence or information perhaps in your review about contaminated soil and the activity in the tampering.

And then, just to clarify, how much you have the information that you talked about now in more detail in the written comments?

And, in the comments, do you talk about the same things in the written comments?

MR. HANSON: Could you repeat the question? I'm on a cell phone now.

MEMBER BRADMAN: I'm sorry, a two part

question.

One, do you have information about soil contamination and then, two, are there any comments that you made just now verbally that are not in the written comments?

MR. HANSON: Only the reference to conductors of the recent research.

The one thing, though, that is not in there is, I'm the U.S. Co-chair of the Nanotechnology Committee for the Trans-Atlantic Consumers' Dialogue.

And, in Europe, the European Parliament has modified the European Commission proposal on EU organic standards to clearly exclude nanomaterials.

So, that's in our comments, but, yeah, I think it's important that we do what we can to maintain compatibility between EU and U.S. organic standards.

CHAIRPERSON CHAPMAN: So, Jaydee, can you help me understand why the proposed annotation is not sufficient to mitigate your

nano, your specific nano concerns?

MR. HANSON: Well, I mean, it's not sufficient because it's -- you're basically, if you will, expecting this material to stay as a silver ion by using citrate in the compound.

If it ends up reducing to nano silver particles, which we would argue, should be excluded.

CHAIRPERSON CHAPMAN: So, you're saying there's no form of this material that can be manufactured with citrate that would not contain nanoparticles?

MR. HANSON: That would not reduce the nanoparticles, I don't believe so. There are, you know, a couple of references in our comments that would point you to the one backdrop and slam on the toxicity of silver ions and nano silver particles in colloidal silver.

And, it's, you know, the silver is a very toxic substance when you mix it with citrate, you actually are making it more toxic.

So, to answer your question, probably

no.

CHAIRPERSON CHAPMAN: Okay. And then, I mean this petition for use as an antimicrobial in a sanitizer at some level, those will always have to have some level of toxicity to be effective in the application.

So, I know you were --

MR. HANSON: Silver and --

CHAIRPERSON CHAPMAN: -- of that. So, what -- like, how do you suggest, you know, a few ways the needs of providing safe foods with the inherent incompatibility between any level of environmental and health issue with a different type of sanitizer?

MR. HANSON: Well, you're going to have some different kinds of problems with metallic citrates or metallic oxides. You know, the problem environmentally is twofold.

Yes, it is an excellent antimicrobial. Personally, I think it should be reserved for medical uses and not sprayed around farms or cutting boards or used in any farm uses.

There is a preliminary research showing, too, that certain plants are especially prone to uptake nano silver and silver ions.

And so, if you then dump it out, which you basically do when you're using it for these antimicrobial uses, you're going to have it go into certain crops. So, it shouldn't be in food and it shouldn't be in waste water and certainly be used next to next to absorb it.

CHAIRPERSON CHAPMAN: And, then, the -- I think there was in the EPA review the substance they did not find it would cause a contamination greater than what's already in the background would be far below the background levels of silver. And, that's insufficient for you, is that correct?

MR. HANSON: Yes, well, you know, we have sued the EPA and actually won on the issue of nano silver. The EPA, frankly, has, in many cases, and the Judge in our last case agrees with me on this, the EPA has, in many cases related to nano silver, had a belief based, not a science

based policy.

So, you know, again, there are other, you know, I would say to look at the work of Timothy Duncan, the FDA's research scientist actually looking at this kind of product. And, he comes to that conclusion.

CHAIRPERSON CHAPMAN: And, these folks that you've cited, are they in your --

MR. HANSON: Yes.

CHAIRPERSON CHAPMAN: -- written comments? Okay.

MR. HANSON: Yes, except for the last paper on from Duncan and I can send that in.

CHAIRPERSON CHAPMAN: Yes, could you send that to Michelle so we would have a chance to --

MR. HANSON: Yes.

CHAIRPERSON CHAPMAN: -- review that as well? Appreciate it. And, I appreciate the detailed comments on this, both on the phone and, I imagine what's in the written comments. I haven't been -- haven't had a chance to get to

yours yet, but I definitely will between now and the full meeting.

MR. HANSON: Yes, both this one and the longer comments from April. Thank you very much. You guys have a lot to go through.

CHAIRPERSON CHAPMAN: Yes. Not hearing any or seeing any. So, Jaydee, thank you for your comments.

MR. HANSON: Okay, thank you.

CHAIRPERSON CHAPMAN: Okay. So, so far, we still haven't gotten any confirmations on anyone up until Suzanne McMillan.

I will run through that list just to make sure they're not here, but Suzanne, just be prepared, we might be coming to you very quickly.

So, Roland Gonzales, Roland, are you here?

Roland, going once, going twice. Up next, Jamie Barron. Jamie, are you here? Jamie, going one, going twice. All right, next is Timothy Opiela. Timothy, are you here? Going once, going twice. All right, Tonda Fernando. Tonda, are you here?

Hearing none, next up is Harold Lyles. Harold, are you here? Hearing nothing, next is Jean Marie Gore Traore, are you here?

All right, and then Inita Patton. Inita, are you here? All right, that was a huge list of folks. So, Suzanne, you were at 11:50, so we're about 12 minutes ahead of schedule right now.

Suzanne, let me just check, you're here, is that correct? Suzanne, are you hear? Are you speaking? If you're speaking, you're on mute.

MS. ARSENAULT: I see Suzanne on the line on the web portion.

CHAIRPERSON CHAPMAN: Yes.

MS. ARSENAULT: So maybe -- Suzanne, maybe it's your mic that's not working. Oh, no, I see you using a headset, yes.

CHAIRPERSON CHAPMAN: Suzanne, are you muted? We're not hearing from you.

PARTICIPANT: Hello? Hello?

CHAIRPERSON CHAPMAN: Hello, Suzanne.

Suzanne, are you there? All right, Suzanne's not there.

Next up would be Marie Burcham. Marie, are you there?

MS. BURCHAM: Can you hear me?

CHAIRPERSON CHAPMAN: I can, Marie. But, hold on, Marie, because now we're fairly ahead of schedule.

And, I don't know if the next people are here, either. So, if the -- after Marie would be Heidy Lopez-Rodriguez. And after Heidy would be Joseph Similanick.

Michelle, have you confirmed any of those folks being on the line?

MS. ARSENAULT: I have not yet, Tom. So, I will do that.

CHAIRPERSON CHAPMAN: Okay. Marie, you're up next if you're ready to go. We can start with your name and affiliation for the record.

MS. BURCHAM: Yes, of course. Hello and good afternoon. My name is Marie Burcham and

I am the Livestock Policy Analyst for the Cornucopia Institute. I'm also an attorney with a background in natural resource and animal law.

Members of the Board and the public, thank you for the opportunity to speak on the material petition of NOSB research priorities.

Cornucopia supports the NOSB comments in their entirety and hopes the NOSB will consider beyond pesticide exclusion in this matter.

We specifically oppose the listing of the petition substances silver dihydrogen citrate, allyl isothiocyanate, and natamycin.

Cornucopia submitted written comments telling why we oppose the listing of these specific materials in more detail.

But, I would like to speak a little bit about the livestock research priorities and discussion documents on the agenda.

First, we strongly support evaluating the current uses of natamycin on organic farms with concerns that direct natamycin is used

principally as a production tool rather than a dietary supplement essential for animal welfare.

If accurate, that would not be compatible to organic agriculture.

Poultry get natamycin in their -- from their diets and poultry who are raised following the spirit and letter of organic law should be most, if not all, the natamycin from a varied diet supplemented by adequate foraging.

We also urge -- concern about the use of fish meal and animal byproducts, fish meal in particular, and it's impacts on fish stock and ocean ecosystem health.

We do support further research into parasite prevention measures. This research is particularly needed for organic sheep research, the biodiveristy of native invertebrates and micro organisms should be carefully considered during this research as it has applications for both human and animal health.

We also support research into organic livestock breeding and we hope that the focus on

keeping breeds viable for grass based production and true outdoor production will be maintained.

High production rates of both milk and meat should not be the focus of the research. The research focus should be on quality of the product and healthy livestock animals.

Again, the agriculture is not premised on a price and conventional imports with organic imports and so it is preventative soil based farming methods that improve soil through holistic farming strategies.

Livestock breed protection is a very important piece of the organic label.

Finally, we are very happy to see even more discussions -- more material discussion documents but still more work needs to be done on this topic as it is not dealt with in the depth this topic needs. And, there is much more moving forward.

We do support the wealth of comments on this issue.

Thank you so much for listening to me

today and I hope you will consider our written comments on these topics as well.

CHAIRPERSON CHAPMAN: Thank you, Marie.

Any questions for Marie? Not hearing or seeing any, thank you for your comments.

MS. BURCHAM: Thank you.

CHAIRPERSON CHAPMAN: Suzanne, are you on the line with us now?

MS. MCMILLAN: Yes, can you hear me?

CHAIRPERSON CHAPMAN: Yes, and hold on one second, Suzanne.

MS. MCMILLAN: Thanks.

CHAIRPERSON CHAPMAN: So, I'm told that there's someone speaking that I may have skipped over before. We've got the name of one of the speakers that I read out.

Ronald, Jamie, Timothy, Tonda, Harold, Jean Marie or Inita, any of these folks on the line now?

Okay, not hearing any of those, so, after Marie, or sorry, after Suzanne, then I have

Heidy Lopez-Rodriguez, Joseph Similanick, Michael Forrest, Frankie Thorn and then Linley Dixon.

I don't have any of those folks except Linley Dixon confirmed to be on the line. So, Linley, just a heads up that you might be coming to you quickly.

And, if any of you folks that I skipped over are here, please message us so we can come back to you.

Suzanne, you're up next, if you could start with your name and affiliation for the record?

MS. MCMILLAN: Thank you.

Hi, I'm Suzanne McMillan, Content Director for the ASPCA Farm Animal Welfare Program.

Thank you for the opportunity to provide comments to the NOSB on behalf of the ASPCA and our millions of supporters nationwide.

The written comments we submitted focused on NOSB's livestock research priority, particularly the goal of breeding animals adapted

to outdoor life and living vegetation.

So, I'll just reiterate some of our points here today.

We thank the NOSB for addressing the critical issue of livestock and poultry genetics, something we've urged through comments for a number of years now.

Reforms to policies related to animal genetics are critical for ensuring adequate welfare for animals raised organically as well as consumer confidence in organic animal products.

Genetics serve as the cornerstone to animal health and welfare. They inform immune function, the ability to manage environmental stressors and a wide range of physical abilities down to basic locomotion.

The vast majority of U.S. farm animals are selectively bred for high yields of meat, milk and eggs. This brings welfare tradeoffs, some of which are detailed in our written comments.

So, the point I want to make here

today is that none of this should be surprising. The scientific principle of resource allocation written about by Temple Grandin among others, dictates that animals have various biological functions, such as maintenance, growth, reproduction as well as general health and well being.

The resources in animals has available to devote to all of these functions in total are finite. And so, their resources must get distributed across all of them.

A healthy animal will naturally find this balance, but if breeding programs overemphasize only one or a few of these biological traits, as has happened in the U.S. with our excessive breeding of livestock and poultry for production traits such as milk volume and muscle mass, then the other functions must necessarily suffer as a result.

Environmental stressors can further skew the scaled balance, draining resources from these critical areas. This is why we see animals

that may appear robust thanks to their ability to turn out large volumes of eggs or produce heavy cuts of meat, but they struggle to simply breathe or walk or to fight off infections and to deal with any stressors such as weather extremes and transport.

These unbalanced genetics now dominate U.S. farm animal populations and it appears that a good number of animals raised organically are sourced from these same gene pools, leaving them vulnerable to identical problems.

This is compounding by the organic programs lack of comprehensive animal welfare standards which could help mitigate environmental stressors and overall health and well being challenges.

Millions of organic animals still contend daily with realities like crowding, poor ventilation, barren environments, lack of sunlight and lack of outdoor access.

We look forward to working with the NOSB to identify meaningful standards for

stronger genetics that can support all animals raised organically.

We appreciate your consideration. Thank you very much.

CHAIRPERSON CHAPMAN: Thank you.

Any questions for Suzanne? Again, thank you for your testimony here today.

Roland, you're here, we're just having a hard time connecting with you. Can you try to talk again to see if you're unmuted?

MS. ARSENAULT: Ronald, this is Michelle, we're still not hearing you.

CHAIRPERSON CHAPMAN: I'm hearing the typing of numbers, are you typing -- hold on.

MR. GONZALES: I'm trying.

CHAIRPERSON CHAPMAN: We hear you.

MS. ARSENAULT: We can hear you, you're a little faint.

CHAIRPERSON CHAPMAN: You're a little faint, so you have to speak up. But, hold on one second, I'm going to go through the people who are on deck and then we'll come back to you.

So, if these folks are here, they'll be next, Heidy Lopez, Joseph Similanick, Michael Forrest, Frankie Thorn and then Linley Dixon.

Ronald, if you can start with your name and affiliation and go into your comments.

MR. GONZALES: I apologize for all the technical problems. I've been trying to connect for a while.

Well, good afternoon, my name is Ronald Gonzales, I am the manager of the Resource Department of Dole Pineapple Division in Costa Rica.

I truly appreciate the opportunity to address members of the Board.

The direct issue that is of great importance for the organic pineapple producers that commercialize their fruit in the U.S. market.

I would like to make a comment to support the use of ethylene gas to induce flowering in certified organic pineapple production.

First, I would like to refer to a practice in the use of ethylene gas is used for years in pineapples.

We have not found any viable alternative in the nation. We have consulted specialists from companies that make products who are using safe bio organic pineapple production.

And, we have not been advised of any alternative that we are now aware of to replace the use of ethylene gas.

Recently, two --[AUDIO DIFFICULTIES, SPOKE ABOUT ETHYLENE FOR PRESERVING PINEAPPLES]-- - took place at University of Costa Rica National University --[AUDIO DIFFICULTIES, SPOKE ABOUT ETHYLENE FOR PRESERVING PINEAPPLES] -- Costa Rica have started to research work to experiments carried out by scientists in Taiwan, in France, looking for alternatives to the use of ethylene gas for flowering in organic pineapples.

These studies have already become -- [AUDIO DIFFICULTIES, SPOKE ABOUT ETHYLENE FOR PRESERVING PINEAPPLES] -- of ethylene and

consequently causing floral depreciation by subjecting plants to stress for a short period of time followed by the application of high ethylene as well as the application of ice cubes.

We hope that the very narrow resource of these --- [AUDIO DIFFICULTIES, SPOKE ABOUT ETHYLENE FOR PRESERVING PINEAPPLES] -- will be available for presentation to the board today.

I have been informed that the application of ice water and ice cubes did not induce flowering in treating plants. And, if these results become available, understanding that they will be presented before you next week.

On the other hand, I would like to turn to the possibility of cultivating pineapple varieties for which the use of ethylene gas to induce flowering is not necessary.

In a categorical way, it can -- [AUDIO DIFFICULTIES, SPOKE ABOUT ETHYLENE FOR PRESERVING PINEAPPLES] -- of usage carried by Dole's genetic improvement tools, not a single variety has been obtained for which the use of ethylene is not

strictly necessary.

Therefore, the organic people at Dole issued out --[AUDIO DIFFICULTIES, SPOKE ABOUT ETHYLENE FOR PRESERVING PINEAPPLES] -- pineapple for which they use the ethylene gas is not required to induce flowering ---[AUDIO DIFFICULTIES, SPOKE ABOUT ETHYLENE FOR PRESERVING PINEAPPLES].

Therefore, the company encourage the members of the NOSB Committee to maintain approved use of the ethylene gas as a floral inducer in the production of organic pineapples.

The introduction of these inputs would have significant impacts on the ---[AUDIO DIFFICULTIES, SPOKE ABOUT ETHYLENE FOR PRESERVING PINEAPPLES]-- breeding in large climates with the --

CHAIRPERSON CHAPMAN: Ronald, we've reached the three minute mark, if you can wrap up your comments.

MR. GONZALES: Okay. So, those would be the two comments I wanted to make. Thank you

so much for your time.

CHAIRPERSON CHAPMAN: Thank you, Ronald.

Any questions for Ronald from the Board?

COURT REPORTER: I'm sorry to interrupt. Hello? This is the Court Reporter.

CHAIRPERSON CHAPMAN: Hello?

COURT REPORTER: Mr. Ronald Gonzales, his phone sounds to be on speaker. It won't be -- it won't make a clear record.

MS. ARSENAULT: Okay, thanks. So, we can talk offline about that, thank you.

CHAIRPERSON CHAPMAN: Yes, that's fine. Okay, Ronald, I'm not hearing any questions from the Board, so thank you for your time.

So, I'm going to read those --

MR. GONZALES: Yes, so --

CHAIRPERSON CHAPMAN: Thank you very much.

MR. GONZALES: -- much, I apologize, I was in the speaker. I hope you guys could hear

what I had to say.

CHAIRPERSON CHAPMAN: Thank you.

I'm going to go down the list of speakers who we still haven't been able to identify.

So, Heidy Lopez-Rodriguez, are you here?

Joseph Similanick, are you here? Michael Forrest? Frankie Thorn, are you here? All right, Linley Dixon, are you here?

MS. DIXON: I am.

CHAIRPERSON CHAPMAN: All right, Linley, hold on one second.

After Linley is Brian Bates who we see is on the line as well. So you're up next.

And then, after Brian is Miraj Patel and that is the end of our list.

So, at that point, we'll run through the list again, but if no one's here, we will then be wrapping up this webinar.

So, Linley, if you could start with your name and affiliation for the record?

MS. DIXON: I'm Linley Dixon, Associate Director of Real Organic Project.

As many of you know, the Real Organic Project is a farmer driven effort to get organic standards back in line with the law.

A few things have become painfully apparent to many in the organic community.

First, there are major differences in how certifiers are interpreting the law, encouraging certifier shopping.

Second, in some cases, the NOC process for continuous improvement is not functioning as it was intended.

And, third, enforcement of the NOP's position, giving an unfair advantage to operations and ACAs that are following that.

We should develop the creation of an add-on label. Farms that are qualified for the add-on of fostering soil fertility and pasture access including poultry.

These are practices that we feel are inherent to the word organic and the integrity of

the label.

As NOC members, we urge you to make the Real Organic Project obsolete by continuing to work to prohibit hydroponics and propose the still standing 24 recommendation and the requirement and access and soil fertility.

We urge you to continue to advocate for strong animal welfare standards, to fight the rejection of the OICP or the SPA.

Our standards are created by the gallant efforts of experts in the organic community and include much of what the organic community has been lobbying for for over a decade.

We have standards reflecting soil fertility, origin of livestock and pasturing poultry.

The standards are published on our website along with information on how to provide feedback and we welcome input.

We visited over 50 organic farms this summer that wanted to participate in our pilot

project. Farmers not only provided us feedback on our standards, but they reinforced concrete needs to differentiate real organic practices under the seal.

Most of these farms have had a significant shift from the organic wholesale marketplace.

Our certified farms have the opportunity to tell others what organic farming is all about through the farmer interviews on their farm.

Every operation showed a deep commitment to continuous improvement and the sustainability of all their farm systems.

Farmers shared knowledge about how to generate fertility on the farm and reduce the need for unsustainably sourced off farm imports.

Their voices are a striking contrast to the certified organic farms whose systems completely depend on imported grain or hydrolyzed protein or fish harvested from the sea.

The willingness of farmers to be

completely open and transparent about the details of their practices is in line with the spirit of organic farming.

Their practices are in line with the organic law as it is written.

If you are a member of the organic community and refuse to sit back and watch as the majority of organic farms meeting the letter of the law struggle to complete against the tiny minority of operations that will, please join us.

Thank you for listening and your volunteered time.

CHAIRPERSON CHAPMAN: Thank you, Linley.

Any questions for Linley? All right, hearing none, up next is Brian Bates. Brian, are you on the line with us?

MR. BATES: I am, can you hear me?

CHAIRPERSON CHAPMAN: Yes, I can.

Brian, you're up and then up next is Miraj Patel.

Brian, if you'd start with your name

and affiliation for the record?

MR. BATES: Sure. My name is Brian Bates. I am the owner and primary operator of Bear Creek Organic Farm in Northern Michigan.

And, I want to thank you for the opportunity to speak today.

My comments pertain to the potential ban of the Japanese paper pot transplanter.

We are a 100 percent USDA certified organic farm for the last six years. Prior to starting this farm, we studied organic agriculture at Penn State and helped author the organic crop production guide.

Can you hear me? I'm hearing background noise.

MS. ARSENAULT: Yes, can you -- people on the line -- can people who are not speaking please mute yourself, we're hearing the background conversation. Thanks.

All right, go ahead. Thanks. Sorry about that.

MR. BATES: That's okay.

And, one of the things that we've learned in trying to be committed to organic crop production since the get-go is trying to navigate the balance in our current agriculture between, you know, what is truly sustainable versus who just meets the bare minimum organic rule and, you know, what sort of embraces the true intent.

And so, being schooled from the early pioneers of true organic agriculture, one of the reasons that we use the paper pot system is because all of the farms that we worked on after completing studies at Penn State extensively used black plastic mulch on their farms which was 100 percent synthetic, annual use, making contact with the soil and with crops and would break down by the end of the seasons and was not organic in any way whatsoever.

We then set out to start our own business that would not use any black plastic mulch, though it was completely allowed to try to farm more in harmony with nature and with what the founders of the organic movement would have

wanted.

When we came across the Japanese paper pot system, it radically changed our operation from an ecological economic and labor standpoint.

One of the things that the paper pot planter has done for us that's most important in our minds is it has allowed us to hire more skilled labor, spend less time doing menial tasks and maximize our efficiency, both in the greenhouse and in the field.

Not only has it improved our labor savings, but doing so, it has allowed us to tap into organic market share that was previously unattainable.

We've been able to lower the cost of our prices of our top products. And, within one year, every product that we grew with the paper pot transplanter became cash positive when it previously was not.

Our concern is that we were given extremely short notice to stop using the paper pot planter which has been used for over a dozen

years, wholly certified in the United States.

And, with not enough time for a proper review, which we completely support by the USDA and the Organic Materials Research Institute.

We are forced to either face our first year of negative growth in 2019, layoff some of our staff in 2019 and forego several thousand dollars of inventory and materials for systems built around this tool.

It is no joke that we have told our staff, if this tool is not approved, they will have to consider finding other work.

I think I hear my beeper, maybe not.

MS. ARSENAULT: It actually --

MR. BATES: And so --

MS. ARSENAULT: Sorry, Brian, it was the timer going off. Sorry.

MR. BATES: Okay, all right, fine. Yes, no worries.

CHAIRPERSON CHAPMAN: No, Brian, sorry. Let me -- because the NOSB interrupted you before, you have a couple left for comments,

go ahead.

MR. BATES: That's fine.

All I would like to say is that, we are committed to organic agriculture without a shadow of a doubt. We've help work with our certifiers on a number of issues. We've helped first-wave farmers in our area over a dozen become certified organic in the last five years.

We are not trying to wiggle out of anything with a tool like this. But, we've seen farms where black plastic is totally permitted who never get all the plastic out of the field.

And, when we use this biodegradable paper product, just because it's not recycled newsprint or cardboard, you can't see any evidence of it within months.

So, we are firmly convinced that the net positive from this tool which has no moving parts and no engines and burns no fossil fuels far outweighs a number of other tools that are widely accepted.

So, what we're hoping is for at least

a stay to pause the suspension of this tool so that there's more time to properly review it because we're confident that with the proper review, this would not be something that you would look to ban in the organic community.

Thank you.

CHAIRPERSON CHAPMAN: Thank you. Thank you, Brian.

Any questions from the Board?

MEMBER ELA: Tom, I have a question.

CHAIRPERSON CHAPMAN: Sure, go ahead.

MEMBER ELA: Brian, I would like to just thank you for calling in and particularly for your clear articulation of the adverse impacts of losing the paper pots on your operation.

And, also juxtaposing the use of paper pots against the alternatives or one of the alternatives which is the use of plastics. I think it's a great point that you make.

One of the things that the Board, I've found in discussing this with the NOP is that,

there's the perception that, you know, that they're not hearing a lot about the need for paper pots. So, your call has been helpful and if we can encourage some of your colleagues also to speak up about this, it could help sway the decision about the state of the paper pots in the near term.

MR. BATES: I appreciate that feedback. This is probably the most vocal I've been on some kind of regulatory issue affecting our farm, second only to the Food Safety Modernization Act which we're widely in supportive and have helped other growers around us implement and get acclimated to over the last half dozen years.

I think a lot of growers feel like they're too small and that the process is too big to stop. And, I refuse to believe that that's the case because I think one thing that is profoundly unique about the paper pot system is that it is only used by small farms and it only benefits small farms.

Once you achieve a certain size, the tool is both irrelevant and not functional.

So I think that's one of the unique challenges with this, is it's not widely scalable. We're seeing many conventional growers exploring plant tape based systems such as the ones that they're bringing over from Spain.

But, I think in the grower community, banning something like the paper pots has felt like a particular attack on small growers.

And, I guess I could see why that might be the case because this tool, other than something like a hoop house has been the most profound innovation on our farm since we've started.

So, I really appreciate that feedback and this is definitely the first time I've actively engaged in this process, but it's something that I think the voice is strong, it's just so small, unfortunately.

MEMBER ELA: Thank you, Brain.

DIRECTOR LEWIS: Brian, this is Paul,

if you want to clarify one thing, and I do realize that, from your perspective, this is going to have an economic impact on you if it stands the way it is right now.

And, I understand the prospective you're coming from. But, it is somewhat a logistical issue or a regulatory issue, it's not that we're looking to ban something, it's that potentially something was allowed that shouldn't have been allowed in the first place without going through the proper channels.

I know that seems like a really small gray area, but when you expand that to the impact it could have on any operation due to the potential use for what would be a synthetic item, it could have some implications there.

So, I know for your specific operation, that kind of regulatory speak probably doesn't give you much reassurance, but just so you know, we're not looking to ban this tool on small operators, rather it's just it didn't go through perhaps the proper channels to get

approved in the first place.

MR. BATES: That sounded definitely clear and I appreciate you saying that. That's something that we actually stayed back on the sidelines for the first two years of its growing popularity concerned that it wasn't totally certifiable.

But, it seemed to sort of start receiving unanimous approval for many certifiers and so we then did decide to take the plunge.

But, I totally understand what you're articulating and I think most growers also understand that.

I think it is the bureaucratic nature of this process that has made it challenging. And, I think the confusion on sort of virgin paper versus recycled paper has caused some consternation amongst growers who are able to use recycled paper all over the place, but then not, you know, virgin paper in a tool like this.

DIRECTOR LEWIS: Yes, yes, fair enough and that's a good point. And, like I said, I

appreciate the impact that this has on your operation. That's not going unnoticed.

CHAIRPERSON CHAPMAN: Any other questions from the Board?

MEMBER OAKLEY: Yes, Tom, this is Emily.

I just wanted to tell Brian that I really thank you for your comments and agree with Dave that you succinctly echoed a lot of what we discussed on the Crops Subcommittee calls.

And, I had one question which is, when were you informed about the 2018 December deadline?

MR. BATES: We were informed, I believe, it was I want to say March or April. We first heard about it on Facebook from another grower who was certified by another certifier. And then, it was included in our certifier's newsletter in, I'm going to say maybe April.

Just ironically, about a month after we had just purchased $6,000 of new inventory for this tool system. But, so that's what makes me

think April because we've been drawing it prior to that. So, I would say April.

MEMBER OAKLEY: Thank you.

CHAIRPERSON CHAPMAN: Any other questions for Brian? All right, Brian, thank you for your comments here today.

Thank you, up next is Miraj Patel. Miraj Patel here? Miraj, going once. Going twice. Okay, I sent out a broadcast to folks and we haven't heard any messages back. So, I'm going to run through the list of names and if someone's here, then we'll go to them. If not, then we'll be completed with this webinar.

So, going down the list from the top, first is Corellia Johnson. Corellia, are you here? Hearing nothing, Ari Davis, are you here? Jamie Barron, are you here? Timothy Opiela, are you here? Tonda Fernando, are you here? Harold Lyles, are you here? Jean Marie Gore Traore, are you here? Inita Patton, are you here?

Heidy Lopez-Rodriguez, are you here? Joseph Similanick, are you here? Michael Forrest,

are you here? Frankie Thorn, are you here? And, back to Miraj Patel?

Okay, it looks like we have now completed all the commenters who are present for the Tuesday webinar before the fall meeting.

We'll fall into recess and come back on Thursday for the second of the two public webinars and that will be at, what, Thursday at 1:00 p.m. Eastern Time, is that right, Michelle?

MS. ARSENAULT: That's correct, thanks.

CHAIRPERSON CHAPMAN: All right, thank you again for all the commenters for your time. It's been very valuable to the process and I appreciate the Board for their thoughtful consideration and questions.

And, I look forward to talking to folks on Thursday. Take care.

(Whereupon, the above-entitled matter went off the record at 3:15 p.m.)

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C E R T I F I C A T E

This is to certify that the foregoing transcript

In the matter of: National Organic Standards Board
Fall 2018 Public Comment Webinar

Before: USDA

Date: 10-16-18

Place: webinar

was duly recorded and accurately transcribed under my direction; further, that said transcript is a true and accurate record of the proceedings.

Neal R Gross

Court Reporter

UNITED STATES DEPARTMENT OF AGRICULTURE

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NATIONAL ORGANIC STANDARDS BOARD

+ + + + +

FALL 2018 PUBLIC COMMENT WEBINAR

+ + + + +

THURSDAY,
OCTOBER 18, 2018

The webinar was held via telephone at 1:00 p.m., Tom Chapman, NOSB Chair, presiding.

BOARD MEMBERS PRESENT
TOM CHAPMAN, Chair
HARRIET BEHAR, Vice Chair
SCOTT RICE, Secretary
ASA BRADMAN
JESSE BUIE
LISA DE LIMA
STEVE ELA
DAVE MORTENSEN
EMILY OAKLEY
A-DAE ROMERO-BRIONES
ERIC SCHWARTZ
ASHLEY SWAFFAR

STAFF PRESENT

DR. PAUL LEWIS, Ph.D., Director, Standards Division, National Organic Program
MICHELLE ARSENAULT, Advisory Board Specialist, National Organic Program

DEVON PATTILLO, Materials Specialist, Standards Division, National Organic Program

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

(1:07 p.m.)

MS. ARSENAULT: So, welcome. This is Michelle from NOP again. We're going to do a little bit of housekeeping before we get started. So if you're online, and you're trying to look in through your computer and you can't, there is a dial in number you can dial in on the phone.

We tend to get less feedback if you're dialed in on the phone, and if you're using a headset, but some folks have no problem. So it's up to you.

We ask that you please stay on mute throughout the call. Background noises are our biggest challenge. We can mute you from our end, but if you're going to be speaking later, then we have to find you in the list and unmute you. And it just takes a little extra time. So we hope that everyone will self-mute themselves.

I think we have a pretty good crew. They're pretty well versed in webinars, and we usually don't have any issues. So thank you for

that. If you are on a phone that does not have a mute button, you can use star-6 to mute yourself and star-7 to unmute yourself.

Let's see. So as a participant, you should see somewhere on the left-hand side of your screen a chat function and a raise your hand. We're asking people not to raise their hands. You have to sign up ahead of time to speak on the webinar. And Tom Chapman, the Board Chair, will call on you when it's your turn, so no need to raise your hands and let us know that you have a question.

We're going to be using a timer, and Tom's going to go over this in a bit. People have a three-minute comment time. So we'll start the timer a few seconds after you start talking. And you'll hear a beeping noise at the end of your three minutes. And we ask that you finish your sentence or stop talking at that point.

And if you're having any technical issues, the ReadyTalk.com website is to stay on the screen. They have a really good customer

service line. There's a phone number you can call. If you want to get immediate assistance, you can chat with them, or you can email them. And they should help you overcome any technical issues that you're having.

And finally, we're having a transcript, so there's a transcriptionist on the call with us. So we'll have transcripts of the webinar which occurred on Tuesday, this webinar today, as well as the in-person comments that will happen at the meeting next week in St. Paul. Those will be available a couple of weeks after the meeting concludes.

All right. And I'm going to turn it over now to Paul Lewis, the Standards director, who will officially open the meeting.

DR. LEWIS: Great, thank you, Michelle. Good afternoon, everyone. I'd like to welcome NOSB members of the public today to the National Organic Standards Board Public Comment webinar. And I appreciate NOSB members participating in this call and for all your work

serving on the Board.

This webinar provides the opportunity for the public to provide comments to the NOSB as part of the Board's upcoming public, face-to-face meeting scheduled for October 24th/26th, next week in St. Paul, Minnesota. Please consult the NOSB website for further information about the face-to-face meeting.

This meeting, like other meetings of the NOP, operates under provisions of the Federal Advisory Committee Act. And I am looking forward to hearing comments from the public to assist the NOSB in preparing their recommendations to the USDA in response to NOSB work agenda items.

I want to also thank my NOP Standards Division colleagues for their help behind the scenes to bring it to today's teleconference.

Before I turn the meeting over to Mr. Tom Chapman, Chair of the Board, I want to add a personal note. This will be the last public comment webinar for Tom chairing for this NOSB meeting. I want to thank Tom for his outstanding

service chairing the NOSB Public Comment Webinar series over the past two years.

Tom, your leadership has resulted in the public comment webinar being a seamless process, offering increased access for the public to provide information to the NOSB to assist the Board in the development of recommendations for the Department. Tom, thank you again for your service.

Tom, the meeting is yours.

MR. CHAPMAN: Thank you, Paul. And thank for those kind words. I value these webinars quite a bit. And I imagine future chairs will also value them just as much and facilitate, I hope, hopefully, as seamless of a meeting as possible, given how much technology and everything else is involved in these.

That being said, I'll just say thanks for all the support of the NOSB staff, particularly Michelle, and Devon, to help us identify, hunt down, and figure out whose phone numbers or which individuals are about to speak.

So thanks to everyone for making this a success, and we'll get started with my general comments.

So again, I'd like to welcome everyone to the second public comment webinar prior to our Fall meeting and appreciate --- just extend a thanks and appreciation for everyone's time, including Board members, and the members of the public who are here to provide their feedback.

Michelle, if you could be so kind as to take the roll?

(No audible response.)

MR. CHAPMAN: Michelle, if you're speaking, you're on mute.

MS. ARSENAULT: Sorry, Tom. I was on mute, getting the timer ready. All right. So we have Tom Chapman.

MR. CHAPMAN: Present.

MS. ARSENAULT: Harriet Behar?

MS. BEHAR: Present.

MS. ARSENAULT: Scott Rice?

MR. RICE: Present.

MS. ARSENAULT: Jesse Buie?

MR. BUIE: Present.

MS. ARSENAULT: Asa Bradman?

MR. BRADMAN: Present.

MS. ARSENAULT: Hi, Asa. Lisa de Lima?

MS. DE LIMA: Present.

MS. ARSENAULT: All right. Steve Ela?

MR. ELA: Present.

MS. ARSENAULT: Thanks, Steve.

Dave Mortensen?

(No audible response.)

MS. ARSENAULT: I'm not seeing Dave at the moment. I will come back to him. Emily Oakley, are you on the line?

MS. OAKLEY: Present.

MS. ARSENAULT: Okay, Emily. A-dae Briones?

(No audible response.)

MS. ARSENAULT: I did not find A-dae's number, so let me get back to her. Eric Schwartz?

MR. SCHWARTZ: Present.

MS. ARSENAULT: Hello, Eric. Ashley Swaffar?

MS. SWAFFAR: I'm here.

MS. ARSENAULT: All right. I'm going to run back through. So Rick Greenwood is not going to be with us today. He was unable to make it. Dan Seitz was not able to make it. He had some family issues to deal with. And Sue Baird is not going to be with us either.

So let me go back here. Dave Mortensen, have you joined?

(No audible response.)

MS. ARSENAULT: If you're talking, you're on mute.

(No audible response.)

MS. ARSENAULT: All right. And A-dae Briones?

(No audible response.)

MS. ARSENAULT: All right. So, Tom, I count ten present.

MR. CHAPMAN: Ten present.

MS. ARSENAULT: Go ahead.

MR. CHAPMAN: Okay. Ten present, so we do have a quorum. And we are expecting Dave and A-dae to dial-in. When they do, we will note it if we noticed it on the call log.

So some logistical steps, as Michelle already stated. Please, members of the public and Board members, keep yourself on mute unless it's your turn to talk. It's always easier for individuals to mute themselves. And always be careful, if you have a computer and a phone going, or a speaker phone, because the speaker itself might pick up feedback. Star-6 to mute, star-7 to unmute if you do it on your phone.

So we'll start public comments in the order of the list that has been provided. If the commenter isn't present at the time that we call upon them, we'll skip them, but we'll come back at the end as time permits.

At the time, going down the list, I'll call the speaker who is up next as well as several speakers after it who are on deck. The program and I try to ID some members ahead of

time to make sure the speakers are here. So if we can't ID a phone number, we may ask that you comment into the staff to ID yourself.

Also, just be aware that we've had several no-shows on these, and so we may skip several names at a time. So just, if you're on the list, be prepared to speak, I guess, on very little notice.

Just so we're prepared, up first is Johnathan Simpson. And we have not identified Johnathan. So if you're on the line, Johnathan, please do comment in to the program so we can identify your phone number. After Johnathan will be Geo Honigford, and then Justin Ellis.

When called upon to speak, we ask that speakers give their full name and relevant affiliations for the record. We ask that you disclose all relevant affiliations pertaining to matters of business before the Board. And if members of the NOSB want further clarification, I encourage you to ask questions after the public commenter has finished their comments.

Comment times will be three minutes per commenter. Out of respect for the Board and other commenters, I ask that you finish as close to that three minute mark as possible. And, Michelle -- you'll hear a buzzer at that three-minute mark --- and, Michelle, are you ready to play that?

MS. ARSENAULT: I am. Here it is, two, one ---

MR. CHAPMAN: There you go.

MS. ARSENAULT: Does everyone hear that all right?

MR. CHAPMAN: Begin with the commenter, and then I'll probably interrupt you. So we just ask that you finish up as close to that as possible. And at that point, I'll facilitate any questions from the Board at both numbers. Just speak up like we did at the last one, and I'll call upon you.

We don't take any questions from the public for public commenters, only questions from the Board members. All public commenters are

allotted only one time slot, either in person or at one of the webinars, in totality. And then, like Michelle said, there will be transcripts of these calls.

Anything else, Michelle?

MS. ARSENAULT: No, I think we covered everything.

MR. CHAPMAN: All right. Then with that, we'll get this started. And again, first up, Johnathan Simpson, are you here?

(No audible response.)

MR. CHAPMAN: Johnathan going once, going twice, all right. That was the first one. The next up is Geo Honigford. Geo, are you here?

MS. ARSENAULT: Geo is on the line. He is muted. Let me unmute him.

MR. HONIGFORD: Hello, can you hear me?

MS. ARSENAULT: Geo, you are unmuted now. Go ahead.

MR. HONIGFORD: Okay.

MR. CHAPMAN: We can hear you now.

MR. HONIGFORD: Okay, great. My name is Geo --- Good morning, Geo --

MR. CHAPMAN: Geo?

MR. HONIGFORD: Hello?

MR. CHAPMAN: So after Geo will be Justin Ellis and then Mary Cox. Geo, you can start with your name and affiliation for the record and then go on with your comments.

MR. HONIGFORD: Great. My name's Geo Honigford. I run Hurricane Flats Farm. I'm a certified organic farmer in Vermont, certified by Vermont Organic Farmers.

So I want to talk about the paper pot transplanter. I've been using this since it first --- since I first found out about it and was the first farmer in Vermont to use it. So it's been eight or ten years I've been using it. It's a crazy appropriate technology for a farm my size.

Basically, I'm sort of in the $150,000 a year category for a small vegetable farm and often don't even have enough employees on my farm

to run any kind of --- other kind of transplanter which would take three people, one on a tractor and two on the back. This is something that plants just as fast, and it just takes one person.

And so I think -- I know that they're working on redeveloping a formula for the paper. And I think they should be given time at minimum to allow this to happen.

When I look at other things that are happening in the world of organic farming, I look at some of my neighbors who use reams of plastic. I mean, we talk about sustainability and what sustainable practices are. I mean, here in Vermont this time of year there's dumpsters full at the vegetable farms, organic certified vegetable farms, filling up with plastic that they use just for weed control. I mean, we're not looking at those issues.

I also make a lot of hay. And the twine I use on my baler has been treated, and that's allowable, because there are no other

sources. If you use non-treated twine, it just rots and the bales will fall apart. So we've allowed some usage of different things when it becomes appropriate. And I think this is an appropriate one.

So that sort of concludes my comments.

MR. CHAPMAN: Thank you, Geo. Any questions from anyone on the Board? Any questions from the Board members?

MS. OAKLEY: Tom, this is Emily.

MR. CHAPMAN: Emily, go ahead.

MS. OAKLEY: Thank you. Thank you for your comments. I wanted to ask you, when you found out that this particular pot transplanter is going to be discontinued for use at the end of this year, December 2018, do you ---

(Telephonic interference.)

MR. HONIGFORD: So I didn't catch the question. It was kind of garbled. So if someone could repeat that on a clearer line?

MR. CHAPMAN: Yes. Emily, you're a little quiet, but Emily asked just when you found

out that paper pots would not be allowed for the next ---

MR. HONIGFORD: When did I find out?

MR. CHAPMAN: Yes. When were you informed?

MR. HONIGFORD: I think it started this past growing season. I can't exactly pick a date. But I think it was just before we started in March or April. But I don't know exactly when it was.

MR. CHAPMAN: Emily was that ---

MR. HONIGFORD: What was that?

MS. OAKLEY: Yes.

MR. CHAPMAN: I'm asking Emily was that not ---

MS. OAKLEY: Yes.

MR. MORTENSEN: I had a quick question.

MR. CHAPMAN: Dave is here. Dave, go ahead.

MR. MORTENSEN: Yes, this is Dave Mortensen. And thank you for the call. Could

you explain for us how it is that the paper pots are helping you with your weed management?

MR. HONIGFORD: Well, they don't help with the weed management. But it helps with my planting. I can plant -- basically, on a tray of onions I can plant 500 plants in about two minutes which would have been pretty laborious doing it by hand. And I could do that as one individual.

I can plant faster with the paper pot transplanter than you do with a mechanical transplanter. So it has enabled me to increase my production without increasing my labor costs. Because I can plant so much quicker cheaper.

MR. MORTENSEN: Right. And could you just then explain how it is that it helps you to not rely so heavily on plastic?

MR. HONIGFORD: You can't use plastic with the system. Because you can't -- there's no way of poking holes through the plastic to get the chain to work. The chain needs to --- you need to pull it along the ground. You need a

continuous strip to operate it. So there's no way you could use plastic with this system unless you put the plastic on later and cut around it, which would be laborious.

MR. MORTENSEN: Yeah, thanks.

MR. CHAPMAN: But, yeah, just to clarify that point, the plastic -- and your point of reference is a black plastic. It's not an alternative to this. Black plastic won't mulch--

MR. HONIGFORD: No.

MR. CHAPMAN: -- for a different purpose. You're just ---

MR. HONIGFORD: Correct.

MR. CHAPMAN: -- saying that you see a lot of waste in the black plastic, and you see value in this --

(Simultaneous speaking.)

MR. HONIGFORD: I'm sorry if people think I'm conflating the two, I'm not. They're two different things. But I'm simply trying to point out that we allow unsustainable practices to go on in the organic world. And since so many

people use black plastic, we kind of turn a blind eye to it even though, I think, in my opinion, that's a much more unsustainable practice than the use of a paper pot transplanter.

MR. CHAPMAN: All right. Did you have a question for Geo?

(Simultaneous speaking.)

MS. BEHAR: That's a really a good question. You talked about using your baling twine. How do you use your hay? Do you mulch with that, or do you remove the twine prior to using the hay?

MR. HONIGFORD: Yeah, yeah. If we use it for mulch, we remove the twine, because that's not organically approved to put into the ground. But most of the hay we produce, we sell to the horse people for feed.

MS. BEHAR: Thanks. That was just a side tangent.

MR. CHAPMAN: All right. Not hearing other commenters, Geo, since you mentioned it, I'm just going to ask real briefly, what are your

thoughts on biodegradable plastic mulches --

MR. HONIGFORD: I have never --- I obviously have never used one, given that I'm certified. I would love to be able to try to use it. I've heard they don't break down very well and you end up with a lot of trash in the field until they break down. So I think I'd give it a shot. So I guess I'm okay with doing it. But I'd rather use that than black plastic, obviously.

MR. CHAPMAN: All right. Thank you --

MS. BEHAR: I have one more question.

MR. CHAPMAN: Oh, Emily -- or, I'm sorry, Harriet. Go ahead.

MS. BEHAR: Hi. So if you have to give up your organic certification in order to keep using the paper pots, do you anticipate that, if and when they are allowed, you would come back to organic certification?

MR. HONIGFORD: Yeah. I'm not saying I would give up my organic certification. I'd probably look to switch to another type of

transplanter that would increase my cost, increase my labor force. But it could be a route that I go, to just dropping my certification. I don't know. I'd have to give it long and deep thought. I don't have an answer to that question.

MS. BEHAR: Okay, thank you.

MR. CHAPMAN: Okay.

MR. HONIGFORD: But I appreciate everybody's time. Thank you very much.

MR. CHAPMAN: Yeah, appreciate your time too. And thank you for your comments.

MR. HONIGFORD: All right. You're welcome. Bye-bye.

MR. CHAPMAN: Yes. Before we move on to more commenters, just for the record, Dave is now present, as you could tell from his question. And then A-dae, I believe, is also on the line with us. A-dae, can you say present if you're here?

(No audible response.)

MR. CHAPMAN: A-dae might be on mute.

A-dae, are you here? I got a text from you saying you joined.

(No audible response.)

MR. CHAPMAN: All right. Still not hearing from A-dae. We'll check in a moment again.

So next up on the commenter list is Justin Ellis. After Justin is Mary Cox. Mary Cox, we haven't identified you yet on the list. After Mary is Michael Moss. Have we identified -- yeah, Michael is here.

So, Justin, can you hear us?

MR. ELLIS: Yes, I can.

MR. CHAPMAN: And we can hear you. You can start with your name and affiliation.

MR. ELLIS: Sure, yeah. Justin Ellis. I work for the Dramm Corporation, Manitowoc, Wisconsin. We produce a liquid fish hydrolysate fertilizer for use in organic growing.

MR. CHAPMAN: Great, and just proceed with your comments.

MR. ELLIS: Okay. Thank you all for

the opportunity, for allowing me to address you today. Specifically, I'm addressing the questions regarding testing the proper amount of acid used by liquid fish fertilizers.

So hydrolysate liquid fish fertilizers typically remove no components from the fish scraps used in the production process, that is no compound proteins, microbiology, et cetera, is removed for other food or industrial processes.

This creates more acid living solution that requires the addition of allowed acids plus stabilities. Without acid, the product is strictly rendered unusable and no longer an efficacious fertilizer.

An upward drift in the pH level occurs as part of the normal production process in which hydrolysates which do not strip out physical ingredients such as bone oils. For example, it is well understood that adding calcium to various compounds or solutions will increase their pH. The fish bones, which remain and continue to break down in fish hydrolysate solutions as they

age, are one of the many factors affecting the upward drift.

The Dramm Corporation has conducted trials which indicate that the amount of total acid required to maintain a pH level equal to or greater than 3.5 throughout the production process is 90 percent greater than what would be needed to maintain stability and yield a product with pH as equal to or greater than 3.5 if the pH level was allowed to drop below that threshold as has been stated in the process.

Specifically, a greater dose of acid is added to fish off of slurry at the initial stage of production, such that its pH level drops below 3.05, it will eventually rise to a level greater than 3.5 as the solution ages in the vault throughout the production process. It ultimately gains a more stable character and consistency throughout the process.

Additionally, Dramm has engaged a third party laboratory to conduct inoculation analysis to test the viability of harmful

bacteria surviving the introduction from outside sources during and after the production process at different pH levels.

These tests have concluded that, at a pH level of 3.5, the fertilizer blend was effective in achieving the greater than 5-log reduction against E-coli and Salmonella after 24 hours and greater than 6-log after 48 hours.

It concluded that a minimum of 72 hours whole time was required to eliminate the survival of these harmful bacteria. At a much higher pH level of 4.9, it took much longer for the bacteria kill stage to be affected, including that and eight-day whole time was required to eliminate the survival of these bacteria.

While no specific quantitative scale was identified, the results strongly suggested, as pH rises, the risk of the presence of harmful bacteria increases exponentially. In short, lower pH levels are necessary to ensure that contamination of harmful bacteria cannot occur.

So in conclusion, as we have

consistently practiced to date, Dramm Corporation is committed to maintaining a pH level of 3.5 or higher in its products' final form prior to their sale and shipment from our facilities.

I would respectfully ask the Board to consider lowering the pH level guidance to a value closer to 3.0 in order to allow for the highly variable nature of the premature fish hydrolysate solutions. Thank you.

MR. CHAPMAN: Thank you, Justin. Comments from the Board, or any questions from the Board?

MR. BRADMAN: I have a question.

MR. CHAPMAN: Asa?

MR. BRADMAN: Two questions, one, what acids do you use to bring it down to screen? And then also, you mentioned you used fish scraps. I just wanted to confirm whether you also use any other sources of fish, such as wild fish stocks, for your production?

MR. ELLIS: Sure. So the majority of the acid that we use is food grade phosphoric

acid. We also use, for one of our blends, sulfuric acid, which are the two that are approved for use in our production.

And the second part of your question, we are using scrap fish from the Great Lakes commercial fishing fleet. So we get the scrap after the filets and other parts for human consumption have been removed. So we use no wild caught targeted fish species. For our industry, we use by-products of the commercial fishing fleets here in the mid-west.

MR. BRADMAN: In the final product, is the phosphoric acid a significant source of phosphorus from the final product?

MR. ELLIS: We get a good portion of our phosphorus from the bone that we let digest in the fish, hydrolysate fertilizers. It's not a significant part of, I wouldn't say. It's certainly a part. But as much or more so comes from the fish carcasses themselves.

MR. BRADMAN: Thank you.

MR. CHAPMAN: Other questions?

MR. ELA: Tom, I have a question. This is Steve. I just want to be clear. From my understanding of your comment, you would love to see the pH recommendation drop to 3.0 from 3.5. But if we leave it at 3.5, are you in favor or against having just the 3.5 at the end of the process versus trying to maintain it at 3.5 during the process?

MR. ELLIS: Yeah, I believe we'd rather have it at 3.5 at the end. Our studies have shown that it requires a lot more of the phosphoric acid to maintain that 3.5. As the solution ages, it would have to be a further addition to keep it down at that 3.5.

Where, as I said, if we're able to dose it with a little higher at the beginning of the process, bring the pH down closer to three, it requires much less acid overall added to the product. Because it doesn't tend to rise, the pH doesn't tend to rise as it ages.

MR. ELA: Great. I just wanted to make sure I understood that correctly. So thank

you.

MR. ELLIS: Yes.

MS. BEHAR: This is Harriet. So I'm just kind of wondering, I think your process is somewhat unique in how this might affect other people who make fish emulsion if it was lowered to 3.0.

MR. ELLIS: Well, we're making a fish hydrolysate which is quite a bit different than fish emulsion. There's a number of other companies primarily based out on the East Coast that also make fish hydrolysate.

Fish emulsions tend to be a heated product where oils, and potentially bone meals, and other collagens, and other products are removed from the product as it's being processed. So I'm guessing that other hydrolysate manufacturers would run into the same issues that we have in that the addition of acid at the beginning will slow the evolution and the upward rise in pH.

And, you know, we've found that this

bony fish that we use here in the Midwest, that that happens fairly quickly. And potentially the guys on the East Coast, if they're dealing with more cartilage at the base, they might not have the same issues that we do.

MS. BEHAR: Thank you.

MR. CHAPMAN: Any other questions for Justin?

Justin, I just want to follow-up on your written comments on what answered to AFIS. So you don't use -- you don't use whole fish unless it comes to you via an agency or something for invasive control. What's the reasoning for not using the whole fish? Is it an economic --

MR. ELLIS: No. I think it's more of just the ethics of how we're trying to -- we're trying to divert a potential waste stream. And the company started by scraping alewives, which were a herring-type fish, off the shores in northeastern Wisconsin.

And it's primarily a waste stream diversion that's really grown. We do get some

invasive Asian carp occasionally, but it is not something that we've ever spent time researching or been interested in. I just want to be procuring whole fish. You know, we're not interested in catching wild fish just to grind them up and turn them into a fertilizer.

MR. CHAPMAN: Are you aware of competitors that have that as part of their supply chain, or is that common in this marketplace, the whole fish -- whole fish?

MR. ELLIS: As far as I know, there are some emulsion companies that do target whole fish with the idea that they will be caught --

(Telephonic interference.)

MR. ELLIS: -- for fertilizer. But I'm not sure as far as the hydrolysate companies how they're sourcing whole fish.

MR. CHAPMAN: Okay. Thank you very much.

MR. ELLIS: Thank you.

MR. ELA: Tom, I have a ---

MR. CHAPMAN: Oh, go ahead.

MR. ELA: Tom, I have a follow-up question.

MR. CHAPMAN: Go ahead, Steve.

MR. ELA: Yeah, this is Steve. Could you just -- you talked about hydrolysate and emulsion products. Could you clarify the difference between the two for me?

MR. ELLIS: Sure. So what we make is a -- it's a hydrolysate product. So we're getting the fish scraps in. It's not any real big secret to it. We grind them up, and then we do a secondary grind. We add it to a tank.

And what's happening is the enzymes that are naturally present in the fish themselves are what's actually breaking the fish down, breaking the product down into a liquid once it's in our storage tanks. It's done at very low temperatures. And the hydrolysates generally aren't removing any products or anything else.

Where emulsions, they start with mainly fish scrap or a whole fish that are being ground up. And then it's usually heated up,

because they're looking to extract oils. Those oils can go into the cosmetic industry, they can go into the, like, fish oil for human consumption industry.

Sometimes they'll also remove the bone then at that point. And that could be sold as bone meal. And what you're left then is sort of a concentrated, usually a higher nitrogen, lower phosphorus, lower potassium product that is quite a bit different than the hydrolysates that we make.

MR. ELA: Thank you.

MR. ELLIS: You're welcome.

MR. CHAPMAN: Okay. Justin, thank you again for your time --

MR. ELLIS: Thank you guys.

MR. CHAPMAN: -- and your comments here. So up next we have Mary Cox, and then on deck is Michael Moss, and then Jay Kurtz. Mary, are you here?

MS. COX: Yeah, we're here.

MR. CHAPMAN: Excellent. We can hear

you. Mary, you can start with your name and affiliation and then proceed into your comments.

MS. COX: Okay.

MS. ARSENAULT: Tom, I'm sorry. If I could interrupt just for one second to remind Mary. I have your PowerPoint slides loaded, and you'll have to cue me to advance to the next slide.

MS. COX: Okay. So it's my cousin, Conor Buckley, and we both work with Socius Ingredients. And we're both going to speak. So Conor is going to start, Conor Buckley, on Page 1.

MR. CHAPMAN: So just --- Mary, sorry, it's a formality of our process that we only allow one speaker at a time for a slot. So we're going to need ---

MS. COX: Oh.

MR. CHAPMAN: -- either you or Conor to speak but not both. I apologize.

MS. COX: Okay, okay.

(Off-record comments.)

MS. COX: You know, so I am going to talk about the challenges in securing organic tamarind seeds. Because I think that was one of -- some comments that were online, if that's okay.

MR. CHAPMAN: Yes, go for it.

MS. COX: Okay.

MR. CHAPMAN: And I will start your time now. But if you could start with your name and affiliation for the record.

MS. COX: Okay. So I'm Mary Cox, and I work with Socius Ingredients. And on Page 2 of the PowerPoint, the company was formed in 2000 for a food ingredient company. And we're focused on proteins, natural colors and hydrocolor corollaries.

So tamarind seed gum is Glyloid brand, and it was manufactured --- oh, do you mind going onto Page 3 --- manufactured by DSPG in Goyko in Japan. In 2004, it got FDA generally recognized as safe accreditation. And in 2018 --

(Telephonic interference.)

MS. COX: -- Canada accreditation.

So I'm going to talk about the challenges in securing organic tamarind seed. Just as a reminder, the tamarind tree produces a pod-like fruit. When someone thinks of tamarind, they are referring to the pod, but 34 percent of the pod is actually seeds.

Tamarind seed gum is made from the seeds. And while they're part of the commercial part of the pod, the seeds are underutilized byproducts. There are many applications possible with the seeds, but at the moment their commercial use is limited to the textile, paper binding, and food additive industries.

Would you mind going onto Slide Number 5, please?

So the epoxy and other applications of the gum are directly linked to the procurement of the best quality seeds. DSPG sources the tamarind kernel and powder from India and Thailand. Seventy-eight percent of the seed is kernel. The seed must be wilted to remove the

kernels from the shell, and afterwards then the kernel can be transported to another factory for grinding and grating into powder.

In India, the seeds there are procured from wide and vast geographical areas and are sold in open markets. The textile industry is very large in India and seeds are mostly used as sizing agents to help strengthen yarn.

Only a select amount of white seeds are used for gum manufacture. However, seeds for both industries are roasted and grinded in the same plants. The food additive industry is too small to have separate roasting and grinding plants.

In Thailand, Tamarind trees grow naturally wild across the country. Seeds are generally discarded as waste, but some farmers manually removed the seeds from the pod as a side job. DSPG is the only company purchasing tamarind kernel powder from Thailand.

We contacted the Organic Certification Board in Thailand, ACT, but we weren't able to

procure organic certified seeds. In our research, we contacted organic tamarind suppliers in Thailand and India. But each time they can only provide us with organic tamarind pulp powder.

Organic pulp can't make tamarind seed gum. If they are organic certified fruit, we can't guarantee these seeds will be the highest quality for tamarind seed gum. To add to the complexity, roasters and grinders would also need to become organic certified. In India, the amount of seed for their food industry is so small compared to the textile industry that there's really no incentive for these plants to become organic certified.

And finally, where we've used tamarind seed gum, it can -- it can be substituted for PGA, and polysorbates, and other ingredients.

MR. CHAPMAN: Thank you, ma'am. And then I have to stop you ---

MS. COX: Okay.

MR. CHAPMAN: -- I'm going to have to

stop you there since you've reached your time. But are there any questions from the Board?

MS. BEHAR: Yes. This is Harriet. Have you tried to work with growers that currently provide the tamarind seeds that you're using for making into gums and see if they will get certified?

MS. COX: So we have contacted, through DSPG in Japan, the tamarind kernel powder suppliers. Because DSPG gets the powder from India and Thailand. And we have contacted them. And they -- right now, at the moment, they say that it's unavailable.

The growers are, like, in Thailand, the trees are just -- they're naturally growing around the country. And small farmers are picking it up as a side job. And then in India, the main reason that seeds are collected is for the textile industry. But we've done, like, the research with contacting organic certifiers, et cetera.

MS. BEHAR: So from what I can see on

the National Organic Programs' Organic Integrity Database, it seems that there is some organic tamarind seed available. So I'm just kind of wondering about have you tried to facilitate the production of the tamarind seed gum by working with organic tamarind seeds or with the ---

(Simultaneous speaking.)

MS. BEHAR: Go ahead.

MS. COX: Yes. On the National Organic Database, there is organic tamarind powder and pulp. But there isn't organic seeds, from my search. But if there was seeds, then we would definitely be open to use organic seeds if they were the right quality for the gum.

MS. BEHAR: All right, thank you.

MR. CHAPMAN: Any other questions for Mary?

(No audible response.)

MR. CHAPMAN: Mary, I have a question. You talked about the sourcing in India through open air markets. I'm not sure everyone on the Board may be familiar with that. Are you able to

describe that in any more detail of, like, what that is, how that functions, the number of operators that may be involved?

MS. COX: As much as I know about this, the seeds are mainly used in the textile industry there. And they're collected from, like, all around India and sold. And that's all I know so far on that. They do go to roasters, and they can be different plants, manufacturing plants that roast them. And then they're transferred to be ground in other manufacturing plants.

MR. CHAPMAN: Okay.

MS. COX: Yes.

MR. CHAPMAN: Can you ---

MS. COX: I feel like --- it seems like it's very disorganized there and that the seeds, you know, are the by-product of the tamarind industry with the cause.

MR. CHAPMAN: Okay. Thank you. I believe we don't have any other comments or questions for you, Mary.

MS. COX: Okay.

MR. CHAPMAN: So thank you for your time.

MS. COX: Thank you for your time.

MR. CHAPMAN: Okay. Up next we have Michael Moss, followed by Jay Kurtz, and then Michael Luna on deck after that. Michael Moss, are you here with us?

MR. MOSS: I am.

MR. CHAPMAN: All right, we can hear you. You can start with your name and affiliation for the record.

MR. MOSS: Thank you. My name is Michael Moss. And I'm an organic farmer in Boulder County, Colorado, certified by OPIA and speaking on my own behalf.

Thank you for the opportunity to comment on the use of paper pots in my OSP. In the past, I have used cardboard and newspaper as mulches to help combat weed pressure and also help build compost.

All of these materials were of varying qualities, with various inks, protective gloss

layers, and materials that I've started to feel uncomfortable with in the organic system. My focus as a farmer is to grow the highest nutritional quality produce possible, and it starts with my soil. In light of this inner conflict, I stopped --

(Telephonic interference.)

-- I stopped using waste stream cardboard and paper in my operation. Four years ago, I started using the paper pot system, as I felt comfortable with the material. And --

(Telephonic interference.)

MR. MOSS: -- accounts for approximately 20 percent of my yearly --

(Telephonic interference.)

MR. MOSS: This allows me to have a higher germination rate and a reduced weed pressure. I also find that the use of this system is a huge labor savings for my farm, helping us achieve higher levels of sustainability.

I have seen that, even in the dry

front range of Colorado, that the paper pots breakdown in the soil without any noticeable detrimental effects. When I decided to become certified two years ago, OTIA was very diligent in their process of certifying my farm. This included approval to use the paper pots as part of my LST.

This process took months and much research on their part. One of my largest items by revenue is a salad mix. This mix is made up of fully matured lettuce heads that are harvested and then mixed to create a nutrient dense weed free salad mix.

We use the paper pots to plant over 4,000 heads of lettuce each week in our growing season. Without the paper pot system, we'll be forced to move to hand planting starts or a direct seated salad mix.

Both of these current options will be highly detrimental to the value and success of these products. It's my request that the NOSB complete a full technical review of the paper

pots in organic systems.

Organic farmers like myself who utilize the paper pots still have on hand supplies that we are not able to use during most recent growing season. I request that organic farmers that have been approved by the certifiers use this material to continue to use the paper pots during this review period so as not to waste money and materials.

As an organic farmer, I'm committed to soil health and organic standards, but I also must balance the viability and longevity of my operation and its impact on my community, family and staff.

I have been in discussions with OCIA, but I may need to no longer certify as organic all the parts of my farm if I cannot use the system. This decision process pains me deeply as I am fully committed to the principle of organic and regenerative farming.

But thank you for your time. I hope that you can support the petition to allow the

use of paper pots on certified organic farms and uphold technical review of the materials.

MR. CHAPMAN: Thank you, Michael. Any comments for Michael or any questions for Michael?

MS. BEHAR: I have a question.

MR. MORTENSEN: And I have one as well.

MR. CHAPMAN: So we'll go with Harriet and then Dave. Harriet, go ahead.

MS. BEHAR: Do you use paper in any other way on your farm, as a compost feed stock, or as a mulch?

MR. MOSS: I do not. I've moved to growing my own mulches through cover cropping, and either mulching that in place on the fields, or harvesting that sort of used as compost.

MR. MORTENSEN: So to the decision to, you know, sacrifice your certification is a pretty extreme one. Could you, you know, identify, like, the one or two constraints that make this particular loss of this tool so

important to your operation?

MR. MOSS: Well, in Boulder County, we are a rapidly gentrifying population, and labor constraints are the number one greatest challenge to myself and other farmers in the county. As Colorado raises the minimum wage, it's really hard for us to find people who can support the work of the farm.

So by having to move to hand planting each succession of lettuce, we're just not going to have the bodies to grow this product. And this is a product that I actually put out in a labeled, branded clam shell to compete against imported lettuce products from other parts of the country. And it's really taking off and has been a great exposure for our farm.

MR. MORTENSEN: Thank you.

MR. CHAPMAN: So, Michael, definitely this is -- economics is the reason for it. Otherwise, you'd have trouble making a profitable, competitive product.

MR. MOSS: I would say economics is a

large component of it. Also for us, these soils that I'm on, publicly owned land, Boulder County open space, the weed pressure and the soil conditions are very challenging. So with the paper pot system, I can transplant a start very rapidly into a freshly cut bed.

So I'm getting a head start on my weed management. And then I can come in with basket weeders or tools to be able to manage the weeds. As our properties improve, hopefully this is will go down, but right now, labor and weed pressure are some of my biggest concerns on the farm.

MR. MORTENSEN: Could I just ask one more question?

MR. CHAPMAN: Yes.

MR. MORTENSEN: Could you explain for the Board how it is that the transplanting helps your weed management?

MR. MOSS: Of course. So on the paper pot system, we start this --- we'll start a tray of lettuce in our greenhouse. And we would direct feed it. It would germinate, and we'd get

to the point where it's about the third set of true leaves, maybe the second set of true leaves. That's when we'd transplant them in the field.

So before we transplant, we will go through and do a final prep stage which may be tilling or flame weeding the beds. And then we will plant the paper pots.

So at that point, the head start is weeks over the weeds. So now we can come in with hand tools or our mechanized tools when the weeds are at thread stage and the lettuces are fully growing.

MR. MORTENSEN: Thanks. So there're some clear agronomic as well as economic reasons, and labor, to have access to the tool. Thank you.

MR. MOSS: Correct, thank you.

MR. CHAPMAN: Any other questions?

MS. OAKLEY: Tom, can you hear me, this is Emily.

MR. CHAPMAN: You're a little quiet, Emily, but go ahead. If Michael can't hear it,

I'll try to repeat the question. Emily, go.

MR. MOSS: I can hear.

MS. OAKLEY: I'm talking a little louder. I just wanted to let you know that the Board has discussed this at length on the Crop Subcommittee. And we'll be discussing it at the meeting.

Our current limitation right now is that we received the petition for the material too late in the process to have it on this meeting's voting docket.

Because we really just had a couple of weeks turnarounds between each meeting, and really we would have to have a proposal ready for this meeting. And that didn't give us sufficient time to discuss whether or not we needed a technical review, et cetera.

So right now, hopefully, we'll be able to have some dialogue with the National Organic Program to see if there might be the possibility of an extension of that 2018 deadline. They have some concerns about precedent setting, but we're

hoping that we might be able to continue that dialogue at this meeting and -- further back won't even be the product.

So I just wanted to give you a little bit of the background of how that process works. And thank you so much for your comments.

MR. MOSS: Great. Thank you for the explanation.

MR. CHAPMAN: Any other questions from Board members?

(No audible response.)

MR. CHAPMAN: Hearing none, Michael, again thank you very much for your time and your detailed testimony here.

MR. MOSS: Thank you.

MR. CHAPMAN: So up next we have Jay Kurtz, followed by Matthew Luna. Matthew Luna, we haven't been able to identify you on the list. So if you're there, please text us in, and then after Matthew is Patty Lavera. Jay, are you on the line with us?

MR. KURTZ: I am.

MR. CHAPMAN: All right, Jay. You can start with your name and affiliation for the record.

MR. KURTZ: Thank you, Tom. My name is Jay Kurtz, and I am speaking today on behalf of Devrow. Devrow is a maker of collagen gel for the food industry, solely used in the skin, excuse me, as the skin in the making of sausages.

For background, over about the past 15 years approximately 50 percent of the fully cooked sausage category in the United States transitioned from using traditional intestine and cellulose casing in favor of collagen gels that are run through a full extruding sausage system.

The food safety of these sausages, excuse me, of the sausages that are made using collagen gel as the casing, or as the skin, is frankly unparalleled. And the quality of the product is of the highest standard.

As the market has and continues to evolve, the ability to meet consumer demands for skin-on organic sausages is certainly limited to

intestine casings which is becoming a significant barrier.

Taking into consideration the precedent set of including process intestines on the National List 606, one of the key basis points was that there was an inability to amass enough organic runners or an identity preserved run.

The same holds true in that regard for collagen gel in that there's a lack of specific type and cuts of animal skins that are necessary to make these collagen gels.

Also, recognizing that gelatin is included on National List 606, and understanding that gelatin is derived from numerous collagen sources of an animal, as an example skin, bones, tendons, et cetera, gelatin is a further processed and de-natured, compared to collagen and compared to the animal skins used in collagen gel production.

Based upon highlighting these two preceding examples, which are also detailed in

the submitted petition, Devrow does believe that strong consideration should be given to collagen gel during the 2019 spring meeting to be included on National List 606.

That concludes my commentary today. I thank you for the time and consideration and look forward to any questions.

MR. CHAPMAN: Thank you, Jay. Any questions for Jay?

(No audible response.)

MR. CHAPMAN: Jay, I am not hearing any questions.

MS. DE LIMA: This is Lisa. I have a question.

MR. CHAPMAN: Oh, Lisa, go ahead.

MS. DE LIMA: Hi. So when you were talking about there being significant barriers, is that specifically you're talking about having single animal casings? There's not --- or is there actually a ---

MR. KURTZ: Well, it's twofold.

MS. DE LIMA: -- an issue?

MR. KURTZ: Yes. It's twofold. It could be specific to single species sausage and single species casings or, more so, based upon traditional or different types of equipment used to make the sausage.

So a collagen gel is different than a typical casing that would be stuffed with whatever type of meat is better to make the sausage. A collagen gel requires a specific type of equipment in order to make a co-extruded sausage, meaning the meat and the collagen gel are extruded or plugged at the same time, never requiring any hands to be touching that product. So it is twofold. It doesn't relate back to -- but it also relates back to the equipment used to make a sausage.

MS. DE LIMA: As a follow-up to that, so it doesn't relate back to -- you're not saying that there's an issue of quantity to use the casings that are currently on the National List? It's a preference for equipment and for the single species.

MR. KURTZ: I would say that is a fair answer, yes, indeed.

MS. DE LIMA: Okay, thank you.

MR. KURTZ: You're welcome.

MR. CHAPMAN: Okay, any other questions for Jay?

(No audible response.)

MR. CHAPMAN: Hearing none, Jay, thank you for your comments here today.

Up next, well, do we have Matthew on now? Matthew, we haven't been able to identify your phone number. Are you on the line with us?

(No audible response.)

MR. CHAPMAN: Matthew, going once, going twice, all right. Next on my list was Patty. Patty, you're here, is that correct?

MS. LUMA: Yes.

MR. CHAPMAN: All right, we can hear you. Patty, hold on one second though. So James Paskind is up after that. James, we see you on the web portion, we don't have your phone number identified. So if you know your phone number, if

you could message that in to us, you could be ready to go next.

And then Evan Perkins is after James. Evan, we haven't identified you. If you're on the line, please message in. And then after Evan, just so people are aware, is Deborah Attwood. So Deborah, you might be coming up quickly.

Patty, if you could start with your name and affiliation for the record.

MS. LOVERA: Sure. Hi, my name is Patty Lovera. I'm with Food and Water Watch, and we appreciate the opportunity to comment. We're also a member of the National Organic Coalition.

So I just wanted to talk quickly about a couple of things. I know you heard we've received a bunch of things, a big group letter which we have signed onto. We submitted a petition from our membership, as well talking about the need to add energy infrastructure and impacts on organic to your agenda.

And I think you heard quite a bit

about this on Tuesday which, you know, we're working in support of developments that you heard on Tuesday. We think this is an important issue that really needs some discussion with the lens of organic for a couple of reasons.

One is just to really show the extent of the impact. It's obviously growing sites and what happens if agricultural land and organic agricultural land is the site of some kind of natural gas or oil drilling.

But there's also other pieces of this industry that ends up impacting food producing land as well from the wastewater disposal, their fracking and mining in certain parts of the country to the source of water they needed for fracking and then the pipelines to get that gas to some kind of market. So there's a lot of areas with -- conflict with the places that we produce our food.

I put a lead in our written comments that are submitted just of one news story that came out very recently in West Virginia. There

was an organic grower in the news that a helicopter came over his land.

They were supposed to be dropping, you know, soil stabilization materials on a pipeline site not too far away. They hit his farm instead, and there was a lot of confusion about what that meant for his certification because all of this unapproved material was suddenly all over his farm.

And I'm sure we're going to be hearing more and more of that. But the idea of putting it on the work plan for NOSB is to raise the awareness of this in the organic community, that people need to be proactive and have some guidance, including these impact mitigation plans that OFA and others are putting out there to get certifiers aware of that and spreading the word so that folks can protect themselves the best they can with this process, and also to raise the awareness of this process impact, the places where we raise our food, including organic food.

So that's probably enough on that. I

think you've heard quite a bit about it and we're, you know, fully in support of having that conversation start.

And then quickly, there have been a couple of other issues of enforcement, and oversight, and accreditation. I think you also heard about this from NOP. We support, you know, really focusing on improving the acreage data collection. We think this is an important part of how we understand the organic industry.

But we think it's also an important part of kind of kind of verifying surges or changes we might see that are an important part of making sure NOP --- you don't have the opportunity for fraud.

And then in the document that you all have about the accreditation oversight, we have some other things we put in our written comment in addition to what you all have in your discussion paper, including having NOP be able to investigate surges and enforce and, when equivalent, country partners take some action,

that we look at taking the same action.

And the last piece I'll say is that we think the standards themselves are an important part of having --- I don't know if you'd be able to have that oversight, so things like the livestock practices and things we would really urge, you know, people take another look at. So thank you.

MR. CHAPMAN: Thank you, Patty. Any questions for Patty?

(No audible response.)

MR. CHAPMAN: All right, Patty, not hearing any questions. Thank you for your comments here today.

MS. LOVERA: Thanks.

MR. CHAPMAN: Up next we have James. James, are you with us?

MR. PASKIND: I am.

MR. CHAPMAN: All right, James. So after James is Evan Perkins. Evan, we still haven't identified you so please, again, message us in if you're on the line. After James is

Deborah Attwood, and then David Ehreth. I've just butchered that.

James, if you'd start with your name and affiliation for the record.

MR. PASKIND: Certainly. My name is James Paskind. I'm a senior manager of Salm Partners, LLC. First of all, I appreciate the opportunity to provide input on the Devrow petition to include collagen gel in 7 CFR 205.606.

Salm Partners is a contract manufacturer. We make high quality, food safe, sausage products. Our product portfolio includes many "better for you" products including many all natural sausages. All of our sausage products are made with collagen gel as the product casing.

We are here speaking today in support of the Devrow petition to add collagen gel to the National List, and we believe their proposal to be fact-based and rational. We're also hopeful that the technical review, as we understand, is underway and will support the petition details.

But my primary purpose today is to describe the marketplace demand for organic sausages in a collagen casing. So first I'll address the growing preference for collagen casing sausages overall, and second, specifically address the unmet demand for organic sausages.

The fully cooked sausage category has transitioned from sausage stuffed in processed pig intestine as the casing to collagen casing sausages made from collagen gel. Collagen casings now represent nearly half of the fully cooked sausage category, and there's consumer research that indicates an overall preference for collagen casing sausage products.

Regarding organic sausages specifically, all the recipe ingredients, the meats, the seasonings, the condiments, are available as organic ingredients. The options for the sausage casing, which is less than one quarter of one percent of the formula, however, are much more limited in fully cooked sausages.

Currently, the only casing option for

inorganic sausage is processed intestines which is included on the National List. So a lot of the sausage category, as driven by consumer preference, has evolved for collagen casings made from collagen gel. There's no opportunity for an organic sausage made with collagen gel.

A specific example worth discussing briefly, of this unmet need, is chicken sausage. Chicken sausage is a high-growth segment of the fully cooked sausage category. Many of these products are blends of low-fat chicken and various vegetables and condiments. Many are also all natural products, and all of them can be considered "better for you" products.

The only opportunity for organic offerings in this segment requires processed pig intestine casings. So this is an obvious show stopper for consumers that desire a high quality chicken sausage but will never purchase a product that includes a pork component. So a product named chicken sausage made with pork casings obviously is a significant limit in terms of

options for these consumers.

Collagen gel solves the issue. It provides consumers interested in an organic chicken sausage a fully acceptable offering satisfying an unmet demand. This same rationale would, of course, apply to sausages made with other non-pork species such as an all-beef sausage.

That concludes my comments, and I appreciate the opportunity to address the Board on this petition. Thanks very much.

MR. CHAPMAN: Thanks, James. Any questions for James?

MR. BRADMAN: I just have some questions. When you say, excuse me, there's more opportunity for single species products with collagen gel, so perhaps also what you're getting it is that there's more opportunity for Kosher products, say with the chicken sausage. Could you comment on that?

MR. PASKIND: I believe there is. And right now Kosher products, for the most part, in

this category are cellulose casing. So the casing is stripped, and there is no casing involved.

But certainly if there's the opportunity to procure -- and we understand there is -- Kosher collagen from Kosher livestock, then yes, the opportunity for Kosher would be expanded beyond the current.

Because the same barrier exists with a processed pig intestine, as we've talked about. Obviously, for more than one reason, that's not the only proposal. But yes, that would be an additional aspect of the market that would be made available.

MR. BRADMAN: Thank you.

MR. PASKIND: Certainly.

MR. CHAPMAN: Any other questions?

(No audible response.)

MR. CHAPMAN: Hearing none, James, thank you for your comments here today.

MR. PASKIND: Thank you.

MR. CHAPMAN: All right, up next we

have Evan Perkins. Evan, we haven't been able to identify you. Are you on the line with us, Evan?

(No audible response.)

MR. CHAPMAN: Evan going once, going twice, all right, Evan. We will pass. Up next we have Deborah Attwood. Deborah, are you here with us?

(No audible response.)

MR. CHAPMAN: Deborah, you might be mute on your side. I see you online, but I don't hear you.

MS. ARSENAULT: I don't show her line as muted. So, I'll try to ---

MS. ATTWOOD: Can you hear me now?

MR. CHAPMAN: Yes. Yes, we can, Deborah.

MS. ATTWOOD: Okay, sorry about that.

MR. CHAPMAN: Yeah, no problem. Hold on one second. So after Deborah, on deck is David Ehreth, and then Jim Adaskaveg. I'm sorry, Jim, I just butchered that.

But, Deborah, if you start with your

name and affiliation.

MS. ATTWOOD: Sure, thanks. Good afternoon, my name is Deborah Attwood. I'm an attorney with Steptoe and Johnson here in Washington, D.C. And I'm commenting on behalf of PURE Bioscience who is a petitioner seeking the addition of silver that hydrogens situate to the National list.

Thank you for the opportunity to provide additional support for why the use of sulfur dihydrogen citrate, or SDC, in organic food processing and handling presents a reasonable certainty of no harm to the safety of human health or the environment.

SDC has been the subject of robust reviews by two federal agencies, the Food and Drug Administration, and the Environmental Protection Agency. FDA reviewed the safety of SDC through its Food Contact Notification Program which is an internationally renowned program that establishes the safety of substances for contact with food.

EPA has reviewed the safety of SDC as part of the pesticide registration process under FIFRA, the Federal Insecticide, Fungicide and Rodenticide Act. Both agencies evaluated the impact of SDC on human health and on the environment. And both agencies concluded that SDC is safe for its intended use.

As part of this review process, the information that PURE Bioscience provided to FDA and EPA was comprehensive. It included detailed descriptions of the chemical identity of SDC and its composition, including any potential impurities or by products that could result from its use.

PURE Bioscience described how SDC is manufactured, and how it's intended to be used, and provided data to show that SDC killed food borne pathogenic organisms.

Based on all of this information, both agencies evaluated how much SDC humans could potentially be exposed to under a worst case scenario and how much SDC could potentially get

into the environment, again using worse case assumptions.

Both agencies would have considered the potential impact that a nanoscale substance could have on safety, but this was unnecessary, typically because SDC is not nanotechnology.

To support the safety of these reviews, PURE Bioscience provided specific toxicological studies that demonstrated a wide safety margin between the worst case exposures as compared to potential levels of concern.

Neither agency would have permitted SDC to be placed on the market unless they were convinced of the safety of the product for its intended use.

In addition to these federal reviews, FDC is also a registered pesticide in California, a state that's recognized for its own stringent safety review for antimicrobials.

Based on these existing comprehensive and conservative reviews by these agencies that have the relevant expertise to evaluate the human

and environmental safety of SDC, we respectfully submit that SDC would be a beneficial addition to the National List for use in organic food processing and handling. Thank you.

MR. CHAPMAN: Thank you. I will start with some questions, and then open it up to the floor for some questions.

So we've heard some public comment or received some public comment stating that SDC will break down into nano particles when in use. Do you have any further information to provide about comments received related to SDC and nanotechnology?

MS. ATTWOOD: Sure. So PURE Bioscience, we did submit some additional --- we recognized the comments that were submitted to the docket on nanotechnology and did also provide our own additional comments responding to those.

From a technical aspect, the representative from PURE Bioscience who will be attending the meeting will be better positioned to explain this for you. But the short answer is

no.

SDC, in and of itself, it's not nanotechnology when it's made. It's an ionic substance. And then when it's used, it's not going to break down into anything further that what it already is. So while we understand the thought process that might lead to those concerns, from a scientific perspective they are just misplaced.

MR. CHAPMAN: We received other comments about growing bacterial resistance to silver compounds and, you know, some scientific research that spoke to you, the need to essentially limit the use of silver in medical situations. Do you have any comments related to that?

MS. ATTWOOD: So again, the product as it's used uses an incredibly low level of silver. And that's one of the benefits of SDC, is that it's a very narrowly tailored and an extremely low level of silver that's used in order to achieve the antimicrobial effect.

Because overall, we consider that the benefits from using SDC and the potential for reduction in food borne illness would instead reduce the potential for antimicrobial resistance and have less food borne illness potential and, you know, most people come to doctors and get antibiotics and that type of medication.

MS. OAKLEY: I also understand that another caller today will be commenting on that particular question as well.

MR. CHAPMAN: Okay, thank you. Any other questions from Board members?

(No audible response.)

MR. CHAPMAN: I am not hearing any. So thank you for your comments here today --

MS. ATTWOOD: Thank you.

MR. CHAPMAN: -- Deborah, and we'll be moving down the list. So next up is David Ehreth, and then following that will be Jim Adaskaveg. And after Jim will be Katherine DiMatteo. David, are you here online with us?

(No audible response.)

MR. CHAPMAN: No, you're muted, David, on our end. Hold on. All right, you're unmuted. David, are you --- well, we've tried to unmute you at the same time. David, are you there?

(No audible response.)

MR. CHAPMAN: David? Are you getting it on your end? We're not hearing you.

(No audible response.)

MR. CHAPMAN: David? I'm not hearing you. So, Jim, are you on the line with us?

MR. ADASKAVEG: Jim Adaskaveg here.

MR. CHAPMAN: Yeah. All right, Jim, we got you. So David, if you can message in, for some reason we're not getting any audio from you. So we'll come back if we can figure it out.

Jim, if you can start with your name and affiliation and proceed with your comments.

MR. ADASKAVEG: Yes, I can. I'm Jim Adaskaveg. I'm a professor in the Department of Plant Pathology and Microbiology at the University of California, Riverside. I specialize in mycology, bacteriology, and

epidemiology of plant diseases. I'm an independent, although it's listed differently, I'm an independent advocate for the fungicide natamycin.

Although the fungicide has been --- this fungicide natamycin has been used in the food industry ---

MR. EHRETH: Oh, crap.

MR. ADASKAVEG: Hello?

MR. CHAPMAN: Okay --

(Simultaneous speaking.)

MR. CHAPMAN: -- but you're not the speaker.

MR. EHRETH: David Ehreth.

MR. CHAPMAN: Okay, David. We'll come back to you. We hear you now. But ---

MR. EHRETH: Okay, thank you.

MR. CHAPMAN: So, Jim, sorry about that, we'll give you some time back.

MR. ADASKAVEG: All right. So I'm an independent advocate of the fungicide natamycin. And I'm not affiliated with --- it's kind of

listed here that I'm affiliated with DSM or PACE. But I'm actually a professor at the University of California.

I've been working with this fungicide, and I'm pretty excited about it. Although it's been around in the food industry for approximately 50 years as a preservative of meats and dairy, with generally regarded as safe, GRAS, standing with the FDA, natamycin's actually a brand new fungicide for agricultural use with this registration in the last two years with the EPA.

So EPA registered this fungicide as a biopesticide with exempt status of residue on agricultural commodities. The fungicide's a natural biofermentation product of Streptomyces nanolenses and other Streptomyces species. And this is the critical part. It has no bactericidal activity. It's not killing bacteria. It's only killing certain fungi that we've evaluated in.

So for agricultural use, my interest

is in the development of new post-harvest fungicides. And I've evaluated hundreds of products from synthetic to biological controls over my career.

I've worked with natamycin since 2012, evaluating its efficacy against plant pathogens of food commodities including citrus, stone fruit, tofu. And I found it to be a very effective fungicide.

I propose it as a new FRAC group, and I'm a FRAC member. And FRAC now lists it as a fungicide. We just went to the Action Committee where they list all the different fungicides used in agriculture. And this natamycin chemical obtained FRAC Group 48 with a unique mode of action.

It's a broad spectrum fungicide, and we have shown that it works on many plant pathogens. But it's still not effective against all plant pathogens, and it's certainly not effective on all fungi. So it has a niche for some of these plant pathogenic or in food

contaminating fungi.

So natamycin, to me, is a very exciting chemistry. There has not been any reported resistance in filamentous fungi despite its widespread use in the food industry.

In my research, I've shown that resistance to natamycin could not be detected in several penicillin species which are notorious post-harvest pathogens. And we were not able to find any such level of resistance.

And so this is a remarkable, major advancement that we can use this thing. Because it's registered now as a conventional fungicide, as a post-harvest treatment. And we could use it alone or in mixtures to help prevent other fungicides for developing resistance. So it has multi potential uses.

Natamycin can, if it's registered as an organic fungicide, since it is a natural product, this would be an extraordinary advancement for organic farming. Having an effective organic post-harvest fungicide would

help in protecting crops during shipment, in marketing, during that transportation period, and could help expand the organic industry tremendously in providing food.

MR. CHAPMAN: All right, Jim. We'll have to wrap up your comments --

MR. ADASKAVEG: Okay. So my last statement is that I propose that natamycin will be great for organic farming. It follows a similar trend as polyoxin D that was recently considered by your group as a natural fermentation product. And therefore, I am supporting natamycin with a similar strategy as a pesticide, or potentially organic, for the industries of the United States.

MR. CHAPMAN: Thank you. Thank you, Jim. Any questions for Jim?

MS. BEHAR: Yeah, this is Harriet.

MR. CHAPMAN: Go ahead, Harriet.

MS. BEHAR: Would natamycin be placed in any way for consumers to know that it had been used upon the fruit that they would be eating?

MR. ADASKAVEG: Most packers label their boxes of what treatments are being used on that food. And that's, I think, required. So, like, on the fruit boxes, currently they say treated with, and they'll list the fungicides that they treat the commodity with.

So that, I imagine, could be on that label as it is used. And it could be also indicating that it's organic pool, that it's an organic material on the box that way.

MS. BEHAR: Yeah, I wasn't sure that there was a requirement that it --- but if it's on the box, it would not be out on the retail floor, for instance, the plums, or peaches, or whatever where people are preferring one at a time. There wouldn't be a sign or anything.

So it's somewhat different with being used in bread products or cheese products where the consumer would actually see it on a retail --

-

MR. ADASKAVEG: Well, in some markets around the world, there are signs put out, like,

in Japan. They do put signs out, even at the marketing location. But that's not the case for other pesticides that are organically used, like copper or sulfur. I mean, there's no signs being posted for those types of materials either. In the US, there's no requirement for that, for example. But there are places around the world that they do to that. Yes, they do put those signs up.

MS. BEHAR: That was our exact use in post-harvest handling.

MR. ADASKAVEG: Right. That's exactly right. They did a required --- what they call a food additive college in Japan with what we have here.

MS. BEHAR: And then, so one of our concerns was that it is used for human health. It's a health product. And it's also used actually on livestock as well.

And there has been some resistance, I believe, by candida, you know, developed to the natamycin over time. So there is some concern

about using a health product that is very useful for maintaining human health and concern that resistance will get built over time if it was used, you know, regularly on fruit.

MR. ADASKAVEG: Well, I work --- obviously we're trying to develop safer products for post-harvest use. And from what I understand talking to the registrar, and talking to people who know about these things, the livestock usage in the United States is basically none. And the company that registered it originally is no longer in existence. So the amount of sales is actually not justifying what you're saying there with its losing livestock.

And as far as medical use, you know, this is mainly for eye infections. And most of these things are happening in more or less third world countries. And, you know, I don't think there's any extensive use of this material, or hardly any at all in, you know, first world countries like the EU, or the United States, or Japan, and these types of places.

But obviously there are some additional uses on the books in case that some issues ever develop. But again, the amount of usage of this in that capacity is near zero, from what I understand.

MS. BEHAR: Thank you.

MR. ADASKAVEG: And as far as the resistance goes, there's no resistance to filamentous fungi. And candida's a yeast which is a unicellular fungus. And, you know, most of those reports are coming out of laboratories where they do mutagenesis and generate resistance for studying these types of things.

So I haven't, you know, I've been very much involved with this, and I haven't really documented any filamentous fungus which is where all or most of the post-harvest pathogens of food crops, which is my specialty, are found. So I hope that answers your question.

MS. BEHAR: Yes, thank you.

MR. CHAPMAN: Any other questions, Jim? Okay. Hearing none, Jim, thank you for

your testimony here today.

MR. ADASKAVEG: Okay. Thank you very much for having me. I appreciate it.

MR. CHAPMAN: Yes. Yes. So, we'll head back to David. David, are you online with us? David? David, are you there? David, again, I don't know if you could hear me before. But we are not hearing you now. I'll give you another moment to try to unmute.

All right, David, still not hearing you. So, we'll proceed on. And if we can figure out technical difficulties we'll come back to you. It might be best, if you're able to, to try to dial in the line, and then message us the number you're dialing in from.

Well, up next then will be Katherine DiMatteo. Actually, I think we have you on mute. Yes, hold on. Katherine, are you there with us?

MS. DIMATTEO: I am. Can you hear me?

MR. CHAPMAN: Yes, we can. So, hold on, Katherine. After Katherine will be Mark Farinha, and then Sanford Bigelow. Of course,

we'll go back to David if and when we can figure out the technological fix. Katherine, if you could start with your name and affiliation for the record?

MS. DIMATTEO: All right. Thank you. My name is Katherine DiMatteo. I'm a senior partner and associate at Wolf DiMatteo and Associates. And we are here today to support the re-listing of sodium carbonate peroxyhydrate, or SCP, which is a safe, environmentally friendly material, and is an alternative to copper sulphate.

While SCP is often used as a disinfectant and sanitizer for water systems, there seems to be quite a lot of debate surrounding its use as an algicide in rice production, which is what I would like to address today.

During the last Sunset Review copper sulphate, on copper sulphate, one report from 2007, which was released before SCP was even allowed for use in rice, has been referenced by

the Crops Subcommittee, and is still being referenced today.

The new report by the California Rice Research Board summarized that "To date we have not found an algicide that gives results like growers would anticipate."

This is just one data point by one organization. There are many more current references that show SCP is an effective algicide. Some of those specifically have been done for rice. And many on algicides in general.

However, change in these other references and reports have not been read by the Subcommittee or the NOSB.

Also, in the discussion document for this meeting it assumes that SCP is not widely used, and cite 2010 data on California acreage in which copper sulphate was used, versus SCP.

At the time copper sulphate was used 97,757 times, versus SCP use of 1,277 times. I'd like to note again that this is when SCP first became available to California rice growers.

Remember, 2010. So, of course the uses rate would be very low.

Subsequently, SCP has been gaining traction. Its peak usage thus far in 2014 of 16,091 acres for California rice -- reported a low vetted national list. But not decisions made that take away materials that can provide a needed tool for organic farmers.

Removing a material from the list based on the number of farmers who currently are using the tool is not a fair and equitable way to decide about who may need an alternative to what is on the list, or who may use it in the future.

One material cannot be appropriate for all situations. Farmers need to be able to use a material that fits their needs when they need it. Thank you very much for the opportunity to comment.

MR. CHAPMAN: Thank you. Any questions for Katherine?

MS. OAKLEY: This is Emily. Can you hear me okay?

MR. CHAPMAN: Go ahead. I'll --

MS. OAKLEY: All right. I'll try to talk louder again. Sorry. Thank you, Kathy, for your comments. I was wondering if this recording that you just provided is for all rice in California? And if you are able to break that down by organic usage?

MS. DIMATTEO: Unfortunately we can't break it down by organic usage yet. That's not the way the information is collected.

MR. CHAPMAN: All right.

MS. OAKLEY: I just want to say, I guess maybe put it out as part of the reason that we noted that it wasn't highly used is we didn't see a tremendous number of public comments that it was used very widely. And it wasn't originally included as an algicide.

I did do a little bit of searching on the pesticide use reports database to try to determine usage among organic growers. And it was a little difficult to break that down by organic. But it seemed that there were some

uses, but very limited.

And there's one -- if in fact that is in irrigation hoses. Like it's, you know, understandable it's under that listing. But part of our concern was that it was originally intended for use as a -- as you noted, for copper in rice.

So, that can be part of that basic discussion that we're trying to elucidate through the public comments, and get more feedback on who is using it and how. So, thank you for your feedback.

MS. DIMATTEO: Right. And I'd just like to send out a couple of things. And, yes, according to select data, most data collected isn't broken out unless it's specific, say the research of the report is done that way.

Secondly, I would imagine that it's very difficult. Most farmer probably who may use SCP may not even know they're using SCP, because they recognize by brand name, a brand name product that they're using in which it is

contained.

So, you know, if you want to collect data from farmers you may have to do it in a different way. Or discover the brand names that use SCP, or have a SCP formulation, and ask the question that way.

We've found in listening to and reading many comments over time that especially on materials the farm community hasn't commented as much as those of us who have either the time, or have been paid, or are an NGO, to be able to, you know, gather the data, or to make a point.

So I, we've always found it very troubling that a decision about the use of a material that may very much be a better alternative than, in this case copper sulphate, is judged on the number of comments that one receives about the product. That seems to not be a very reasonable way to make those kinds of judgments.

And we, again, our company has always pointed out that this is a toolbox of tools.

Nobody's required to use them either all the time, or even some of the time.

They're, the tools are there for farmers to choose to use when they really need them. And they need a set of alternatives. Because one size doesn't fit all. Each farming situation is different.

So, just a caution from us that we have repeated many times. And I'm sure people on the NOSB who are listening in have heard us say this. But be careful about removing safe, environmentally friendly products that may be the best alternative for some farmers in their production systems.

MR. CHAPMAN: Any other questions for Katherine? Hearing none, thank you, Katherine for your comments. I believe that --

MS. DIMATTEO: You're very welcome.

MR. CHAPMAN: Thank you. I believe we have David on the line now. David, are you here with us?

MR. EHRETH: Yes. Can you hear me?

MR. CHAPMAN: Yes, we can.

MR. EHRETH: Okay. Good.

MR. CHAPMAN: Hold on one second, David. So, after David it will be Mark Farinha, and then Sanford Bigelow. David, if you could start with your name and affiliation?

MR. EHRETH: Okay. My name is David Ehreth. And I am with Alexander Valley Gourmet. And I would like to speak in support of using natamycin as a post-harvest rinse for organic products.

I'm a partner in a small company that has produced natural live culture fermented pickles and sauerkraut for 14 years. And we depend on naturally occurring lactic acid bacteria for vegetable fermentation.

Unfortunately, that same environment encourages bacterial, that encourages bacterial fermentation provides an ideal environment for spoilages. Because of this our products are very vulnerable to considerable losses cause by spoilages.

In our efforts to protect our food supply from synthetic chemical intrusion, producers of products like ours have long sought some completely natural, non-synthetic antimicrobial that while effective on fungi such as yeast, will have no impact on bacteria.

Natamycin appears to be such an antimicrobial. And further, natamycin can be produced with non GMO organic ingredient inputs.

The primary source of yeast in our process is the naturally occurring yeast on vegetables. Our fermentation depends on lactic acid bacteria also present on these vegetables. And therefore, we can't use broad spectrum antimicrobial washes like chlorine.

Our experiments using natamycin as a post-harvest wash have resulted in as much as a 30 percent yield improvement. The water solubility of native natamycin is very low.

Vegetables washed with natamycin rinse have very small uptake. With a secondary water rinse, quantities of natamycin in the finished

products fall below detectable thresholds.

Repeated studies have found that natamycin is safe to use as both a surface treatment, and as an ingredient.

The World Health Organization, and many others, have studied the food safety aspects in natamycin, and concluded that it's safe for human consumption within defined limits.

Studies by DeVore, et al, have shown that there is no observable increase in generational resistance to natamycin used in factories.

In a paper by Dalhoff and Levy, concern has been expressed about the possibility of increased microbial resistance as a result of certain natamycin formulation with other chemicals.

However, their expressed concern relates to the formulations of natamycin that increase acid resistance and solubility. Our discussion here, or at least my discussion is focused on natamycin, not on compounds of

natamycin combined with other chemicals.

Because natamycin is completely natural and can be produced with organic ingredients it has been shown to be safe for human consumption, and has not negative demonstrated environmental effects, we recommend granting organic certification to properly produced natamycin.

And just to put a footnote on this. We believe that natamycin is one of the most remarkable tools that can help promote organic and natural foods that contain live cultures, and have that lead to a very positive health outcome.

So, we very strongly support natamycin. And I'll take any questions. Thank you for your time.

MR. CHAPMAN: Thank you. Any questions for David?

MS. BEHAR: Yes. This is Harriet. Are there other materials that can be used instead of natamycin that are already on the National list, or are natural, and don't need to

be on the National List?

MR. EHRETH: There are other products that have been put forth. And we have experimented with them. None of them has shown the efficacy that natamycin has.

And these other products are not, things like mustard oil, or products that contain mustard oil, or other things, they have an unfortunate organoleptic component that adds, you know, sometimes undesirable flavors, or other things to products that natamycin does not have.

So, I would say that natamycin, to the best of my knowledge, is in a class of its own here.

MS. BEHAR: I just have a follow-up. How much loss do you think we are having now in fruit due to the lack of the use of natamycin, in post-harvest handling?

MR. EHRETH: Well, I can't speak, if you mean, when you say fruit, I can respond to the vegetable. And really, I have to narrow my observations to the fermented, inputs to the

fermented food business. Because that's the business I'm in, and very familiar with.

I have at times lost an entire batch. And for us an entire batch would be about 12 tons, and to spoilages. And I know that there are others, some of my other colleagues in the industry have had to reverse their effort to offer live culture foods, and reverted back to pasteurization, because they were simply unable to bear the losses.

And these losses are periodic. They come, they go. They're, it's a sort of a ghost that haunts our industry, and drives up the price, the consumer price of our products.

And so, we, I personally believe after studying this problem for years that natamycin is the single most effective tool against this. And because of its completely natural, the creation is non synthetic, and that it can be created with natural input, organic inputs, that this is a powerful tool for the fermented foods industry.

MR. CHAPMAN: Other questions for

David?

MS. OAKLEY: I have a question. This is Emily.

MR. CHAPMAN: Hey, Emily. And we can hear you clearly.

MS. OAKLEY: Yay. How many certified organic products comprise your overall line?

MR. EHRETH: At present we have one product line that is certified organic.

MS. OAKLEY: And how many, would that be in total?

MR. EHRETH: No, no.

MS. OAKLEY: Organic products you have in total?

MR. EHRETH: We have ten products.

MS. OAKLEY: Okay. So, ten. And one is organic? Thank you.

MR. EHRETH: Yes. And if I could just explain very quickly, that these issues dovetail, in that our reluctance to offer a broader line of organics have to do with the economics here, that organics to begin with is more expensive from a

material basis.

Combined then with spoilages, losses drives the price out of the reach of the average consumer. And we are very focused as a company on being able to offer products that the average consumer can afford.

MR. CHAPMAN: Any other questions for David?

MR. ELA: This is Steve. I have a question.

MR. CHAPMAN: Go ahead.

MR. ELA: Just, one of our concerns, and obviously the previous caller we talked a little bit about this, is the potential use of natamycin for human health, and the concerns over antibiotics used in agriculture, and crossing over to potential resistance in human health. Do you have any comments on that?

MR. EHRETH: Yes, I do. First of all, my proposal here is, as I mentioned, one of the real miraculous characteristics of natamycin. Is that it can be used as a post-harvest rinse. And

then washed from the products to the point where it is non-detectable in a finished product.

So, used as a post-harvest rinse I would point to its lack of solubility. And I know there are products on the market that have increased the solubility.

And I can't speak to those, because I am not scientifically skilled to address that. I would leave that to others. But I do know that used as a post-harvest rinse it can be extremely effective, and virtually non-present in the finished product.

As an ingredient we have also run experiments to see what would happen if we introduced natamycin into ferments that had a major yeast outbreak, and found that it was, I don't know another word to use, it was devastatingly effective.

And then, that goes over to the question of safety, you know, human safety. And I know in the paper by Dalhoff and Levy there was concern expressed about two things.

One, the increased microbial resistance, just due to the resistance of certain formulations of natamycin in the human gut. And the second was the possibility of horizontal gene transfer.

Those two subjects are way beyond my pay grade. And I would hearken back to both the FDA and the World Health Organization, European Food Safety Organization, and others who have studied this, and have generally concluded that natamycin used within defined limits is safe.

So, the Dalhoff/Levy paper is an interesting one to read, but does not draw, it's not a scientific study. It is titled a letter, or a word of caution, is just how they phrased it. So, that's kind of where I'm at on that.

MR. CHAPMAN: Any other questions? All right.

MR. EHRETH: And by the way, the Dalhoff/Levy study, just quickly, the Dalhoff/Levy study doesn't speak to natamycin, per se. It speaks to natamycin combined with

other ingredients that cause it to be more water soluble, and more resistant to acid.

MR. CHAPMAN: All right. Thank you, David.

MR. EHRETH: Okay. All right.

MR. CHAPMAN: And hearing no more questions. Sorry for the technological issues in there.

MR. EHRETH: No. That was, the problem was on my end I'm sure. Thank you.

MR. CHAPMAN: Okay. Yes.

MR. EHRETH: Bye, bye.

MR. CHAPMAN: Okay. Up next we have Mark Farinha. Mark, are you on the line with us? We might have you --

MR. FARINHA: I am here.

MR. CHAPMAN: Okay, Mark, we can hear you. Hold on one second. After Mark we have Sanford Bigelow. After Sanford Bigelow we have Dallas McCann.

Dallas, we haven't identified your phone number. So, if you're with us, please

message in. After Dallas will be Jane DeMarchie. Mark, if you can start with your name and affiliation?

MR. FARINHA: Yes. My name is Mark Farinha. I'm a professor of microbiology. I am a food consultant and pharmaceutical consultant. I've been in the business for over 25 years.

Today I want to address the NOSB on PURE bioscience, on their behalf for their silver dihydrogen citrate product.

Today what I'd like to do is to focus on the matter of silver, and resistance to silver by microorganisms. Research on silver resistance spans about 70 years of formal research.

But recently, in the last 20 years or so this has accelerated. And there's quite a lot more research in the last 20 years or so. This coincides with an expansion of the use of silver in wearables, in medical devices, in food packaging, and in food processing.

Ionic silver has been attractive as a antimicrobial, because it is very broad in

spectrum, affecting not only just bacteria, but also fungi, and a number of viruses.

This ability of silver to be effective is really centered on the broad action attacking and compromising many products of the cell, including the cell membrane, critical protein inside the cell, and even on the expression of DNA in microorganisms.

Because of its broad spectrum of action resistance to silver appears to be surely difficult for organisms to achieve. The majority of reports on resistance, and I've done some of this work, deals with the expulsion of silver from the cell.

And this is done by efflux pumping. Silver ions are pumped out of the cell at the end itself. This mechanism really just limits the amount of silver in the cell. And therefore, minimize the damage from the silver.

This is typical for the cell. It crosses the cell, and reduces the fitness of cells. And it makes this sort of resistance

fairly transient, according to all observations that have been noted to date.

When they're talking about PURE bioscience, and their product, this is of ionic silver that's combined with citrate, and is a fairly stable product. The citrate really makes the product enter the cell better, because it appears strew from microorganisms carrying the silver with it.

It drains down to the silver until it's delivered to the target. And what this does is minimize the silver ions available for efflux pumping.

And so, I think this particular application allows you to have something squarely, safely delivered, something that's fairly effective, and something you can deliver at a fairly low level.

This means that the actual amount of silver used in the process is fairly small. And this correlates with induction of efflux pumping systems in bacteria.

So, I think when you look at the overall number of organisms affected by silver, you can see many of the common foodborne pathogens, this seems like a reasonable approach to treatment, especially food treatment, equipment treatment, and pre-treatment of food products.

So, what I'm saying is, this broad antimicrobial activity of silver was a unique formulation of silver dihydrogen citrate should provide us with fairly safe food preparation and processing, even in organic facilities, with really an absence of development of resistant microorganisms. And that's my comment. Thank you.

MR. CHAPMAN: Thank you, Mark. I'll start with some questions, and then I'll open it up to the Board. Are, if I understood your comment correctly, correct me if I'm wrong, you're saying that the silver with the citrate is the more effective sanitizer than perhaps what we've seen in studies submitted to us about just

silver alone.

And that the resistance that's in those studies about silver is not applicable to the silver citrate product that we're discussing here.

MR. FARINHA: When people talk about silver products they're really talking about two things now, nano particle silver and ionic silver.

Nano particle silver causes resistance by excluding, and not taking out the particles themselves. For ionic silver, silver comes into the cell, and that free ionic silver is pumped back out of the cell.

What you have with SDC, the silver dihydrogen citrate, is the citrate binds the silver, in turn the cells takes this up because it thinks it's normal food. And the silver being bound to the citrate is able to affect the targets in the cells, and not be easily available for pumping.

This means you can use less silver in

the treatment. And it's more likely than not to show resistance. Not because the cells aren't capable of turning on efflux pumping. But it doesn't help them very much to do so.

MR. CHAPMAN: Okay. Are you also qualified to speak to the some of the nano silver comments that we've received? And I can --

MR. FARINHA: Perhaps. Within the knowledge of what I've done with nano silver.

MR. CHAPMAN: Okay. So, we received comments from folks that said that the sodium dehydrates, the FDC will, even if it's not a nano silver in its form, it will break down because of the citrate into a nano silver. Is that accurate? Is that accurate as?

MR. FARINHA: I don't believe so. And I'll tell you my reasoning why. Nano particle silver is aggregate silver. And this is a problem with unbound ionic silver.

Unbound ionic silver is perfectly capable of coalescing, and forming small particles. The citrate action prevents this from

happening, and stabilizes the ionic silver.

This is a problem I've seen with other ionic silver products, is they will actually particalize and play out in the product, like on surfaces. And that is a problem. But I have not seen this to date with the SCD product. And so, I think it's unlikely to happen.

MR. CHAPMAN: Okay. Do we have questions from other Board members?

MR. MORTENSEN: I do. This is Dave Mortensen. Yes. So, thank you for the explanation. I am just wondering, if the organisms are, if their defense mechanism is to pump out the silver, what is the fate?

Like when we think about pesticide fate in a plant or a microbial organism, we think about the fate in transport. What is the fate of the silver that's excreted?

MR. FARINHA: Well, it remains outside, or it can be re-entered into the cell. It's like any other sort of pumping system. The cells pump it out, and then it's back outside.

MR. MORTENSEN: So, in this --

(Simultaneous speaking.)

MR. FARINHA: I'm sorry.

MR. MORTENSEN: If you could just walk us through? So, in this case where we're washing something we would, you know, it would have a antimicrobial effect. And then there would be silver ions that are released in the process back into the water? Is that how it would work?

MR. FARINHA: Not from this particular product. This product enters the cell where it delivers the silver to bind to internal material inside the cell. And therefore, it cannot be pumped out. So, it would just be a contaminant that is killing the microorganism at that point.

MR. MORTENSEN: And it would, that dead microorganism would be washed off the produce?

MR. FARINHA: That is correct.

MR. MORTENSEN: Yes.

MR. FARINHA: But because of the stabilized product you're using so little of it

this falls very far below the level that you would normally find in effluent or water. And not to be this guy, it's such a low level of silver.

MR. MORTENSEN: Thank you.

MR. BRADMAN: I just have a quick follow-up question.

MR. CHAPMAN: So, this is Asa. Asa you need to identify yourself to the court reporter, Asa the instructions.

MR. BRADMAN: Yes. How are you defining what is a low level?

MR. FARINHA: Lower level in terms of EPA levels.

MR. BRADMAN: So, for water, for soil, for heating exposure?

MR. FARINHA: Naturally occurring levels of silver, according to the EPA. And these are far below those levels. So, you're not adding to the silver burden already present in the natural environment.

MR. BRADMAN: Okay.

MR. CHAPMAN: Other questions? Not hearing any, Mark, thank you for your testimony here.

MR. FARINHA: Thank you very much. Thank you to the Board. Thank you for listening.

MR. CHAPMAN: Up next we have Sanford Bigelow. Sanford, are you on the line with us?

MR. BIGELOW: Yes, I am. Can you hear me?

MR. CHAPMAN: All right. Yes, we can. And hold on one second.

MR. BIGELOW: Great.

MR. CHAPMAN: After Sanford is Dallas McCann. Dallas, we have not confirmed your phone number. So again, please message in. After Dallas is Jane DeMarchie, and then Jean-Marie Ngore Traore. Sanford, if you can start with your name and affiliation for the record?

MR. BIGELOW: Great. I'm Sanford Bigelow. And Vanguard Global Associates, a consulting firm. I have a PhD in Chemistry from the American University in Washington, DC. And

I'm a Board Certified toxicologist.

I provided written comments to the NOSB, for the NOSB Board. I'm presenting today on behalf of PURE Biosciences, and the use of their SDC product, as referred to by the previous speaker and Deborah Atwood.

And I will call this product silver citrate in my presentation. I encourage the Board to approve the use of silver citrate as a synthetic substance in the National List

The Board reviewed the peer petition, prepared the technical report. And the Board recommended to limit silver citrate use with particle sizes greater than 300 nanometers, based on their nano technology policy.

VGA intends to make five major points regarding the Board recommendation, safe use of silver citrate in fruit.

One, the Board recommendation on particle size will not work. Two, silver citrate contains silver ions which are not chemically defined as nano particles.

Three, the EPA and FDA have approved food uses for silver citrate. And both agencies recognize that silver citrate is composed of silver ions. The EPA and FDA have both determined that silver citrate is safe for food. This is point number four.

Furthermore, no scientific articles had been published in "PubMed" from 1968 to 2018. And no articles reported that silver exposure promoted antibiotic resistance in microbes.

Accordingly, if there was any evidence the EPA and FDA would have considered antibiotic resistance in their safety evaluations when they approved the use of silver citrate.

The Board should not adopt the particle size recommendation for silver citrate use. Both the Board technical report, and their --- Board's review recognized that silver citrate contains silver ions.

We strongly advocate that the Board does not adopt particle size recommendation because, one, it does not accurately describe

silver citrate composition in the PURE Bioscience's product.

Two, the recommendation will unintentionally result in approving a different silver based disinfectant, for which a Board petition has not been filed.

And three, the recommendation will result in disinfectant uses that are outside the compliance with existing EPA, FSIS, and FDA regulations for silver citrate uses in food.

Thank you for your time and efforts. Are there any questions?

MR. CHAPMAN: So yes. This is Tom. I have some follow-up questions. And then I'll open it up to the Board.

So, we used the criteria laid out in the organic food production data in order to evaluate substances for inclusion on the National List. There is human health environmental risk, as well as compatibility with the system of organic production.

And previous National Organic

Standards Boards have passed guidance stating that nano, from the Board level, not adopted by the National Organic program. But nano technology, and particularly the finding of 300 nano particle size is incompatible with organic production systems.

So, that annotation was placed on it to make it consistent with previous NOSB policy, as well as potentially compatible within organic production systems.

So, you're saying that adding that annotation in there would not, would make this product not, would not be -- I guess I'm confused. Because the petitioner stated that this is not a nano product. And this inclusion of the nano product spectrum you're saying would disallow, would invalidate the use of this product. I guess I have not been reviewing this product then. So, help me --

MR. BIGELOW: You know -- Go ahead.

MR. CHAPMAN: Can you help clarify this for me?

MR. BIGELOW: You're adding a criterion that no longer describes the petition use, or the petition product. The petition product contains silver ions. Silver ions are smaller than nano particles, according to FDA nano technology policy.

Nano particles fall within the range of 1/100 nanometers, according to FDA's policy. A silver ion has a ionic radius of .29 nanometers, or, you know, a circumference, ionic circumference of less than .6 nanometers, which is less than the range of nano particles recognized by FDA.

Because silver is a, just like a calcium ion, a free calcium ion, or a free copper ion, which are already approved on the National List of Disinfectants, they would, it really solubilizes with citrates, as available for disinfectant use, disinfectant action.

MR. CHAPMAN: Okay.

MR. BIGELOW: Yes. So you're, by placing this criterion you're no longer

describing the petitioned product. It's a freely soluble ionic material. And it's smaller than, you know, nano particles.

And just like other minerals that are used as disinfectants, they also will form, you know, ions. They may agglutinate as ions into nano particles. Who knows? And then they, you know.

But if you want to place this criterion onto SDC, silver citrate, you may want to look at those other salts that are already on the National List.

MR. CHAPMAN: Okay.

MR. BIGELOW: And the EPA --

MR. CHAPMAN: Any questions?

MR. BIGELOW: The EPA, when they exempted silver from a pesticide tolerance, they characterized the composition of silver citrate as not metallic silver. It was only silver ions that were generated from electrolytic generation. And those would be ions, not any metallic silver, or nano particles. So, they wanted to exempt the

silver, just the silver ion for this particular product.

MR. CHAPMAN: Any additional questions from the Board?

MR. ELA: This is Steve.

MR. CHAPMAN: Go ahead, Steve.

MR. ELA: And pardon my ignorance a little bit here. But when the previous speaker was talking about, while, you know, why the citrate was so critical for the action of the silver, so the cells couldn't, in essence pump it back out.

But if you're saying the silver is actually as an ion in the cell, I'm a little confused as to why, if it's separate from the citrate at that point as a silver ion, why the cells can't go ahead and pump it out as a silver ion.

MR. BIGELOW: Well, as all ions, all salts, there's dissociation between the anion and the cation. So, citrate is a tricarboxylic acid. And it will bind three atoms of silver.

The silver citrate is absorbed into the cell. And there's always association and re-association of anions to cations in cellular milieu.

The situation becomes is when the silver ion is associated it can, it's available to exert its disinfectant action by binding cellular molecules, and stopping cellular metabolism. And that's essentially what EPA and FDA recognize, the action of silver citrate.

MR. ELA: So, once that silver is disassociated in the cell, what prevents it from, in that disassociated state, from recombining? And my chemistry is rusty here, to say the least. But combining back into, like one of our public commenters, written comments said, back into what, into something like a nano particle?

MR. BIGELOW: I don't, I think that the level of silver citrate used, and the sheer massive quantity of cellular material in the microbe, just by mass action alone you're not going to have a lot of silver citrates, silver,

excuse me, silver ions re-associating with other silver ions.

Plus, when one silver ion disassociates from citrate it, there may be a situation where the other silver ions will remain associated with the citrate.

But the, clearly, based on antimicrobial testing, the silver ion is active in stopping or reducing the viability of these microbial organisms.

MR. ELA: Thank you.

MR. MORTENSEN: I have a question. I asked this question --

MR. CHAPMAN: Hold on. Hold on. Say, just for the court reporter --

MR. MORTENSEN: Yes.

MR. CHAPMAN: Dave Mortensen, you have a question?

MR. MORTENSEN: Thank you, Tom. Sorry. I'm just concerned about the fate. And the last speaker said that the concentration was so low that it was lower than the background

concentration in water, which I actually can't believe.

But what is the, what concern do you have about the fate of the silver in the run state that comes off of these cleaning tables in processing facilities?

MR. BIGELOW: If you look at the EPA standards for ambient water standards for silver, and I can't remember the PPM in the ambient water standard.

But the idea that silver, when it dissociates from the citrate ion, it's going to become bound to cellular macro molecules. It's highly unlikely that once bound it will be effluxed from the cell.

Nevertheless, there is some cellular influx. But one can easily suggest that silver will become bound to cellular macro molecules in neighboring cells, or in neighboring plant tissue, to the levels that are insignificant, according to the EPA and FDA safety evaluations, based on their approved uses in food.

MR. MORTENSEN: So, you have these dissolved and degrading microbial communities that are in the water, streaming, coming out of a facility. And probably the fate of the silver that is contingent on the decomposition rate of the single cell organisms, I would guess. Is that right?

MR. BIGELOW: Yes. Yes. And the FDA approval has an environmental impact assessment associated with food contact use approvals. And so, I had mentioned that in my written statements. And so, your concern about silver burden in the environment from SDC use, FDA in approving the use in food had addressed that in their environmental impact statement assessment.

MR. MORTENSEN: Okay. Thanks. I'll go back and look at that. Thank you.

MR. MORTENSEN: Yes.

MR. BRADMAN: Tom, I had a question.

MR. CHAPMAN: Okay. Asa.

MR. BRADMAN: You made two comments at the end of your initial comment period about, you

stated that, lack of approval will result in approval of other, in other's silver material. And you also I think said something about the result in use outside compliance. Can you be more specific about those statements?

MR. BIGELOW: Sure. There are numerous silver based disinfectants approved by the EPA. The one that's been petitioned to the Board here is silver dihydrogen citrate, which is ionic silver.

There are other silver disinfectants that are approved by the EPA. The Board may inadvertently approve the use of other silver disinfectants that do comply with this annotation.

The second thing is when you do put in place adoptive annotation the, if, for one to use an SDC they would still be outside the approval, because it does not reflect the composition if these other silver disinfectants were to be used. The may fall outside the already regulated uses of the silver.

MR. BRADMAN: So, this is specifically about your concern about the particle size annotation?

MR. BIGELOW: That's correct.

MR. BRADMAN: All right. Thank you. I just wanted that clarification.

MR. BIGELOW: Yes. Yes, sir.

MR. CHAPMAN: Other questions? Okay. Thank you for your comments here today. Up next we have Dallas McCann. Dallas, are you on the line with us? Going once, going twice, and I'll skip over you. After Dallas we have Jane. Jane, are you on the line with us?

MS. DEMARCHIE: Yes, I'm here.

MR. CHAPMAN: All right then, I can hear you. And then after Jane we have Jean-Marie. Jane, if you'd start with your name and affiliation?

MS. DEMARCHIE: Sure. My name is Jane DeMarchie. And I represent the American Food Trade Association. AFTA represents over 700 member companies that produce food, the row

crops, vegetables, grasses, and cover crops.

We encourage the National Organics Standards Board and the National Organics Program to use AFTA as a resource for issues related to food breeding and food working. These, oral comments are exerted from our written comments, that were also this submission.

AFTA supports the proposed regulatory language changes of the Organic Food Regulations. We understand that since the inception of the NOP access to a broader, higher quality organic food supply has evolved.

Concerning the organic seed guidance AFTA would like to see the methods proposed to verify organic seed usage, to be reflective of how different types of organic growers supply organic seeds.

Specifically, the value of using variety trialing to judge rival performance is accepted, and by all types of growers, even on your farm, or through an internal trial location.

Comparatively, catalogues of

predominantly proprietal selection by small scale growers only, they're not necessarily factual records of proprietal performance in all production locations and conditions.

AFTA strongly supports the change specifying a minimum of five sources. We support a refinement in the guidance that the sources be companies that can actually offer organic seed and planting stock of the equivalent variety. As a result, in some cases fewer than five sources will be able to be identified.

On the excluded methods many of us that commute have made listed in the proposed methods table of vital components of current plant breeding, the fundamental concerns regarding regimented criteria for disputed methods.

AFTA opposes the proposed excluded method of termination for transposons due to the lack of surety around the definition, and the prevalence of transposons in plants. As an example, the lettuce genome is 75 percent

transposable elements, peppers 76 percent, maize 85 percent.

AFTA supports the determination that embryo rescue should not be considered an excluded method by an LSC. We also urge the Materials Subcommittee not to include double haploid technology in the list of excluded methods.

AFTA does not support the testing program proposed in the Materials Subcommittee proposal on genetic integrity transparency in seed grown on organic farms.

As the proposal stands it may have the unintended consequences, depressing the growth of the developing organic seed industry, and reducing the depth and breadth of seed choices to organic farmers.

The National Organic Program is a process based standard, and AFTA continues to believe that the contractual relationship between the seed sellers, seed buyer, and existing seed laws are already appropriate mechanisms to

provide assurances of seed quality. Thank you for your time.

MR. CHAPMAN: Thank you. Any questions from the Board? Harriet? Sorry. Harriet, we had you muted. I didn't know if you had a question or not.

MS. BEHAR: Yes. I have a question.

MR. CHAPMAN: Okay.

MS. BEHAR: So, I was wondering about the transparency for the growers when the seed company does not provide them with information on the presence of genetic engineering in the seed that may have, you know, probably was, you know, happened there through no fault, you know, or just, you know, out in the field.

It wasn't that it was actually genetically engineered feed. But there can be a detected contamination in that feed. And then the producer doesn't know that it's present. And yet they are hoping to meet a certain market that will be testing.

How do you propose we deal with that

issue if we don't require some testing and transparency? So, before the farmer buys the seed they know what they're getting.

MS. DEMARCHIE: Sure. I think there are different answers to that. One of the things that we will recommend that growers are able to look at the seed, the purity on the existing seed tags, which in, you know, in many cases, you know, require high, over, you know, over 95 percent. So, that is definitely a method for indication. So, that's the purity of, the genetic purity of that variety, you know.

And I think we're also, what our members find is that in many cases growers are asking for tests. And they are receiving that data.

Our concern is with the structure of the program, as it is written in the proposal. I think we're definitely open to further conversation about this topic.

And perhaps, you know, additional data is needed before you go through the process of

establishing such an onerous testing requirement.

MS. BEHAR: Okay. No further questions.

MS. ARSENAULT: Tom, are you there? Tom, if you're talking you may be on mute.

MR. CHAPMAN: I'm on mute. I'm on mute. Sorry. Looks like we figured out there's no further questions, Jane. Thank you for your testimony.

MS. DEMARCHIE: Thank you.

MR. CHAPMAN: And we'll move on to our last public commenter, who is Jean-Marie. And I think we had you muted. Jean-Marie, can you hear us?

MR. NGORE TRAORE: I'm here.

MR. CHAPMAN: Yes, we can hear you. If you could start with you name and affiliation for the record?

MR. NGORE TRAORE: Yes. My name is Jean-Marie Ngore Traore. I'm owner of a small company, startup company, Wari Di Company. And we are dealing with import and export organic

fruit.

We are concerned because we are going to export to U.S. companies from France and French Polynesia, and also from French Caribbean, on the organic fruits.

Because we are familiar we are getting also the exports to the U.S. that are already grown. But our concern right now is to find from American goods organics. Because our concern is to import U.S. products to France.

The reason why, and the main concern with dealing with the market, organic market. They don't have mass production. We don't produce enough. So, we need some organic foods. And they don't believe that we have products are organic.

So, we have a predilection for us, particularly those products that are produced in U.S. And also organic products. It is basically our jobs to introduce some organic products in France from U.S. That's it.

MR. CHAPMAN: Okay. Thank you for

your comments. I do know that the U.S. and European Union have an equivalency related to our organic standards, that do allow recognition of one standard in the other jurisdiction, and vice versa. I don't know if anyone from the program wants to speak further to that.

MR. NGORE TRAORE: I know that the standards with Ecocert. So, we cannot use the U.S. But, what do you mean?

MR. CHAPMAN: So Ecocert is a certifier who certifies to a specific standard. And the European regulations, which I don't know the most recent numbers, as well as the National Organic Program, under the Organic Foods Production Act in the U.S.

The Government, the European Union, and the United States have determined each standard's equivalent. And so, you can sell products produced in the U.S. under the equivalency arrangement into the European Union without further certification, and vice versa.

(Off-microphone comment.)

MR. CHAPMAN: Any other questions for Jean-Marie?

MS. OAKLEY: Yes. This is Emily. Can you hear me again?

MR. CHAPMAN: Yes. We can hear you loud and clear.

MS. OAKLEY: Thanks. So, Jean-Marie, are you saying that French consumers don't believe that USDA certified organic products are organic? Is that what I heard you say?

MR. NGORE TRAORE: Yes. We are from French products. They are organic certified. And ready to go to U.S. But we are looking for U.S. products to export which we import them, ship them to France, to the markets, to the European markets, yes.

So, other people produce standard products, orange juice, apple juice, and all kind of U.S. products, organic food, and so on, from U.S. to export into the French market.

MR. CHAPMAN: So, this is the, National Organic stands for, works the standards

related to organic production, particularly under the U.S. standards. We're not a promotion board for products produced in the U.S., per se.

But what you can look at is, there is, on the National Organic web page, under the USDA there's the Organic Integrity Database, OID. And on there you can find a list of everyone who is certified to the U.S. Organic Standards who is based in the U.S. or in a non-equivalent country.

MR. NGORE TRAORE: Okay. Thank you.

MR. CHAPMAN: Any other questions? All right. Jean Marie, thank you for your comments.

MR. NGORE TRAORE: Thank you.

MR. CHAPMAN: And at this time we will run through the public commenters that we skipped over to see if they've been able to join the call since then.

So, starting at the top of the list. Jonathan Simpson? Is Jonathan Simpson here? Matthew Luna? Is Matthew Luna here? Evan Perkins? Is Evan Perkins here? And Dallas

McCann? Is Dallas McCann here?

All right. None of those folks are here. Then it looks like we've reached the end of our public comment webinar session. And we will go into recess, and then reconvene in St. Paul on Wednesday of next week.

I appreciate all the Board members and the NOP staff time, as well as all the time from the public commenters who provided comment here, and waited on the line, or listened to other comments given.

Again, this is highly valuable, as you can tell from the questions that you get from the Board members. This is probably one of the most valuable pieces of back and forth feedback that we can get.

So, I appreciate everyone's participation. And I look forward to seeing folks in St. Paul. Take care, and have a good weekend, everybody. Thank you.

(Whereupon, the above-entitled matter went off the record at 3:32 p.m.)

C E R T I F I C A T E

This is to certify that the foregoing transcript

In the matter of: National Organic Standards Board
Fall 2018 Public Comment Webinar

Before: USDA

Date: 10-18-18

Place: webinar

was duly recorded and accurately transcribed under my direction; further, that said transcript is a true and accurate record of the proceedings.

Neal R Gross

Court Reporter

UNITED STATES DEPARTMENT OF AGRICULTURE

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NATIONAL ORGANIC STANDARDS BOARD

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FALL 2018 MEETING

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WEDNESDAY,
OCTOBER 24, 2018

The Board met in Great River Ballrooms 1&4 of the Intercontinental Saint Paul Riverfront Hotel, 11 Kellogg Boulevard East, St. Paul, Minnesota at 8:30 a.m., Tom Chapman, Chairman, presiding.

PRESENT:

TOM CHAPMAN, Chair
HARRIET BEHAR, Vice Chair
SCOTT RICE, Secretary
SUE BAIRD
ASA BRADMAN
JESSE BUIE
LISA DE LIMA
STEVE ELA
RICK GREENWOOD
DAVE MORTENSEN

EMILY OAKLEY

A-DAE ROMERO-BRIONES

ERIC SCHWARTZ

DAN SEITZ

ASHLEY SWAFFAR

STAFF PRESENT:

MICHELLE ARSENAULT, NOSB Advisory Board Specialist, National Organic Program
SONIA JIMENEZ, Deputy Administrator, Specialty Crops Program, Agricultural Marketing Service
DR. PAUL LEWIS, Ph.D., Director, Standards Division, National Organic Program
CLARISSA MATHEWS, Ph.D., National List Manager
DEVON PATTILLO, Materials Specialist, National Organic Program
DR. JENNIFER TUCKER, Ph.D., Deputy Administrator, National Organic Program; Designated Federal Official

ALSO PRESENT:

DAVE FREDERICKSON, Commissioner, Minnesota Department of Agriculture

JULIE GROSSMAN, Ph.D., Professor and Organic Program Coordinator, University of Minnesota

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

8:35 a.m.

DR. TUCKER: Okay, everybody good morning. We're going to get started here. Welcome. We are officially opening the Fall 2018 National Organic Standards Board meeting.

My name is Jennifer Tucker. I'm the Deputy Administrator of the National Organic Program, which is part of the USDA's Agricultural Marketing Service. I'll serve as USDA's Designated Federal Officer for the meeting.

First, I want to thank everyone for being here, making the trip to St. Paul, Minnesota. I'm going to start by introducing the AMS and NOP team. First next to me here is Dr. Paul Lewis, our Standards Division Director. Also supporting the meeting is our new National List manager, Dr. Clarissa Mathews. Stand up Clarissa.

(Applause.)

DR. TUCKER: I'd like to share a little bit about Clarissa, who started in the

role in June. Most recently, she served as an accreditation manager in our Accreditation and International Activities Division in NOP. Previously, Clarissa served as chair of the Institute of Environmental and Physical Sciences at Shepherd University, where she taught Environmental Science, developed curricula in sustainable food production and directed a veterans to Agriculture training program.

Earlier in her career, Clarissa worked at the USDA ARS Appalachian Fruit Research Station in West Virginia. There, she investigated ecological methods of managing insect pests in orchards. Dr. Mathews earned a Bachelor's of Science from the University of Rochester and a Master's degree and Ph.D. in Entomology from the University of Maryland.

So many of you have already interacted with Clarissa since she became National List manager, but let's give her another welcome.

(Applause.)

DR. TUCKER: We also have Devon

Pattillo who folks know well, and who is an amazing member of our Standards team. I'm going to tell you more about Devon later, and then also in the room we have Betsy Rakola, NOP's Compliance and Enforcement Division Director. Betsy's done terrific work.

(Applause.)

DR. TUCKER: Betsy's done terrific work on the Enforcement side over the past year and a half, and I'm really glad she's with us here this morning. Betsy also has a birthday on Friday, so wish her a happy birthday at the break. Yea, happy birthday.

We also have a guest from another part of AMS, Sonia Jimenez, who is the Deputy Administrator for the AMS Specialty Crops Program. Sonia, we're very happy to have you here.

(Applause.)

DR. TUCKER: Later this morning, I'll be talking about a new learning management system for organic inspectors and certifiers, and we

would not be able to be where we are with the project without Sonia's team. They already have an infrastructure that we've plugged right into. She's been enormously helpful. So Sonia, thank you so much.

Next, I want to introduce and thank Michelle Arsenault, our advisory board specialist.

(Applause.)

DR. TUCKER: These meetings would not be possible without Michelle. She does amazing work to bring us together each and every time. So again Michelle, thank you so much. I now want to welcome our two new members to the National Organic Standards Board, four of whom were appointed earlier this year.

So Dr. James Greenwood from California is an environmental protection and resource conservation -- sits in the Environmental Protection and Resource Protection seat. Jim, go ahead and tell the audience about yourself.

DR. GREENWOOD: First of all it's a

real pleasure to be here. I'm a faculty member at UCLA in the Department of Epidemiology, and also a professor within the Institute of Environmental Sustainability. One, partly for this group, I've been an organic avocado grower in southern California for probably the last 15 years, and if any of you have any influence, we need rain, okay. So that's the issue.

This year we got three inches of rain, and I know my colleagues on the Board, some of them had three inches of rain in an hour. So it's a big issue in southern California. But again, it's a pleasure to be here and I look forward to working with all of you.

DR. TUCKER: Thank you very much, welcome. And we also have Mr. Eric Schwartz, also from California, and he is on one or our Organic Handling seats. So Eric, your turn to introduce yourself to the group.

MR. SCHWARTZ: Well good morning. Like Rick, it's a pleasure to be here. I currently work for a vegetable cooperative,

represent 50 growers. It's about 160,000 crop acres in California for leafy greens. Our cooperative has about 70 percent of the organic leafy greens that are grown in the west coast.

Prior to that, I worked for Dole for a number of years in both their conventional and their organic program. I was there from the beginning when they started their organic salad line. Prior to that, spent a lot of years in processing at Kraft for Birds Eye.

In fact, I remember many times going down to Waseca and I learned how to do that in the winter time. But it's a pleasure to be here, and I'm looking forward to it. Thank you.

DR. TUCKER: So welcome to both of you. To mark the occasion, I have letters here signed by Secretary Perdue, welcoming you to the Board.

(Off microphone comments.)

DR. TUCKER: Okay, I'm back. Okay. So here is a quick overview of our three-day agenda. This morning, we will hear from two

very, very special guests. We're really honored to have them here.

Mr. Dave Frederickson, a past Commissioner of the Minnesota Department of Agriculture, and Dr. Julie Grossman, professor and organic program coordinator from the University of Minnesota.

Then we'll hear an NOSB update and I'll provide an NOP update. The rest of the day will be dedicated to public comments. Tomorrow, we'll continue public comments and then turn to the subcommittees. This will continue into Friday, and then we'll close Friday with administrative activities, officer elections and a look ahead.

To close, I'd like to give a special thank you to Tom Chapman, chair of the Board and chair of this meeting. This is Tom's fourth meeting chairing the Board. Let's give him a round of applause in advance for braving it.

(Applause.)

DR. TUCKER: Tom, I am handing it over

to you.

MR. CHAPMAN: Thank you, Jennie. Thank you for right nice introduction. Hello and welcome everybody. Thank you for traveling here today to participate and observe the fall National Organic Standards Board meeting. I hope everyone traveled safely and is enjoying Minnesota's warm hospitality and chilly weather. This is a bit of a contrast from our last location in Tucson.

Still, Minneapolis and St. Paul are a fitting location for our NOSB meeting, well-steeped in food production amongst other industries. The Twin Cities came to prominence by harnessing hydropower to melt grain into flower. Given that history, I think it's a fitting place for us to have our NOSB meeting.

With that, I'd like to take a moment to introduce or have the members introduce themselves, the other 13 members, and we'll start down here with A-Dae.

MS. ROMERO-BRIONES: Good morning. My

name is A-Dae Romero-Briones, and I am Cacatua and Kiowa. I currently serve as the Director of Programs for Fresh Nations Development Institute, and my home base is in Lodi, California.

MS. DE LIMA: Hi. I'm Lisa de Lima. I'm in the retailer's seat. I work at Mom's Organic Market as the Vice President of Grocery. It is my fourth year on the Board.

MR. BRADMAN: Asa Bradman from UC-Berkeley, School of Public Health, Center for Environmental Research in Children's Health. I've worked for many years at environmental exposures and agricultural issues in California.

MR. ELA: Steve Ela, Ela Family Farms, organic fruit grower in western Colorado.

MR. MORTENSEN: Dave Mortensen from the University of New Hampshire. My background is in food systems and agro-ecology.

DR. SEITZ: Good morning. My name is Dan Seitz. I serve in a consumer seat, consumer member seat. I'm the Executive Director of the Council on Naturopathic Medical Education, and

also a board member on a food co-op, and I live in Great Barrington, Massachusetts in the Berkshires of western Massachusetts.

MS. BEHAR: Hello. I'm Harriet Behar. I work with the University of Wisconsin Organic Laboratory, and I live on a farm. I've been a certified organic farmer for almost 20 years. I live in Gays Mills, Wisconsin, and believe me Tom it gets a little colder than this.

MR. RICE: Good morning. My name is Scott Rice. I am in the certifier seat, and I am the External Affairs Coordinator with the Washington State Department of Agriculture Organic Program. This is my third year on the Board.

MS. SWAFFAR: Hi, I'm Ashley Swaffar. I'm in the producer's seat. I'm from Fayetteville, Arkansas. I have a small organic mixed vegetable farm and I'm also the Director of Animal Welfare and Food Safety for Handsome Brook Farm.

MR. BUIE: Good morning. I'm Jesse

Buie, president of Ole Brook Organics. I sit in a farmer's seat and I think this is my second year.

(Off microphone comments.)

MR. BUIE: Third? Goodness, okay.

MS. BAIRD: Hi. I'm Sue Baird. I'm from Missouri. I'm the Executive Director of Mid-America Food, Mid-America Organic Association and Mid-America Food Hub. I serve as special interest group and so thank you for having me.

MS. OAKLEY: Emily Oakley, Three Springs Farm, Oklahoma, and I'm in a farmer's seat. This is also my third year.

MR. CHAPMAN: And I am Tom Chapman from Clif Bar and Company, where I work as the Director of Ingredients Sourcing, and I sit in the handler's seat. This is my fourth year on the Board. Thank you everyone for the introductions. As Dr. Tucker mentioned, we have two special guests here this morning, and I would like to introduce our first guest.

Our first honored guest is Dave

Frederickson, who served as -- who serves as Commissioner of Minnesota Department of Agriculture since being appointed by Governor Mark Dayton in 2011. Frederickson was elected to the Minnesota Senate in 1986, where he served two terms. He was president of the Minnesota Farmers Union from 1991 to 2002, and president of the National Farmers Union from 2002 to 2006.

At both organizations, he worked on federal farm policy and other issues important to farmers and ranchers. Frederickson continued his work on federal policy at Agricultural Outreach Director for U.S. Senator Amy Klobuchar from 2007 to 2010, and the Frederickson family, family roots in farming go back to 1873. So he can maybe teach us a little bit about that grain mill.

He and his wife Kay have operated a farm in Murdoch, Minnesota for more than 20 years. Commissioner Frederickson's farming background and his wide range of experience in public service have given him the unique insights

to challenges facing Minnesota's agricultural industry.

Today, he is focusing on ensuring Minnesota's Department of Ag fulfills its mission to protect the integrity of our food supply, the health of our environment and strength of our organic agricultural economy. These missions are close to the organic community both in the U.S. and in Minnesota, and I welcome Commissioner Frederickson and ask him to share to some remarks with us.

(Applause.)

MR. FREDERICKSON: Thank you very much, Mr. Chairman. Excuse me. Where did you get that lengthy bio? I'll tell you, that needs to be cut down. I'm a Norwegian Luther, and I was born guilty and so I just can't deal with that at 8:30 in the morning.

(Laughter.)

MR. FREDERICKSON: It's too much. Nonetheless, what you probably took away was I can't hold a job.

(Laughter.)

MR. FREDERICKSON: Again, Dr. Tucker and Mr. Chairman and members of the Board, what a great pleasure it is for me to be here with you today to welcome you to the great city of St. Paul. Most people say well, you're from Minneapolis, and I say hell no, I'm from St. Paul. I live in St. Paul, one of the twin cities.

So it's great to have the acknowledgment that St. Paul actually exists. Good to be here and thank you for choosing St. Paul. A wonderful venue here close to the river, so it's exciting hopefully for you to be here and certainly exciting for me to be here to welcome you.

And again, I have to mention my colleague, Harriet. We've had a little fun back and forth about who's the coldest state, and so if that's all the far we get with the rivalry, I'm okay with that. Oh, I forgot to mention the Packers and the Vikings. Yeah, that's part of

our history also.

Again, let me give you a little bit of history myself, rather than I'll give you the short -- why don't I do it this way? I'll give you the short life story in about two minutes. I was born the middle child of three kids. I was born in 1944. Yes, that makes me an old man today. I'm 74 and knocking the door on '75. I flunked retirement once, I don't plan to flunk again.

I thought it would be a good idea to farm, and my dad said good gosh no, go get an education. You can always farm, which I thought was -- it was appropriate in 1962. You could. Today it's a whole different story for people in terms of you could always farm. It's sort of farm now, he should have said, because you could always go to school.

So I went to school and my sister graduated from the University of Minnesota at a little campus in Morris, Minnesota. My brother graduated from the University of Minnesota. I

went off to a state university and I taught school for eight years before Kay and I, my spouse of 53 years, we were married in 1965. She was an Irish Catholic Katherine Ann Kennedy, and I was a Norwegian Lutheran.

Lived seven miles apart. We were ecumenical before the word was popular and we married in '65. They called it a "mixed marriage" at the time, and he actually hate another one now, but by God we're going to show that we can make.

No, we thank you. I taught for eight years. I taught behavior problem kids. Many of them are members of the Board now, and when my father's health failed, I chose to -- my wife and I chose to go back to the farm.

And so we did. We went back in 1974, and farmed there until 1999. And then eventually leased the farm and eventually sold it to a cousin. So we no longer farm. We had two daughters, neither of them interested in farming and just made the decision one day to sell it to

a cousin. He said he was helping me, and he said you're never here anyway so why I don't you sell it to me, and I said sure, why not?

So I did. One major mistake, I should have kept it for a few more years, and I would have had a shot at being a millionaire, but I didn't quite make it. So always a matter of farmer mentality I guess it is. You know, sell low right, make it in volume or something along those lines.

We spent 25 years there. I in the meantime got angry at a state senate, my state senator and foolishly decided to run against him no expecting to win. Just thought somebody's got to this, and did and accidently won the election by 32 votes. We had two small kids at the time farming about 1,200 acres of corn and soybeans.

My salary at the legislature was $22,900 and I hired a hired man for 25,000. Brilliant move. But I spent two terms in the Senate, and some people don't recognize this but early on I recognized that in my second term that

every now and then an innocent person is sent to serve in the legislature, and so I thought this was a good time to exit.

And so I did, and was headed back to the farm to see if we couldn't, you know, actually turn a profit. I was sidetracked to the Minnesota Farmers Union and I spent what I thought would be just about six months filling an unexpired term of the president. That turned into nearly 11 years.

At the end of those 11 years, I ran for and was selected to serve as president of the National Farmers Union. I traveled to our office at the time was Denver, Colorado, and so I maintained an apartment in Denver, a home in Minnesota and a hotel room in Washington, D.C.

I was back here traveling out to a little meeting in Woodstock, Minnesota. Not the one that you people with beards remember, but the one out by Pipestone. Actually, they say if you remember Woodstock you weren't there. Yeah.

(Laughter.)

MR. FREDERICKSON: Anyway, on the any I fell asleep at the wheel and I drove up the back end of a grain truck. I was doing about 60 miles an hour and she was doing about 30, and I totaled a pickup, ended up in the hospital. My wife had to come out and pick me up and said that's kind of scary. I'd been on the road a significant amount.

A couple of months later -- I survived it, got a new pickup out of the deal, I was flying back to Mexico City through Houston on up to the Twin Cities and the plane was struck by lightning, and this huge ball of fire went out from under the plane and I thought -- and the lights flashed and the wings rocked and people were screaming.

I thought to myself I think I'm ready to retire. I think I've just received a sign from someone, and I was able to retire at that point. I sat around and stared out of the window after leaving, at the end of my term. One day my wife said you remember the vows we took in '65?

I said of course.

Well, I'm okay with in sickness and in health. That's great, I'm happy about that. I'm actually okay with "until death do us part." Good. Where is this going? She said I am certainly not okay with you being home for lunch, so go find something to do.

So I did. Our U.S. Senator, our senior Senator was elected to serve in the United States Senate. Amy is a long-time friend, and asked if I would come and work with her on her ag policy and ag outreach issues. So I was right here in the Twin Cities for the first four years of her term.

Our governor was elected, Mark Dayton, and asked if I'd come over to the Department, and I've been there for two terms. He survived the first term. My role is basically to keep his name out of the paper for bad things and ensure that it gets in there for good things. I've got two and a half months so far left. So far, so good. But that makes me a really dangerous lame

duck, I suppose, at the end of the day.

So that brings us here. You know a little bit about me at this point. My plan for retirement is to -- I've been working on an old boat for the past 20 years. I've finally got it done and I plan to drop it in the Mississippi here and take it to New Orleans in June or July of next year, Mississippi Solo.

It should be great fun. I'm excited about it. It's about 1,850 miles. The boat is 18 -- you know, my boat is so small and the river's so large. So it's a little scary, but you know, I've had a good life, right? So I'm looking forward to it. It should be great. I have a lot of friends up and down the river. I met one right now, Adam Wartheson, who says call me when you get to Winona, so what are friends for if you can't call them and use them once in a while.

I have an outboard, so I'll be needing gas, Adam, at some point. I had a chance to again read your incredible bios. Last night, I

entertained myself by reading all about you. You know a little about me and I know a lot about you, except for Rick. Your bio was not present on the website quite yet. But that -- yeah, yeah, yours.

But everyone else around here, hello, I know you. Great to see you again. What an incredible group of people. I'm just so excited to get a chance to read about you, read about your history. Jesse, I read all about you in your bio. What an incredible experience, and I don't like you remember whether it's two or three years either, so don't feel bad, you know.

Just I'm just so impressed. Scott Rice, I know your director very well, Director Sadison (phonetic). I spent last week with him in Monterey in Mexico. We had a great opportunity to work with the Tri-National Accord, and thank you to USDA for pulling together the now new NAFTA agreement.

I can't remember the initials. I guess it's USA, something to do with -- help me.

Yeah, sort of like that, you know, the Village People, right.

(Off microphone comments.)

MR. FREDERICKSON: Got it. Some of you got it, right? But thank you. Thank you because otherwise that meeting, that Tri-National Accord would have been difficult, and it is the Ministers of Agriculture from Mexico, the Ministers of Agriculture from the provinces in Canada, and the directors, secretaries or commissioners that serve in the states in the United States.

We have met over the course of 27 years, and generally it is pretty friendly. I was worried this year to go in and talk about the negotiations, but the good news is it's done. And so my hat's off to the administration for working through this process and making things better.

I'm still concerned about the 232 tariffs that are still in place. Right now, agriculture is held hostage and we are collateral

damage across the state and across the country. We're not price-setters. Farmers are price takers, and consequently we need that to get behind us as fast as we can.

I believe that there's a significant amount of new interest in organic agriculture, and there's a new generation coming on board that are extremely interested in my earlier comments about the difficulty of getting into agriculture I think lend itself today to this new generation that are stepping up, saying I want to be involved in agriculture, but I view it differently.

I view it from an urban warehouse, where I can grow things in the city and I can do it in a climate such as Wisconsin and Minnesota, where we can maximize our opportunity to grow food. We have that happening time and time and time again here in the Twin Cities. I'm really proud of that. I'm proud of the work that the Minnesota department is doing.

Our efforts to promote organic

agriculture range from grants, loans. Our organic certification cost share, we've certainly helped with that process. One of our jewels in the crown, if you will, is our organic conference, which we've held for the past 15 years.

We have somewhere in the area of six to seven hundred people up at that area. You were there, I believe, last year and spoke. It's a conference that's sponsored by the Minnesota Department of Agriculture. Thank you for being there and sharing your 30 plus years of wisdom in organic agriculture. Learned that from your resume and today.

A couple of years ago, I had an opportunity to travel to Cuba, to spend some time understanding their organic structure of agriculture. It all happened because of what they refer to as their special period. That's when the Soviet Union crumbled, and all of the resources that were flowing to Cuba dried up.

Literally per capita, they lost

weight. They didn't have the food, and so at that time they determined that they had to be more self-sufficient. So they entered a period of rapid expansion of organic agriculture. I had the opportunity to spend time with Fernando Funes. The farm is called Finca Marta, named after his mother.

He is Ph.D. There is an abundance of Ph.D.'s in Havana and certainly Cuba because they can go to college for free. He is an excellent spokesperson for organic agriculture, and we were fortunate to invite me to come to Minnesota and speak to our organic agriculture conference in St. Cloud a couple of years back. We've had breakout sessions at those workshops.

Fernando took part fully during the time that he was here, and I will be going back to Havana on the 6th of November this year, and we'll be able to have a chance to be out at his farm and his spouse, and see some of the growth that's taken place on the farm over the past few years. I'm excited about that.

Let me just say that from a Department perspective in the work that we do, Minnesota has added more than 15,000 certified organic acres to its landscape, actually bringing the total number of certified acres to more than 130,000 in the state. We rank first nationally in the value of organic cow milk sales. We rank second in organic corn, soybean production and turkey sales.

We produce about 15 percent of the nation's organic oats, with exactly 714 certified organic farms, we rank 7th in the United States and account for roughly four percent of the nation's certified organic farms. Again, keep in mind 714.

We have in Minnesota 73,000 farms. In 1945, we had 180,000 farms. And so you can see what's happened. We didn't create less land or more land. We just lost people on the land, and you can drive across the state of Minnesota, the state of any state and you will see the impact in small communities that has occurred in those

regions of the state and it's disappointing.

So our one hope, of course, is to see organic agriculture grow, because we will see those numbers of farms move up instead of down. Organic sales are also strong in Minnesota, as consumers continue to value foods grown and raised using minimal off-farm inputs in ways that restore, maintain and enhance ecological harmony.

The latest USDA certified organic survey published in September puts the value of organic sales in Minnesota at more than $106 million, a 16 percent jump by the way since 2016. The work we do would certainly not be successful without a tremendously strong partnership that we have fostered with Minnesota's organic industry, and you're going to hear in just a few seconds from my colleague at the University of Minnesota.

They are such an incredibly strong partner as we move forward hand in hand to strive to be supportive of the organic sector. We do this also through regular meetings with our Organic Advisory Task Force, many of whom are

here today. I see Jim Riddle in the back, former member of the Board.

This team that guides our work to best utilize available resources for outreach and technical assistance for Minnesota's organic producers is incredibly helpful to us at the Department of Agriculture. We continue to use them to spread the word and spread the message across the state, but more particularly through the Minnesota legislature in efforts to move our program along.

With that, your agenda is heavy and I'm looking forward to hearing from my partner from the University of Minnesota. Thank you very much. Again, welcome to Minnesota, where there's snow on the roof and water in the basement all on the same day.

(Applause.)

MR. CHAPMAN: So we also have DR. Julie Grossman from the faculty of the Department of Horticultural Science at the University of Minnesota here today. She is also the organic

program coordinator of the College of Food, Agriculture and Natural Resource Sciences. Julie received her Ph.D. from the University of Minnesota in Agronomy and Soil Science, and then was an NSF post-doctoral fellow at Cornell University.

She was faculty at North Carolina State University in the Department of Soil Science prior to arriving at UMN in 2014. Julie's research explores management of plant, soil and microbe relationships to enhance soil fertility and organic systems, especially the process of biological nitrogen fixation and legume cover crops.

Julie has a strong interest in sustainable agricultural education, is the former chair of the Sustainable Agricultural Education Association. She has authored over 45 peer-reviewed articles, with the majority emphasizing soil fertility, management and organic systems. Dr. Grossman, I welcome you to share some comments here today.

(Applause.)

DR. GROSSMAN: Thanks Tom for that nice introduction. How does this sound? Good, okay. I want to also thank the USDA, AMS and the NOP for inviting me to be here today. This is real pleasure. This is my first meeting. I was excited to hear that I had 20 minutes. I kind of couldn't believe it, and Michelle said oh yeah, we want you to give some opening remarks.

I said oh great, how long? Five minutes, six minutes? No, we have 20. So I'm going to take full advantage of those 20 minutes. For those of you who are coming here from out of state, the University of Minnesota you might know is one of the few comprehensive land grant institutions. So we have all disciplines represented at the university. We have about 50,000 students across the state. So we're a very, very big university.

Within the cities, we have two campuses. So we have the St. Paul campus and the Minneapolis campus. St. Paul campus houses some

of the natural resource departments, some biology and all the agriculture. Also you'll hear me talk a little bit later about how lucky we are, because we're right here in the middle of the city.

We actually have research and educational land, certified organic land, about six acres, that we can use to teach students. I was really excited to hear the Commissioner talk about the new generation. That's what I'd like to talk about today. If you guys want to talk to me about my research, we can do that later. I'm not going to touch, talk about that very much.

But what I really want to do is share some personal reflections on how organic agriculture and especially academic agriculture education has changed in the last 30 years. It's really taken some huge strides, and what I want to argue is that by the way we're training those students, that's going to -- they're going to be the ones sitting in this room in 20 years.

So we need to think beyond just how

we're training them to carry out production, thinking about all aspects of organic agriculture, from policy and decision-making skills to critical thinking skills to the economics of organics. Somebody, those students need to understand everything. So that's really what we're trying to do at the University of Minnesota, but also at many other land grant institutions around the country.

About 20 to 30 years ago, as many of you know, if you have a student that wanted to do organic agriculture or sustainable agriculture, there were really only a few fringe institutions, you might say, that they could go to. I'm sure many of you know what those are. Many of them were found at small liberal arts colleges.

I was at a small liberal arts college, not one that focused as agriculture. I was at a small college called Simmons College in Boston. I was a top biology student without about 15 other biology majors, most of whom wanted to become doctors. That was, I wanted to make some

change in the world, but that really wasn't on my radar screen. I didn't want to be a doctor.

So at some point in college I made this link between social justice, environmental science, biology, food access and all of the sudden I found myself in agriculture, in the middle of Boston, which was a tricky place to be when you wanted to study agriculture.

I remember the day going in and talking to my advisor, and saying you know I think I figured it out. I think I know what I want to do. I want to, I want to study farming. My zoologist advisor was like well, there is an ag school somewhere in the middle of the state maybe you can go, and you can study there. You can go to their library, so I --.

So long story short, I ended up doing a senior research project, which interestingly was on hairy vetch. Anybody know Drumlin Farm in Boston, outside of Boston? So I worked on Drumlin Farm, and at the time the manager of the farm, whose name I can't remember, says oh we're

trying this new crop. It's called a cover crop, and we're going to be looking at -- it's hairy vetch and it survives the winter.

I was like ooh, that's great. So we went, it was the worse research project ever. He said we want you to go and see how well it survives. So diligently every month went out to this farm and I laid down this quadrant, a square and I would count the number of plants that existed in January, February, March, and it didn't really change, because they were sitting there frozen.

So it was just a total bomb, but the nice side of it was that I am still working with hairy vetch in my research. So those, even though I'd say I probably didn't learn all that much about hairy vetch and nitrogen fixation, that experience of being on a farm and working with a manager had a profound impact on me and really got me to where I am today and what I'm working on. So those experiences are really, really important for students.

So around that time, this was about the late 90's, sustainable agriculture programs were really starting to boom in higher education. So youth were getting excited about organic agriculture. They were looking for, they were seeking programs that focus on that. But then when you found a program, they primarily taught you how to grow the food, you know.

You could grow the food, you could produce the food, you could have an abundance of produce or whatever it was you were choosing to grow. But there were a lot of really critical skills that were left out of that that, that education. So things like marketing, economics, policy, those elements I mentioned earlier.

This meant that future farmers or those working with farmers had to learn these skills on the job, and they often had somewhat dire consequences as you know, because they had to decide at some point where they were going to have their operation be viable or produce a high quality of life for themselves, and how to

balance those was really, really tough.

So we really, we needed to make a shift in how we were thinking about that interdisciplinary aspect of education. So a lot has happened in the last 30 years, especially at the land grants. But many of these programs started out as very small fringe, or at least many started out as fringe universities.

Now I would say at many land grant institutions if not most, it is integrated organics and sustainable ag education has been integrated throughout the curriculum, with many programs focusing exclusively or allowing a student to focus exclusively on organics, which is really, really exciting.

Here at the University of Minnesota, we are privileged to have the Minnesota Institute for Sustainable Agriculture. Lisa, how many know MISA? Okay. They've been around for a very, very long time and they just actually celebrated their 25th anniversary last year. Their goal is to bring together the students and faculty and

staff at the University of Minnesota with producers and community working within sustainable agriculture.

So I wanted to give a shout out to them, because they've really been instrumental in making Minnesota a hotbed for sustainable agriculture. So I, in my -- here in the bio, I went to graduate school here and then I went away. I was gone about 11 years in North Carolina. I taught at -- I was at Cornell and then at North NC State, where I was in the Soil Science Department, but I always sort of watching Minnesota and thinking I'd love to come back at some point and be based here.

Sure enough, about four years ago, they created a new major, this was before I arrived. It was called a Food Systems major. It's interdisciplinary, undergraduate educational major that focuses on all those aspects of the way I think our students should be trained. So the food production, but also the other elements as well.

So I applied and came back very excited to be working with this program. We now have about 60 students in the major, so it's growing every year. Many of them are in a track that's designated exclusively for organic and local production.

So students that are primarily focused on production, interested in production but the major also asks them to take classes that gets them to learn critical thinking skills, systems thinking skills, things that traditionally were not rooted in such majors.

I mentioned we also have six acres of certified organic land. That's right out the back door in St. Paul. How many of you know the St. Paul campus? Okay, so you know it. So it's, you know, it's not -- it's in the city. It's on the edge of St. Paul, but it's -- you can get on a bus and in ten minutes you're in downtown Minneapolis.

So it's a really nice opportunity for student learning, for students coming from an

urban background. Having those six acres outside of our classrooms provides an incredible opportunity for students to learn about organic production.

So I teach a class that's called organic farming, farming and management. It's a lot of biology, but we also integrate other aspects as I think are important into this -- into the concepts we teach.

But we use that land to teach students about practical skills as well, and in fact we're one of the few universities that have that. We're very, very lucky, because we can teach in the morning and then go in the classroom and then go out in the afternoon to the land and use that for our lab. It really is our lab. We spend time outside on that land.

The six acres of land, even though it may sound small, also provides a lot of opportunities to research to take place. So I'd like to spend some time today highlighting some the diverse research projects that are taking

place at the University of Minnesota. As a land grant institution, we are obligated to conduct research with results that are keenly relevant to the stakeholders in the state.

And so one of the things I've noticed and now comparing to other universities is the University of Minnesota really does a nice job of intentionally bringing together faculty across disciplines to carry out some of these projects. So for example as a soil scientist, I work very closely with economists, to make sure that things that we develop in our research or relevant economically to growers. So that's a nice network that we have at the university.

The first project I want to highlight is one being directed by Dr. Mary Rogers. So she's an assistant professor on the Department of Horticulture Science at the U. One problem that faces organic farmers in our region is the appearance of the invasive spotted wing drosophila.

It's an invasive pest to soft skin

fruit and berries, and has been responsible for significant economic damage around our state. So host plants for the spotted wing drosophila include strawberries, blueberries, raspberries and cherries. And, you know, many of you I'm sure think about fruit flies and you think about the flies land on rotting fruit.

The problem of course with spotted wing drosophila is that it doesn't lay its eggs on rotting fruit. It lays its eggs on fresh fruit. So what happens? You end up harvesting your fresh fruit, you take a bite of your fresh fruit and you get a nice big worm and you're frustrated. Anybody, how many of you have heard of spotted wing drosophila? So many. So it's becoming a big problem in our area.

Minnesota growers were losing approximately $2.2 million due to spotted wing drosophila-related damage. So this really made this problem one of thoughtful solutions. So Mary has been working on this for about four years, and their work is showing that the best

management practices to control spotted wing drosophila in organic systems are things like exclusion using tunnels. So plastic tunnels are a season extension.

In-season sanitation, frequent harvesting of the berries and cultivar selection to avoid those peak spotted wing drosophila population times. The results or recommendations are being made widely available around the state. We have seminars. I think she said -- and workshops and webinars. I think she said she gave approximately 20 talks just last year alone to stakeholders who were interested in this issue. So we're doing some really great work.

The second example is actually in our group, taking place on the down low in the soils. So we're a bunch of soil biology geeks and our lab is really excited about trying to come up with ways, management approaches that farmers can use that improve soil fertility, primarily through cover crops, so specifically legume cover crops.

So we worked and looked at biological nitrogen fixation and rhizobia interactions with those crops. Here in Minnesota we have a ton of high tunnels. As you might imagine we're cold, and high tunnels have allowed us to extend our season in a pretty big way. So a lot of farmers are putting them up and elsewhere in the country we're finding that farmers who have high tunnels in warmer --

We can't grow things in our high tunnels in the winter by and large. But elsewhere in the country, farmers are really pushing those tunnels to the max. So they are growing crop after crop after crop and after about 15 years of having cost share dollars building high tunnels, we've seen that the soils are struggling. They're being impacted by salinity, compaction. There are nutrient issues.

So we for the last four years have been thinking about ways to sneak cover crops into these high tunnels. In Minnesota, it was pretty easy, because we found that they were

empty in the winter. They weren't in use for crops.

So when I got here four years ago, I said well, let's put cover crops in. I want to put cover crops everywhere. That's kind of my goal. So let's get legumes into these tunnels, and we've been able to do that pretty successfully, and the really nice thing about it is that we've been able to do it using crops that typically don't survive outside the tunnel in the winter.

So it's too cold to get some species to survive outside the tunnel, but the tunnel's just a little bit warmer. So we can use that time in the winter to really improve soils. So we've found that by growing legumes over the winter, we've been able to increase the amount of nitrogen that farmers can basically produce on their farm through nitrogen fixation.

So that improves the farmer's bottom line by reducing off-farm fertilizer inputs, and of course increases soil health through organic

matters. So we're still working on that. We actually have multi-state OREI grant right now. We're working on a north to south gradient, looking at high tunnels from here down to Kentucky, where we have collaborators along the way, and we have replicated identical experiments in all states to try to understand how these different cover cropping systems might differ based on where you are on that north-south gradient. So it's been a really, really fun and exciting project.

I also want to highlight a Minnesota research example from economics. This is a project that is helping farmers to better understand price premiums of their organic farm, organic crops and what they can bring in the marketplace. So this is being conducted by a faculty member who's in Applied Economics, and that's Metin Cakir. He's in the Department of Applied Economics at the U.

You know, the people who are at the University of Minnesota, we call it the U. So

like that's our U. I know there are other U's, but sometimes I forget that. I say "the U." They said what's she, you know. So despite the large and growing importance of organic fruits, there's surprisingly little consensus on the retail premiums that they can bring in the marketplace.

So in particular, the state of academic research on organic foods is hindered by this lack of comprehensive micro level data on organic marketing. So he's tackling that head-on, and what he's doing is using a point of sale scanner around the state to compare organically and conventionally grown fresh fruits and vegetables, to determine how changes in organic price premiums might vary by over time, and how they vary across locations as well.

So this project. It's -- we're just in the middle of it right now. But the project he's hoping will help farmers that are transitioning to organic production, as well as researchers who are working with organic food and

agriculture markets. It will help him by helping them better understand how price premiums are determined across the organic marketplace.

Finally, although many people when they think about the University of Minnesota, they think about the campus we have here in the Twin Cities, and we do have many other campuses that are around the state. One of them in particular, many of them work in organics, but one of them in particular is a real hotbed of organic dairy research.

Again, the University of Minnesota is well known for our 150 head of certified organic dairy, and 650 acres of certified organic land that is located in Morris, Minnesota. So that's about three hours away from here, and it's been around since about 2010. So it's been quite a while now.

This program is known nationally as the University of Minnesota Organic Dairy Program, and it's directed by associate professor of Animal Science Brad Heins. Brad is great. He

also sites on the task force, the organic task force that brings together FDA with the University of Minnesota and stakeholders around Minnesota.

Brad is trying to solve the most challenging aspects of organic dairy production, to help farmers weather the storm, the economic storm that they've face in recent years. In particular, although Dr. Heins' program is really widespread in its focus, he's very interested in grazing research, building a more robust cow, and his group also focuses on improving the nutritional quality of milk and meat across his many, many funded projects.

Harriet might know Brad's name, because I think his students have now the MOSES poster competition award, you know first or second place for the last like five years. I mean he's just a -- he's a real excellent mentor for these students that are interested in organic dairy.

So in closing, I wanted to highlight

Minnesota as an example of a university that is trying to prepare both graduate and undergraduate students with these skills that I feel are really, really important to bring about positive change in the world in coming years in organic and sustainable agriculture.

There again, they're the ones that are going to be making these changes. They're going to be teaching our future students, they're going to be farming. But many of them are not going to be -- not all of them are going to be farmers. So some will, but most of them will be working with farmers. So it is really, really critical that the people that are making the decisions are knowledgeable.

So I want to encourage us to continue to support programs that are trying to move beyond organic production, and get these students to think about their decision-making skills, hone their critical thinking skills. We need leaders who understand connections between food access and food skills, between social science and soil

science.

Sometimes you might say I talk fast, you know, I introduce myself. And I say oh, I'm a soil scientist. You're a social scientist? No, soil scientist. So sometimes those differences get mired in the details, but they're really important to connect. And there are many multiple other disciplines that are really going to make our organic systems strong and healthy for tomorrow.

So I really would like to help us think about that today while we're sitting here about how you go here. How did you all end up sitting at this table today? Where did your background come from, and what was your background that brought you here, and how can you share that with students?

I'm really excited to be here. This is my first meeting, so I'm really excited to see how this works, and I look forward to meeting many of you. Thank you very much.

(Applause.)

MR. CHAPMAN: Thank you. Thank you so much, both to Commissioner Frederickson and Dr. Grossman for your comments here today. I really appreciate it. A really great way to start off this meeting here in St. Paul, so thank you again. Right now we'll move on to my report as chair, and then proceed to the NOP's report as well.

MR. CHAPMAN: This is my fourth report as chair, so I will keep it brief, as I'm sure you're all tired of hearing me mumble through this by now. My last few meetings, I've asked for patience as we've waited for the administration's leadership to be seated, and I'm happy to say that now we have a full USDA leadership team in place.

At the last meeting, we heard from Undersecretary Ibach, and since then we have had both an AMS administrator and an NOP deputy administrator appointed. While no surprise to most people in this audience, I'd like to recognize Dr. Jenny Tucker, who was recently

selected as the deputy administrator of the NOP.

I could spend probably too much time right now praising the selection of Dr. Tucker to head up the NOP. But I'd be remiss if I didn't sing just a few of her laurels. Hired under Miles-McEvoy in 2011 as associate deputy administrator, you'd probably be surprised that most of Miles' successes were probably done by Dr. Tucker's work behind the scenes.

Dr. Tucker has a B.A. in Environmental Science from Wesleyan University, an M.S. in Management from Purdue University, and a Ph.D. in Science and Technology Studies from Virginia Tech. Over-achiever.

(Laughter.)

MR. CHAPMAN: So she knows -- so she's an environmentalist, knows people in management and technology as well to boot. I couldn't really think of anyone more prepared to lead the NOP during this current time.

I know from talking with NOP staff, as well as members of the organic community that Dr.

Tucker commands a tremendous respect and trust, and I personally look forward to her honest, humble, straightforward leadership. Can I get a round of applause for Jenny?

(Applause.)

MR. CHAPMAN: Lastly, as we get started here today, I'd like to thank the Board, who has again volunteered and spent numerous hours discussing, reading, debating, and listening to comment in preparation for this meeting. That time is extremely valuable, and I appreciate everyone's dedication.

With that, we will move on to the Secretary's report. Scott.

MR. RICE: Thanks Tom.

(Off microphone comments.)

MR. RICE: Okay, I'll try this.

MR. CHAPMAN: I think it's feedback from the beard.

(Laughter.)

MR. RICE: I'm a beard man. Mr. Chairman, the summary notes of the April 2018 bio

and meeting in Tucson have been distributed to Board members. Are there any corrections or comments?

(No response.)

MR. CHAPMAN: Seeing none -- seeing none, thank you Scott. We will accept the Secretary's report without objection by consensus, and seeing no objections, the report is accepted. Up next, I will hand the meeting over to Dr. Tucker for the NOP report.

DR. TUCKER: Okay, good morning everybody.

VOICES: Good morning.

DR. TUCKER: Okay. I'm going to do a quick test here. Ooh, it works. Yes, okay. Okay. Welcome to St. Paul, Minnesota. It is so great to be here and to see all of you out here. I always start presentations by celebrating our certified organic farms and businesses in whatever city or state we are in.

So there are 966 certified operations in Minnesota. Raise your hand if you are one of

them.

(Show of hands.)

DR. TUCKER: All right. We've got a number of folks out there. So thank you so much for being here.

(Applause.)

DR. TUCKER: And you can of course learn more about all of these operations in the Organic Integrity Database. So I'd like to actually show you a different view of the certified operations here in Minnesota by specifically focusing on a particular county that we're in right now, which is Ramsey County.

So this is a different view of data from the Organic Integrity Database. It is an internal mapping system that allows us to see operations at the county level. So we can hone in on specific cities and on specific counties. We've invested in these data visualization tools for a lot of reasons.

First, it helps us with audit planning. So when we do witness audits or review

audits, it's good to know where different operations are so we can plan audits efficiently and effectively. It also helps us with county-level and state-level reporting of acreage.

There's a lot of conversations about data, data quality and acreage reporting, and so having county level views and the ability to list data within county is going to be very helpful as we continue to make our reporting more robust. It's also helpful to view operations at a county level when we are approached by state officials who have questions related to emergency pest management programs.

So being able to see if there are actually any operations in a county that might be impacted by a state program just gives us a lot more data to be able to make decisions with. So the map helps us assess possible impacts of state treatment programs.

As certifiers report more acreage data, and we strongly encourage them to do so, and as they adopt our product taxonomy and the

Organic Integrity Database with more accurate reporting against product categories and item lists, we will be able to provide more data output, tables and graphics to provide the community with the data that you need for good research and decision-making.

So data quality continues to be a need. When we launched the mapping of function, we learned that there was about a 75 percent match with census and postal service data.

So there's still a lot of work to do on data quality, and so we're going to continue to reach out to our certifiers to up the data game. So if your information about your operation is not correct in the Organic Integrity Database, we strongly encourage you to contact your certifier, let your certifier know that that's important to you and why.

So I like to also start presentations with reviewing USDA's principles for organic. So these were published in the 2018 Farm Bill, a legislative principles document. The goals are

protect the integrity of the USDA organic certified seal, and to deliver efficient and effective oversight of organic production practices to ensure organic products meet consistent standards.

Let's take a look at our four key priorities for fiscal year 2019. So the government fiscal year starts at the beginning of October. So we are near the very beginning of our fiscal year, and so I'd like to walk through the four priorities, and then I'm going to show you what we've done in these different areas over the course of the last few months.

The first three areas here are strong organic control systems, farm to market traceability, and robust enforcement were all part of the enforcement action plan that we published in May. So we're continuing these priorities into 2019. The outcomes of those will be trusted people, process, and rules, worldwide supply chain integrity and a level playing field for all.

Our fourth goal for FY '19 is to continue to support the standards and collaborate with the community, and the outcome of that will be ongoing engagement and transparency. So I'm going to walk through each of these four areas, highlighting some of the work that we've done over the past several months.

So in the area of strong organic control systems, which lead to trusted people, processes, and rules, we have released new policy memos and letters related to fumigation and prohibited commodities. We've really upped our outreach on fumigation, so that the trade has a better sense of how to consider products crossing the border, and doing research to make sure that products that have been fumigated are not represented as organic.

As part of this, we're collaborating with APHIS, a partner agency, for better data. Now last time I presented to the Board, I presented that there was a very, very high number of fumigation incidences. In the meantime, we've

worked very closely with APHIS to better understand the data, and that's led to much better data quality related to fumigation.

So it actually turns out that the hits are actually much, much lower than we had thought, which is very, very positive and very good. It also allows us to do much more specific follow-up and investigations on any particular hits that we get. So that's been a piece of positive news of the last several months.

We have been developing new models for risk-based oversight using diverse data sources. There are a lot of international agencies that do very good work on the risk of fraud. We're also using data from the Organic Integrity Database to help us identify points of risk in different parts of the world. We are continuing to conduct auditor -- audits of certifiers, both satellite offices and headquarters worldwide.

Those audits have resulted in some enforcement action. We recently negotiated a consent order that led to the suspension of one

of our international certifiers. So those audits are a very important part of our enforcement mission. And we are advancing the enforcement role and learning management systems. I'm going to talk a little bit about those in particular.

So here is the list of items that are being considered for the strengthening of organic enforcement rule-making, and I have been encouraged not to read the list to you.

(Laughter.)

DR. TUCKER: So I'm not reading the list. But it's there for you to read. So here's -- it's a snapshot of a number of different areas being considered. Many of these were covered in a webinar we did in July, and many of these come from NOSB recommendations.

So sometimes it can take time to respond to recommendations, but we believe that this rule will cover a lot of areas that the Board has worked on, and has provided us feedback about. If you have feedback in these areas, we are accepting a communication at our guidance

box.

That's nop.guidance@ams.usda.gov. We have received some best practice documents from different organizations --- a lot of folks who spend a lot of time thinking about these topics. So that input is very helpful.

Let me talk a little bit about the virtual town hall that we had in July. This is just a snapshot of the different topic areas in order of the number of chats. And so not validated research by any stretch, but it does give a sense of how many -- how much energy there was around different topics.

So there were about 400 folks who attended the webinar, and somebody did the math, I love this. There were approximately 14 chats were minute, and the top three topics were excluded operations, import certificate traceability, and standardization of inspector qualifications. The Board's being doing a lot of work on inspector qualifications recently, and has also advanced recommendations on exclusions.

So very helpful work. We are anticipating a proposed rule in the spring of 2019 that will be announced in the Organic Insider. The process from there will be there will be there will be a formal public comment period like there are with all rules, and then the comments from the proposed rule will be considered in a final rule.

So next, I'd like to show you sort of an initial front page of the Organic Integrity Learning Center. So this is -- I've been calling it the Learning Management System, LMS for short. We've officially named it the Organic Integrity Learning Center.

So this center is going to be designed for certifiers and for inspectors, to really up the game on continuing education and training, to make sure that inspectors and certifiers have the right skill at the right time for the right operation.

And so the center will provide online training to support professional development and

continuing education. We're really focusing on certifiers, inspectors, and reviewers to start, as well as professionals that are serving in compliance and enforcement roles. So there are times where certifiers need to conduct investigations, and so we're going to include training to improve their ability to do that, and to really help the folks who are really boots on the ground every single day out there on organic farms.

This project directly supports our goals of fair and consistent certification and effective, fair enforcement. So if you would like to learn more about this other program and provide your feedback, we are going to have a virtual town hall on November 15th, where we're going to give sort of a test drive through the Learning Management System.

You'll be able to ask questions and provide your feedback about course topics. So again, that will be November 15th from 1:00 to 2:00 Eastern. We're going to post more details

later today in the Organic Insider. So I hope you'll be able to join us.

Let's move on to the second area, farm to market traceability. So our first big success in this area is that we published a report, it's on the website on collaboration opportunities and technology needs related to supply chain integrity and import integrity.

This was our formal response to the 2017 OIG report. I committed at the last NOSB meeting that we would complete all of our AMS response items to the Office of Inspector General, and we did so, and this report was a big part of that.

That has led to lot of follow-up conversations with the OIG, with CBP, Customs and Border Protection, and APHIS as we advance those specific projects. We have worked closely with Customs and Border Protection to scope our organic message set projects.

If you remember from our last meeting, the organic message set is what makes the organic

import certificate an electronic part of CBP's import system. We've also initiated visioning for a global organic oversight and traceability system. So I'm going to talk a little bit about that.

So part of our report this summer included a technology needs assessment. And so here's a look at our technology goals for the months ahead. We are interested in facilitating full supply chain traceability, allowing government entities to access, approve, and verify the validity of certificates and transactions.

Implementing electronically based and secure oversight control systems. We need to have trusted users and secure data exchange. So that's an overview of our leading goals related to technology. And so technology is an area that I tend to think about and focus a lot on, and so I want to show you a couple of pictures that simply have started a conversation on what an international potential system could look like.

So block chain is a technology that's come up in the last couple of NOSB meetings. May or may not be a final technology for where we're headed here, but it is a framework for consideration. And so here's just one vision of how a technology solution could play out. You can have farms or initial consolidation points provide both data and product into the organic system.

The data and products would then be exchanged and traced across handlers and brokers. Organic certifiers would be able to confirm transaction authenticity with oversight from the National Organic Program, and then an import certificate would transmit the data into CBP's system and then into the United States.

So this is one vision. This was a vision that we first drafted out on a chart paper in spring 2018. So sort of our fix -- a first picture of folks who worked with me on the Organic Integrity Database know that that system was basically built out of a flip chart in my

office. So that one piece of paper visioning, I tend to enjoy doing that work.

So as we continue to extend our thinking on this, we have another picture. And so this may in fact be a more accurate picture of what this ultimately could look like. So a second version of the vision would be really more about connected data strings, where a lot of different people or a lot of organizations have their own systems, and those systems are able to exchange data in a unified way.

And so in this model, we might have organic oversight block chain or other system that would be fed by and would feed other chains and other systems. So here you could have a supply chain block chain. We have some supply chain leaders out there who are considering building their own block chains. You might have a government that builds a system.

So for example Italy has invested in a country-wide system, and so data could be exported from these different systems onto a

stream of data that is then transmitted across the oversight system. Again, one of those nodes may be Customs and Border Protection as that data becomes import ready for our import systems with CBP.

So lots of different ways of looking at this problem. We are just starting this conversation, and so I am now approached periodically by folks who are considering building block chains or exploring that idea for their own supply chain or their own sort of part of the organic universe. So I welcome those conversations so we really have a sense of all the diversity that's going on out there.

Third area, robust enforcement, which will create a level playing field for all. So first, I want to highlight our Dairy Compliance Project. Now last time we were with you, we started talking about this project. We had called it a pasture surveillance project. Based on everything we've learned to date, we have reoriented. It is now a Dairy Compliance

Project.

There are problems out there, and we are investigating and we are enforcing. We are doing unannounced inspections as part of investigations. We are also doing unannounced inspections as part of surveillance activities. This is one of our top priorities in the program, and so based on everything we've learned to date, we are going to continue that project also into 2019.

So this is going to be an ongoing series of investigations and compliance oversight effort. We have also overhauled our complaint intake process. We had started this process at the last NOSB meeting. We have continued it, so that we are able to classify complaints coming in more rapidly, and to respond to questions that really aren't complaints but are really questions.

Where we get a complaint in that doesn't really have the evidence that would be needed to support an investigation, we provide

immediate feedback, so folks have a better sense of what is needed. I'm going to talk more about complaints in a bit here.

We've also awarded a contract to expand our investigative capacity by approximately five people. It is still the case that more than half of the complaints that we get in are actually uncertified operations. So having some supplemental capacity to investigate complaints against uncertified operations will allow us to take action faster in those particular scenarios.

We continue to work with APHIS and CBP to block non-compliant imports. We are building a new complaint management system which is more consistent with what other federal agencies have with an enforcement mission, and we are supporting investigations by our federal partners.

So examples of federal partners are Office of Inspector General and Department of Justice. So that takes me to some comments.

We've gotten some questions about recent news reports related to domestic organic fraud. And so we can't comment on the details of open investigations or pending litigation.

What we can say is that over the past year, we have done a comprehensive review of our pending case load, and we are confident that any open case with verified violations is actively being worked on by an NOP specialist, or has been referred to another partner such as other federal agencies or other governments for investigation.

Some of these cases involve complex supply chains and players, and many players may become involved, both in the problem itself but also in the investigation. So building strong cases with deep evidence and providing due process to all the parties is a vital part of any investigative process. This takes time.

I am fully confident in our compliance and enforcement team. We've added staff resources, improved intake, added new technology tools to assist investigations, and have built

strong bridges with other members of the federal enforcement family.

We all know that a few bad actors can undermine the work and livelihood of thousands of good organic farmers who rely on consumer confidence in the organic seal.

We are advancing strong cases quickly, and referring cases to other investigative teams where appropriate. It is important to remember that fraudulent organic food sales are the exception, not the rule. Working together with farmers, ranchers, certifiers, and other stakeholders like all of you here, we will all together ensure the organic seal remains the gold standard.

Now I would like to turn to imports, and so I think one of the good ways of showing what we've done in this area is to review a case study. So we're going to review a case study of corn imported from Serbia. So in August, there was a blog post that highlighted some trade data that showed organic corn was being imported from

Serbia.

This was the first time that a blogger had seen Serbia as a producer of organic corn, and there was no Organic Integrity Database listing for a Serbian corn producer. So as a result, many people started speculating that the imports might be fraudulent, and we heard from several stakeholders about this.

Within two weeks, the NOP took quick action to obtain and analyze data, and we confirmed organic integrity. Here's how we did it. First, we used the ACE database, that CBP sourced for all trade and import data, to get information on the supply chain. Then we contacted the North American importer for further information. The importer immediately provided an organic certificate for the Serbian source.

Second, we contacted the certifier who is listed on the certificate. This allowed us to verify the certificate and get more information about the operation's acreage and production capacity. The certifier quickly cooperated and

confirmed that the Serbian producer had enough land to produce the amount of corn that they exported.

Finally, we examined available market analyses from the USDA's Foreign Agriculture Service. We found that the Serbian government has been investing in organic transition, providing a fast-growing supply of organic products. We also learned that they had a bumper corn crop in 2017 thanks to good weather conditions.

We are keeping in touch with our local FAS contacts to monitor the situation moving forward. The NOP has developed this sort of rapid response model when we receive questions about imports.

When we have access to data, we're able to act quickly to resolve doubts or to identify new areas for surveillance. The trade data showed that Serbian organic imports before there was a listing in Integrity for a Serbian corn grower. This understandably raised

concerns.

Our priority is ensuring organic integrity worldwide. There are both good and bad actors around the world. So we're developing the risk-based systems that will detect the differences. Two key take-homers here. First, another example of why accurate and timely data in the Organic Integrity Database is so critical.

A lot of certifiers are reporting data more frequently and we really need the trade's help to emphasize the importance of up-to-date data across your supply chain with your certifiers. We need better data to ensure a level playing field to protect our borders and facilitate fair trade.

Second, in this case the certifier was able to substantiate that the farm could produce the yield seen in the export. Not all certifiers are generating verifiable yield data. We did a recent webinar with certifiers to review ways to do this. This is part of our ongoing work, to ensure fair and consistent certification around

the world.

So let's take a look at our import investigation strategy from here. We are pursuing cases with sufficient evidence, continuing to work specific cases with CBP and APHIS. We're focusing on oversight in the Black Sea region on certifiers, and then also on surrendered operations who are now seeking re-certification.

So we're really keeping an eye on those cases, and particularly in reconfirming that yields reported are possible. We are increasing our emphasis in other geographic areas based on complaints and our risk-based model, and we're going to continue to increase certifier training on how to calculate yield estimates and on the non-compliance process evidence and appeals.

I've showed this slide in the past few meetings, and I'm going to continue to show it, because it is core to all enforcement. The Organic Foods Production Act, regulations and

legally defensible evidence. Enforcement depends on all three. So I get asked a fair amount well, what does legally defensible evidence look like? So let's take a look at that.

So here are examples of evidence that are often gathered by NOP and by certifiers. So we're not expecting complainants to have all of this information when you submit a complaint. I'm going to get to those elements in just a second. But here are some of the types of evidence that we look for when we're conducting investigations, and that certifiers need to be looking for when they conduct theirs.

This is not an exhaustive list, nor is it in any kind of specific order. But it does give a sense of the kind of documentation and evidence that best supports the investigations as they unfold. Now I'm going to turn to how you can help and talk more about complaint submittals and what can constitute an effective complaint.

So we're going to focus on who, what, when and where. So who, we need brand name,

operation name, manufacturer, U.S. importer, and certifier. Any combination of those that you have, as well as any information you have about the supply chain.

The what includes product packaging and the label, product lot numbers, photographs, invoices, bills of lading, certificates. You need to check the scope for alignment with the complaint. So for example, we had an email, it's a great sort of case study, an email that included a handling certificate and the email said well, I'm not sure that the crop was actually grown on certified land.

So there was concern about the validity of the crop, that the crop was certified as organic. Well, it was a handling certificate, and so to really verify the crop, we need a crop certificate. So take a look at your certificates when you're looking at a complaint, to make sure the certificate actually aligns with the scope that you are looking at and concerned about.

It also is very helpful to have a

specific regulatory violation. What part of the rule do you believe is being violated, and how does your evidence show that it is being violated? Finally, when and where. So provide the details of when you observe the alleged violation, date and times, the location it occurred.

So for example websites or specific store, and if it is in the case of an import a specific ship or port if known. That's how we were able to work with the Serbian bit. We had country information about a specific time and place.

So complaints are an important tool for maintaining organic integrity, and the U.S. government has a unique ability to enforce. Buyers, in turn, have a unique ability to see what's happening on the ground. We encourage all organic buyers to do research on their supply chains. If you're concerned about the integrity of the product you're getting from a handler or broker, ask for the certificate for the original

product.

If they're unwilling to provide supply chain information, that's important data for you to consider. Traceability is core to organic integrity. Be sure before you buy. Preventing fraud takes all of us.

Moving to the fourth area, supporting the standards, collaborating with the community. This will lead to transparency and engagement. I'm going to touch on some very special topics here, first starting with National List rule-making.

We have new National List rules. They are in clearance. Our goal is to move ahead quickly with rule-making once we have NOSB recommendations. We expect a final rule addressing multiple substances shortly, and other rules should quickly follow. We'll also continue to support technical reports for the National Organic Standards Board.

In FY 2018, we invested $250,000 on technical reports. These investments are not

impacted by the expiration of the Farm Bill. I've been asked that question, so I wanted to share that. We also invest a lot of time on material inquiries and conflicts.

There are times when certifiers make decisions on materials, and those decisions conflict. In those cases, we analyze the disagreement and determine next steps. So consistency and material determinations is a critical element of fair and consistent certification, and it supports organic farmer needs.

So I'd like to cover a very specific topic that's generated a lot of interest for this particular meeting, and that is paper pots. So paper pots is an example where there was a material conflict. Some certifiers approved it, and others did not. Those that approved the paper pots likened them to regular pots used in production, or saw the paper pots as similar to the current listing for newspaper and recycled paper. They saw it as being agroenvironmentally

sound, and approved them.

Other certifiers did not allow them. They are an input into the soil, they are not made of newspaper or recycled paper, and they have an adhesive that is believed to be synthetic. The product, and as far as we know the adhesive, is not on the National List.

This conflict was raised to the NOP, and we agreed with the certifiers that did not allow the paper pots. Paper pots are fundamentally different from any paper allowances on the National List. They are not made of recycled -- not made of newspaper or recycled paper.

They're not used as mulches or compost feed stocks, which are the only allowances of paper in crop production. Because this came out of a certifier conflict, in February 2018 NOP notified certifiers that producers using them could continue to do so for the remainder of the 2018 growing season. Then, that use needed to stop.

We provided this grace period because of the certifier conflict. Paper pots have since been petitioned to be listed on the National List as an allowed synthetic production aid for crops. The Board's considering that listing now, with a discussion document at this meeting.

If the Board recommends paper pots, the USDA will consider that recommendation. If USDA agrees with the Board's recommendation that will involve rule-making, including providing the public with an opportunity to comment. We have been asked to extend the allowance of paper pots while the Board does its work.

We've put a lot of thought into this, and we've decided not to allow that. First, we must be fair to the many farmers who have been told that paper pots cannot be used. Second, allowing continued use of a material because certifiers were wrong in allowing its use in the first place sets a bad precedent.

Synthetic materials are not allowed in crop production unless they're on the National

List. Paper pots are currently not on the list. We look forward to hearing the Board's deliberation on this topic.

Finally, at the last NOSB meeting there was interest in increasing our outreach to the American Indian tribal community. Last month, the Organic Program participated in an AMS consultation with a group of tribe representatives. During the session, we shared our strategy to strengthen organic integrity.

We provided background on the National Organic Standards Board and opportunities for the Native American and Alaska Native community to engage with the NOSB and NOP. So many thanks to Paul Lewis for advancing that consultation. Thank you.

Okay. I am going to switch gears now into our peer review, which we have been reporting on annually at the NOSB meeting. Quality management is an important part of what we do to ensure the integrity of our accreditation system. So last fall I reported on

our 2017 peer review, and I am now ready to report on our 2018 peer review.

We worked with ANSI again this year. We changed our approach. So we took a bit of a different tack this year. The reviews have over time gotten very, very detailed, with a lot of focus on records and very specific aspects of checklists. This round, we asked ANSI to take a more systems-level view of our program, and to focus on the areas where the challenges are most clear, such as imports and dairy oversight.

We also asked them to view our system through a risk-based lens, which is also a key emphasis of the newest version of 17011 -- that's the ISO standard. And so there are two slides here that have opportunities for improvement and recommendations.

Again, it's a very different list than what we had last year. A lot of the observations last year again were focused very specifically on documents and checklists, where this time again we asked for a very systemic view, which is

really helpful in charting and has really informed our goals for FY '19.

So one of our big problems right now is we don't actually have a dedicated quality manager. That position has been vacant for a bit. We have gotten permission to hire one. So I have approval authority to hire a quality manager, and we really need that to maintain our systems effectively. We will be developing a document that summarizes our relationships with other organizations.

While there are many mechanisms that we have to avoid conflicts of interest, they're not all written down in one place, which is something that the ISO standard recommends. So that was -- is an opportunity for improvement. We do not have sufficient auditors and we don't have sufficient personnel to handle complaints and enforcement actions.

Now we did receive new funding in the middle of the fiscal year, when Congress passed their '18 budget. Many thanks to all of those

who helped advocate for that increased funding. That is helping with our ability to hire and do staff augmentation to meet our mission.

Internationally, we've learned that the procedures for residue testing aren't real well clearly understood by international certifiers and satellite offices, and we aren't auditing satellite offices as much as we would like to. So these are observations confirmed by ANSI. So having external organizations help you see these things that, you know, having them on paper is very helpful in planning.

ANSI also recommended that we establish stronger quantitative objectives and performance indicators to effectively monitor our goals. We do, this is repeated from last year, we do have challenges with our own internal document controls. This is a side effect of not having a quality manager in place, so I think that will be a situation that's remedied by that hire.

Some comments on our certificate and

our terms of accreditation. The need for additional training was emphasized. We've been emphasizing certifier and inspector training, but we also need to continue to train our own staff in the area of risk assessment and investigative methods.

And so finally ANSI confirmed what I think we know, that certifier audit trail exercises are not always providing adequate detail to verify and fully document full supply chains.

So here are the initial actions that we're taking. A lot of our '19 goals were designed to address these concerns. We have been approved to hire a quality manager. We've been approved to hire additional auditors. We are launching the Learning Management System. It will include import oversight topics as well as residue sampling testing, analysis topics, and other issues.

We are developing risk-based oversight models and continuing to refine audit planning

based on the available resources that we have.

I am going to close by summarizing our FY '19 goals across all four of these areas. So FY '19 goals related to strong organic control systems. We're going to publish the proposed rule that we discussed. We have already launched a pilot version of our Learning Management System. We now need to get training into it for organic certifiers and inspectors.

We are expecting that to be fielded by January 2018 (sic) in advanced of our certifier training in February. We're going to continue to conduct face-to-face training sessions with certifiers. We're developing a risk-based certifier oversight model, and we're maintaining and negotiating organic equivalency emphasizing oversight and enforcement.

For FY '19 goals related to farm to market traceability, we'll be contracting with Customs and Border Protection to program the organic import certificate into the automated commercial environment. We'll be

institutionalizing business processes related to fumigation, data analysis, investigations and notifications.

Developing a concept of operations and architecture for the traceability system that I showed you a couple of pictures of, and we're going to be completing a memorandum of agreement to access CBP and ACE data across all harmonized trade codes. So those are our activities related to farm to market traceability.

Our goals related to robust enforcement, we will be launching our new compliance and enforcement database system to get us in line with other enforcement agencies. It has been our consistent goal to resolve 90 percent of appeals within 180 days, and for the past couple of years, we've really hit that mark. In FY '19, we hope to resolve 80 percent of the complaint cases opened in FY 2017 and earlier, and by the end of FY '19 we want to be trending towards resolving 75 percent of new complaints within 180 days.

Again, investigations can take time, particularly when they involve other federal partners. And so we plan to resolve most complaints much faster. There are complaints that will remain open for longer periods of time, where a more in-depth investigation is justified and warranted.

And then finally we'll complete the 2018 Dairy Compliance Project with associated adverse actions and increased training with certifiers, and we'll initiate our 2019 Dairy Compliance Project. For FY '19 goals and standards and collaboration, we're institutionalizing our streamlining actions to reduce National List rule-making time frames.

Again, the Standards Division has done a really nice job of re-envisioning how National List rules can be published faster, getting new tools to farmers and to processors as needed. We will be posting a call for nominations in 2019 for Board seats that will be opening in 2020. From an NOP staffing perspective, we have a

number of vacancies we've been approved to fill.

I am recruiting to replace the associate deputy administrator position that was vacated when I took on this new role. We are currently interviewing for additional accreditation managers. We have approval to hire a quality manager, a new trade systems lead, auditors, and an additional compliance and enforcement specialist.

We will also be hosting two NOSB meetings in FY '19, and in addition to those face-to-face meetings and our certifier training, we are also dedicated to continuing our online public engagement or virtual town halls. In the past few months, we've conducted two webinar training events for certifiers.

In May, we posted a public webinar on technology initiatives. In July, we hosted the Strengthening Organic Rule-making webinar and in November, again we're going to host the webinar on the Learning Management System. So these are important ways for us to share our work with you

and to get your feedback and input.

And so that is our look ahead at FY '19. I want to thank you all for being here today and for listening to this presentation. I'm going to now turn it back to Tom to facilitate questions from the Board.

MR. CHAPMAN: Thank you very much Jenny for that detailed and thorough public update. I'm going to open up to questions from the Board. Emily.

MS. OAKLEY: Thank you, Jenny. I wanted to talk to you not surprisingly about paper pots. So one of my big objectives, small scale farmers and especially direct to consumer growers getting and staying certified organic. I'm concerned that this decision might lead to loss of smaller scale growers and their dropping of certification.

So I wanted to ask you one, about your concerns about that, and then two, I'm also equally interested in seeing growers engage in the NOSB process, and I was really heartened to

see that we had approximately 80 comments from growers specifically about paper pots, which in 93 years is a really large number of growers engaging on a topic.

Since you stated that we probably won't be able to get an extension of the 2018 deadline that we're going to keep working on trying to change your mind if possible, what can those stakeholders do to try to request an extension that might lead to that result? Thank you.

DR. TUCKER: Thank you. I appreciate the question and again, this is not a decision that is made lightly. Our first fidelity must be to the USDA organic regulations and to the National List, and that protecting the integrity of the organic seal goes back to the Organic Food Production Act and the regulations as published.

And so those decisions are never easy, but we have to have fidelity to the regulations. I only wish that the product had been petitioned earlier, so the Board could have considered and

had this conversation much earlier and used. We believe the certifiers that decided not to allow this were correct, and so we have to uphold the decision-making of certifiers that weighed this against the list correctly.

So I think certainly hearing from stakeholders both through this meeting and through any follow-up communication such as letters sort of formalizing that. I think we haven't gotten a lot of formal letters at USDA about this. So I have been asking sort of weekly who is writing about this, and we haven't gotten a lot of communication on this until this meeting.

And so I think many out in the audience have heard my little talk about the importance of letter writing and that letters matter. So I would give that advice.

MS. OAKLEY: Could I follow up with that? So when if people were to write to the USDA, should they be writing to NOP, should they be writing to the Secretary of Agriculture? Do

you have some suggestions for where they could direct that communication most effectively?

DR. TUCKER: So letters that are sent, and so this is just a little bit of sort of education on how the USDA correspondence system works. There are entire manuals on correspondence. So in the USDA it's called controlled correspondence. Anything that is sent to the Secretary or the Undersecretary gets entered into a magic system and assigned a number, and so -- and responses are tracked.

And in fact my performance is assessed based on my ability to get responses done and in the system. So I think writing to the Undersecretary and the Secretary level helps express your priorities and why they're important to you, and what potential economic impacts might be experienced in specific cases.

So you can always write to me and in fact if you write the to the Secretary and Undersecretary, we'd always appreciate your cc'ing me so I know it's coming. It's just

helpful to have a copy of that, of that correspondence.

MS. OAKLEY: Thank you for letting me ask one more. I just want to make a comment that I think it is a big ask to get growers involved in the process. So I don't want them to feel disillusioned that they made comments to the NOSB, and now they're being asked to make comments to another level.

But I think if stakeholders in the room can hear this dialogue and communicate that and try to encourage participation among farmers, and not have them feel disheartened, I think that would be a really effective tool for this dialogue. So thanks.

DR. TUCKER: Yeah. I do think that part of ongoing engagement with the government is remembering that you can't just do it once, right. So public comments are important, letters are important, phone calls are important, visits are important. So there are stakeholders who communicate in a lot of different ways. There

are other stakeholders who, you know, make one comment or send a letter and that's it.

I know folks are doing their normal day jobs, and that is their number one mission, and hearing from multiple folks in different ways. This is where I think if you're a member of some kind of coalition or group that can represent the perspectives of multiple farmers, one of the letter -- the letter that we've gotten on paper pots so far has been from a certifier advocating for its operations. So that's another important vehicle.

MR. CHAPMAN: Ashley.

MS. SWAFFAR: Thanks. Jenny, I have three questions. I'll ask them one at a time. So this summer the NOSB Executive Committee asked for a work agenda request to address antibiotics in pre-second day of life day-old chicks. Can you please explain further the rationale used for the program's denial of our work agenda request?

DR. TUCKER: Okay. So first, I want to thank you for the work agenda request. A lot

of thought goes into those work agenda items. I think they are a very, very important tool for defining the scoping the work of the Board. So I think the formality of the work agenda process is a useful construct for both a sort of project management and also for communications.

One of the first, when we look at petitions, we look at them against a number of criteria, and the first criteria is is the work agenda something that can be implemented because it's within the scope of the Act and the regulations? So just a very quick review that Organic Food Production Act is owned by Congress.

The Act is owned by Congress, and then the agency owns the regs that implement that Act. And the Act on this is pretty clear on we call it sort of the day-old chicks part of the Act. The work agenda would have directly conflicted with something that the Act is fairly clear upon. So it was determined by USDA that if the Board worked on it, it would not be within our statutory authority to carry forward, and so

therefore we can't really approve that work agenda item. We'd be working on something that we don't have the authority to implement, and that's not a good use of your time and resources.

MS. SWAFFAR: Okay. My second question is that we've had several commenters write in for several meetings on how they feel that we can work on that, and that's adding to 205.238(c)(1), stating that the prohibition on antibiotic treatment applies to poultry not under organic management prior to day two of life.

Consumer Union did a -- has wrote that in for varying, I guess four meetings now or more. Do you think that OFPA would still have the conflict, even if we wrote that in?

DR. TUCKER: If we believe that the work agenda was -- is not included under the provisions of OFPA. On this one we did. We did get feedback from our general counsel on it and they're very familiar with our regulations. And so some work agenda items we are able to approve right at the program. Other agenda items when

they relate to statutory authority, we do pull in other folks from across USDA. This was one of those cases.

MS. SWAFFAR: Okay. Third question not related to day-old chicks.

(Laughter.)

MS. SWAFFAR: So just to general review, from the time you receive a complaint until the time that complaint is finished, what is your typical time line there? Because I know you talked about one was two weeks, but I think that's pretty unusual.

DR. TUCKER: So what is -- it depends -- it depends a little bit on the nature of it. So let me give sort of a couple of business rules on how that works. So when a complaint comes in, the first thing we look at, and we -- so we have a complaint intake specialist, and so -- and Betsy works very closely with that intake specialist to look at every single complaint that comes in.

So one of the first things we look at

is is this actually a complaint, or is it really a question and not a complaint. And so if it's a question, then we answer the question and then if it really isn't a complaint, it's simply handled as a question. So those are handled within -- within a few days to a week.

Second, we look at the complaint for whether there is evidence, and what the nature of that evidence is, and we look at whether the operation is certified or not. So if it is a certified operation, then often but not always we will refer it to the certifier, because the certifier has the best on the ground knowledge about what's happening with that particular operation.

Now if there is reason to believe that the certifier is somehow either involved or had a problem, then we might keep it ourselves. But if we don't see a potential issue with a certifier, we'll refer it. And we give the certifiers a deadline for getting back to us with their investigative results.

That's an area we're working on in terms of getting more timely responses from certifiers on complaint investigations. Part of our training needs to be training more on how to conduct these complaints. There have been times where we've gotten complaints in where on at first look, it feels like a complaint but it actually isn't, that it's a complaint about the policy not the operation.

And so it will be a complaint that says this operation is doing these awful things, but it turns out that actually the complainant doesn't like the policy, or doesn't like the regulation as written but the operation, based on all available evidence, is compliant. And so those take sometimes a little bit of time to identify as I call them policy complaints.

But often, we are able to and want to close those on the faster side, because there isn't evidence that the operation is actually violating the regulations as written. There's evidence that somebody doesn't like the

regulations.

So for the investigations where there is a -- there is good evidence or there's signaling of the potential to get good evidence, those take longer. And so if it is significant violations that might also involve other types of violations beyond organic, so for example identity theft or other types of violations, those are where we will consider referrals to other federal agencies.

Once a case has been referred to another federal agency, it becomes their case often, which means that we then don't have control over the time line. So again, the nature of the case, the evidence that comes with it, whether the operation is certified or not, those are all the variables that will dictate how long those kinds of things take. Does that answer the question sort of?

MR. CHAPMAN: Harriet.

MS. BEHAR: Good things come in threes. I also have threes. I also have three

questions. So the first point is about the Organic Integrity Database. I was thrilled to see that you're looking at the county level, because that has always been a frustration for me and I think I've given comment to that program.

But I was wondering too if you were going to be asking the certifier for information on fields that they are managing organically, that may not be directly adjoining their home farm, which would then, you know, follow the residential address. There's a lot of leased land and whatever, you know, land that is not directly adjoining.

I think that that would be useful both for like drift watch and that sort of thing for people to then be aware that this is organic land, and as well to for crop insurance windows. Farmers are applying for crop insurance. Then it's already categorized as organic land in the database.

DR. TUCKER: That's a great question, and so the first question I would ask back is

well, how not adjoining exactly is this land, because are still seeing some violations on 4009, who needs to be certified. We are seeing some incidences where we have operations that have fields that aren't really anywhere close to each other that are still under the same certification, that really in all rights should be separately certified.

So that is always the first question. The database can accommodate reporting of acreage at an awful lot of different levels, and so for at least one large certifier that has electronic systems that are managing this, they report there's an operation level reporting tab in the Excel template, and then there's a product level tab.

So some certifiers are, if they're multiple fields, here's the field, here's the acreage, here's the crop. Here's the field, here's the acreage, here's the crop. Now those are not affiliated specifically with addresses at the acreage, at the item level or the product

level. I would say to get more granularity on the address itself, I'd go back to the original question of should they just be separately certified.

Right now, the database is oriented around the entity that is certified. So one certification, one listing, unless you're dual certified and then you're listed twice. So we do have some challenges with addresses, that not all certifiers provide both addresses. The regs are pretty open on this in terms of the type of address. So we do get both addresses, but not all certifiers report both and not all are doing address checking.

MS. BEHAR: Just to respond to this, to respond to that, there's a lot of rented land that may even have been rented for generations from a relative or whatever that is not contiguous, and I know especially in California much of the land is leased. It could be again leased for 10 years, 20 years, and it may not be contiguous. But it's been with that operator. I

think typically certification has gone with the operator and not necessarily by parcel.

I think that asking each parcel if they have a separate certification and pay a full certification fee might be a little bit. But that's not really what I'm asking for. I'm just asking for the certifiers to maintain a location for all those various fields, because again, that could be useful to the producer as well as to people who are just trying to find, you know, which -- is this the organic field or not as far as for drift issues or whatever.

DR. TUCKER: Yeah, some certifiers do provide separate certificates, and then list those certificates separately in the database. So those would be considered separate certifications for the purpose of the database. So they have a unique NOP code. It may end up being six fields with separate certificates and therefore separate listings in the database.

So a lot of challenges I think of the public-private partnership when it comes to data

is while there's a lot of concern about fair and consistent certification practices, the same kind of challenges and fair consistent certification also lead to data is consistent and standardized, it's the same sort of package of challenges.

MS. BEHAR: Okay. So the second one, totally different. On the import fraud, I think there's no -- I think there is a coincidence, not a coincidence that the largest fraud that we've had on the imports is in an area where we have very low domestic production in corn and soybeans.

So I'm just wondering, has there been any thought within the NOP, we've had public comment about this, that another way to prevent that fraud is to bring up the domestic production, to really get -- it's maybe above you Jenny, but to have the USDA make a concerted effort to see organic as a priority, and to try to improve and increase the knowledge and accessibility of organic production and then certification.

So that I think that that would even help with domestic problems if people felt more accessible to an understanding of what the regulations actually say.

DR. TUCKER: Yeah, I appreciate that comment and those -- our conversations that we certainly have had is how can we support domestic production. There are a lot of private sector initiatives that are rolling out in that. I think are sound and sensible certification materials from a few years ago are still accessed quite often to help with the transition.

There will be a part of the Learning Management System for organic producers who might be interested in seeking certification. A lot of that is -- it really does take local work, and it really is a cultural element, as well as for the government, providing sort of education and cost-share assistance. It's also very much sort of local communication and facilitation.

MS. SWAFFAR: Okay. My last point is as member of the Livestock Subcommittee, I would

be remiss if I wasn't talking about the antibiotic use in day-old chicks. So I'm wondering about a kind of perhaps a guidance document that could encourage producers to at least seek out the information if those chicks had been given antibiotics, either in vivo or at day-old, because I know in the marketplace on the conventional side, that it is being somewhat phased out.

So I think some transparency on this issue might cause it to not -- to operators to choose hatcheries that are not doing that, as long as there's some transparency. But right now since they don't look at those day-old chicks or the eggs that they've treated, that there's no knowledge.

So I'm just wondering if we could do a guidance document instead to encourage movement away from that.

DR. TUCKER: So guidance documents are going to require kind of the same scrutiny honestly as regulations. So the first question

when we talk about wanting to do a guidance document was well, show us how it is authorized by the Act and the regs. So it's sort of a com -- we can't do guidance on things that are outside the authorities of either.

I would say that this is where I think private sector labeling in terms of if this is a claim that is important, there are USDA process-verified programs that can verify that that has been confirmed, certain production practices that are outside sort of statutory authority, but are perhaps a differentiator in the market.

I think those process-verified programs may be a useful option to consider that kind of differentiated marketing.

MR. CHAPMAN: Lisa.

MS. DE LIMA: Jenny, can you talk a little bit about the BPA that was on the Handling Subcommittee's work plan, that's been moved from the active work agenda to the, I guess, not active, how we did have handful of public comments come through asking for an update and

why they weren't seeing that come forward?

DR. TUCKER: Sure. So the BPA was a work agenda item that was actually initiated by the National Organic Program several years ago. So I think four years or so, where we sent a memo to the Board asking them to -- asking the Board to work on this topic or consider this topic.

I would say honestly a lot's happened since then, and I think that right now, as a program, we've determined that it's -- we initiated the work agenda and now we're saying yeah, actually that's not as important a priority as some of the other topics such as imports. And so sometimes we have to make tradeoffs on where we want to spend energy and time, and so I think you have more recently received a work agenda item on imports, which the group has been pursuing very diligently and I appreciate that work.

That means that some other items will need to be deprioritized, and for the moment, BPA is one of them. So I think in terms of community

planning, being open about what we're actively working on and what for right now is sort of tabled, I think helps people plan in terms of monitoring what's happening with the Board. So we want to be honest and open about the fact that right now we're deprioritizing this NOP-initiated item.

MR. CHAPMAN: Dave.

MR. MORTENSEN: Jenny and NOP colleagues, I want to echo what Emily had to say about paper pots, and then I also wanted to make a couple of assertions. You could choose to respond to the assertions. They're not really questions.

DR. TUCKER: Okay.

MR. MORTENSEN: It's my view that the not allowing paper pot use in field season 2019 is disproportionately severe, and the impacts will be very large. Other than the soil hydroponic issues since I've been on the Board and I'm in my second year, I have heard more comments about this than any other issue.

It's my view that this is an issue that we have to be very careful that we're not regionally biased in our decision-making. This is small and intermediate-sized growers that are poorly represented at a meeting like this, and that frankly are much less likely to have organized voices in contrast to large growers who often have had speakers coming to us who are paid representatives or expert agronomists or whatever that can commit three days to come to this meeting and make such presentations.

Finally, during one of our subcommittee calls about three or five months ago, it was indicated that you were hearing little in Washington, D.C. about the paper pot issue. We can see from the public comments and the written comments and the discussion that we've had that we've been hearing a lot from small growers, that to me this is an indication of our problem with our information feed into this system as Emily alluded to at the end of her comments.

Small farmers are dispersed, they're small. Their profit margins usually are very thin, and time and to take out, to be keeping up with all the sorts of rulemaking and writing is extremely constrained. I can't imagine, I don't know of a single farmer that would know that they should be writing to you or to the Secretary of Agriculture of the United States about an issue like paper pots.

That simply wouldn't even be in the minds of anyone that I know, and I probably know about 50 pretty well, of having been on their farms. So I just feel like this kind of an issue doesn't get a fair shake, because the system in my view is somewhat broken with regard to the voice, or the lack thereof, in Washington, D.C. on such an issue. Thank you.

DR. TUCKER: I appreciate that. I think all the comments on paper pots have been both eloquent and helpful, and so I genuinely appreciate this feedback.

MR. CHAPMAN: Scott.

MR. RICE: Thanks. Jenny, we've talked a lot about exclusions in the upcoming rulemaking, and the one question that I've received is about the $5,000 exemption. I know that's written into OFPA for small producers, but it's become comically small. I know that that was there. That maybe let people, kind of let small producers test the waters of whether they wanted to become certified after that.

It's also again just so small that it doesn't really provide any sort of sensible kind of level, and we're more looking at it either way or a disincentive or incentive.

DR. TUCKER: You know, that's an interesting question. Right now, we have not been looking at that as part of the rulemaking. Exemptions are fundamentally different from exclusions. You know it's interesting. Joan, our secretary in our front office, gets a lot of calls from newly beginning farmers who are working under the exemption.

We sort of had that conversation about

should that limit be raised. I'm not sure what it would need to be raised to make a substantive difference. So I think it's an interesting thing to sort of keep an eye on. If you folks are interested in sort of providing feedback on that, right now it's not part of the regs. But I do think just as civil penalties go up with inflation, should the exemption also go up with inflation? It's sort of an interesting question that I don't have an answer to. But it's a good question.

MR. CHAPMAN: Asa.

MR. BRADMAN: I'm not getting a light here, but I think this is working. I wanted to follow up on Lisa's comments and questions about BPA. It sounded like from your response that it was an issue of priorities for the decision to temporarily put the BPA question on hold.

That it's not necessarily a question of jurisdiction or authority. So I just wanted to clarify that, and that maybe we can look forward to working on the BPA issue.

DR. TUCKER: Yeah, I think it's a good question. I think when you read the memo to the Board that went in 2014, I'm not entirely sure that that memo really stated yes, this is absolutely in the statutory authority or no, it isn't. So I think that if we decided to reactivate that, I think that would be sort of part of the question in terms of where are the limits of the statutory authority with respect to packaging.

And so I do think it is a larger question that would need to asked if that item were reactivated. I think for right now, it's not in the priority set given the other challenges that we are jointly facing as a community.

MR. CHAPMAN: Rick.

DR. GREENWOOD: Jenny, a quick question on residue testing. As I mentioned, I'm an organic avocado farmer. I've had my avocados tested once in 17 years for residue, and that came through a county inspector. Is there or are

there guidelines for residue testing that go to the certifiers, or is there a plan to have something standardized, because I think that's an important component of the enforcement activities?

DR. TUCKER: Yeah, I agree with the importance of residue testing, so a few comments on that. There was a residue testing rule in 2000, was it '13, '14, that requires residue testing five percent is the level. We've also required residue testing with respect to some of the import investigation going on, that specific imports from specific regions and commodities were required, heightened testing there.

I think testing is a great tool, both for monitoring surveillance and for enforcement. So the residue testing pool formalized the five percent. When we talked to certifiers about it, we talked about the importance of testing in collecting evidence but also risk-based oversight in enforcement.

We need to and are in the process of

updating our residue testing guidance for certifiers. The guidance is pretty out of date in terms of the types of substances that should be and can be tested. Also certainly detection limits are dropping over time as technology evolves.

So that, those documents need a bit of an overhaul now, so need to be overhauled in the context of enforcement and where the greatest risks are in the market, because of a number of commodities on a market or a geographic area, or for example fumigants. So I think there's certainly work to be done there.

We will be doing more training on sampling and testing through the Learning Management Center, for certifiers to make sure they're sending their folks out with better instructions on how to sample, where to sample, when to sample.

DR. GREENWOOD: Okay. A follow-up question since everyone else asked three. But this is still on residues. Do you share data

with FDA, because they do a tremendous amount of residue testing on import foods. So do you get any residue data back from them, because it could be a good source?

DR. TUCKER: We do get residue data from FDA, and so that's -- and we use those to inform investigations. We also closely collaborate with our science and technology program within our agency, Agricultural Marketing Service, and so they also have a residue testing program. So yes, we do get notifications from FDA. They're a good partner on that one.

MR. CHAPMAN: Steve, then Emily.

MR. ELA: Jenny, you've been great about as you've come on board with us about transparency, and I really appreciate your candid comments about what your decision-making processes are. For this meeting, we've received a number of comments from our stakeholders about a couple of things within NOP, and one is first of all the shortened time to -- for not having the full 30 days for people to comment,

especially when we have a complex agenda.

And then the other is coming back to the subcommittee notes that people, that are no longer being published. I understand the cost and time issues, and why those decisions were made. But what ways can we get more timely and better information out to our stakeholders, so they have time to fully vet some of our decisions and follow our process? It seems like we're not quite where we need to be on that.

DR. TUCKER: Okay, thanks for the comment. This just came up yesterday as well at the National Organic Coalition meeting, so I'm going to repeat some stuff that some folks may have heard yesterday, but hopefully you won't mind hearing it twice.

So first, the subcommittee notes, we will be reinitiating that posting process, and so we heard that feedback. Thank you so much. All right. We heard that feedback loudly and clearly. From an agency perspective, remember we are -- NOP is one program of many within our

agency, and we post by far the most on the website.

So the Public Affairs team, every single time a document has to get posted, they have to review it, because nothing goes up on the website without them having a sense of what's going to happen, and it has to also be reviewed for what's called Section 508 compliance, which means making sure it's accessible for people with disabilities, which takes time. So all of that takes time.

And so understandably, Public Affairs has said to all programs hey, you know, take a look at what you're posting. You're really -- what does your community actually need? So it also relates to just we also get complaints about how there's so much on our website that it's hard to find things.

So where we can find documents that perhaps if people aren't using as much, that they're going to be times where we'll make decisions about looking across the labor that

goes into that. It was taking about 20 hours a month to post those minutes. That's a lot of time, and it's time that we are not spending doing something else.

I think the other thing is sometimes folks appreciate having things but never say it. So we don't know if people are using it or not, right? So once we stopped posting subcommittee, we got, heard a lot oh, you're not posting subcommittee. No one had ever said before that wow, thanks for posting those subcommittee notes, we really use them and this is why.

And so I think if there's stuff on the website that you really appreciate and want to continue letting us know that, I got some really direct and helpful feedback from the community about the importance of posting enforcement actions. So yeah, that's an area where we really are advancing in what we're posting and really advocating for that.

So we'll continue to post technical reports on the NOSB meeting, materials.

Recognize it's an awful lot of documents. So we are reposting the subcommittee notes. But I wanted to give some sort of context on why that kind of happened, and that we did hear you and we are returning to those postings.

Now in terms of the comment period, I'm going to try and briefly walk through the process. So once a meeting ends, the clearance for the Federal Register announcement for the next meeting immediately goes into clearance. So in fact Michelle has already written the meeting announcement for the next meeting, the Spring 2019 meeting. I've already cleared it and it's ready to go into USDA.

That takes a little bit of time, because it goes in the Federal Register. So a lot of people need to look at that before it's actually published. But I wouldn't -- usually now we're getting to the point where we can announce the next meeting fairly soon after the previous meeting.

When that happens, it opens what we

call the public docket, the open docket. So then that docket is literally opened for anyone to do public comments on all the way up to when the public comment period closes. So if folks want to post materials in that open docket, they can't. So for example, the last meeting the Board said hey, if you have information on this please post it in the open docket once it's launched, and indeed people did, and that was helpful.

Where we I think want to look at the business process further has to do with sort of the late end of that process, where the subcommittee's done its work and its package of discussion documents and proposals that's ready to go online and the public comment period. Well, it has been opened all along. It really starts in earnest because now there's something to really read and comment on.

Now this is always going to be a balance between the amount of time the Board gets to work on stuff and the amount of time the

public gets to comment on stuff.

So we have really compressed the period that breaches those two as fast as we can. So once we get in the proposals and documents, Michelle has to bundle all of those into a master document, and it really does need to go through some level of USDA clearance.

We have managed to get that clearance down to about a week and a half. We're not going to get it any faster than that. There are a lot of people who need to look at 100 and whatever pages before it goes up on a government website. I think that's normal. And so we have briefings internally about what these documents are, where the controversies might lie, remind everybody of the process that unfolds. A week and a half in a big federal system is actually fairly rapid to get all that done.

So that leaves us with either you guys get less time to work on proposals, there's shortened public comment, or we find a way to post interim drafts in the open docket as you go

along. So let's say you finish a proposal or you finish a discussion document early. You have an early interim draft.

Where I think we might have some room to move would be how could we introduce a governance process where that material could get reviewed, but it could be posted in the open docket for people to read? So I think there might be some room there. At the same time, you guys know sometimes you're working on these documents until the very last minute, and those aren't going to be available as an interim basis.

So I think it's important for everybody to understand the full time line, because it also explains how we've implemented the open docket recommendation from the Board. I think that process can work well. I'm not sure we're maximizing those tools quite yet. Did that answer the question?

MR. ELA: Yeah, I think that's great, and again I appreciate your being flexible on learning what works and what doesn't work, and I

know as a committee chair, I mean just knowing that when we finish documents in committee that we can go ahead and send them to Michelle, instead waiting until that last week and a half, you know. That's something we need to be aware of.

So I think it's a learning curve for all of us. But thank you for that. Thank you for your attempts to be transparent. Really, I appreciate that.

MR. CHAPMAN: Briefly Emily.

MS. OAKLEY: Very briefly. Some stakeholders have expressed concern that given short comment periods or concerns over the work agenda, that if they would like to suggest that the Board send a document back to subcommittee for further work, they have fear that it might be removed from the work agenda because of staying on the work agenda for too long.

So we talked about that already yesterday, and I was just wanting to have you clarify that for stakeholders, and give us

guidance on that.

DR. TUCKER: Thank you for that. It's a great question. We have really formalized the front end of the work agenda process in I think a very smart and healthy way that really encourages collaboration and honesty about what's possible and what's not, and what the priorities are and what the priorities aren't.

I think that in general when something is approved and is on the work agenda, if it's actively being worked on it needs to go back to the subcommittee for more work. I don't see that as increasing the risk of it, of it being taken off. So I think part of the goal and the purpose of the Board is to bring up those controversies and to make sure that we get it right, and to make sure that we get it with the best and most public comment to inform any government action that happens from there.

So if that takes going back to the subcommittee for another round and more discussion, then I don't see that as creating

risk for that item per se.

MR. CHAPMAN: Okay. I'm going to wrap up with one question from myself, and then we'll take a break, and Jenny I think it's a brief one. But in your presentation, so going back to your presentation, you were talking about equivalency agreements, trade agreements and a focus on compliance and enforcement. As you look into those, what -- do you have some details on that you can share? What does that mean?

DR. TUCKER: Sure, what does that mean? So for example I think as equivalency has evolved over time, everybody sort of learned along the way of, you know, what equivalency is and isn't and what it entails and what it doesn't.

I think in the early time of equivalency arrangements, and before some of the I think the import fraud became front and center, there was a strong emphasis when negotiating equivalency on the standards.

So the practice standards and the

National List. So let's compare those, let's compare standards, and I think over time there's been a real expansion in attention to -- it's not just about the standards. It's also about your system overall, your ability to investigate complaints effectively, your ability to accredit effectively, oversee all the entities effectively.

I think as we've seen with data, the importance of having transparency in operations. So for example, the Organic Integrity Database is actually fairly unique as a public registry of certified operations. Other governments don't have that, and so that makes it harder to verify organic certification of operations in equivalency arrangements.

So I think taking closer look at data on systems, on enforcement systems and making sure all of those systems are sound including -- in addition to looking at the standards themselves. It really does need to be about the entire control. So that's the eye to which I'm

thinking when we're talking about a future and maintaining equivalency arrangements. Does that --

MR. CHAPMAN: Yes, thank you, and thank you to the Board for your questions, and thank you Jenny for your transparent answers. It's been a very valuable discussion. Before we move to break, I think we have one last item to cover, and I will pass it back to Jenny to do that.

DR. TUCKER: So we do, and this is a fun one. So a while ago, I think like three meetings ago, I got to announce that we had an employee of the quarter for Lisa Brines. And so we gave that award to Lisa and now I have another one to give for one of the NOP staff members who's present, and that is Devon Pattillo. So Devon was our employee of the quarter this period. Come on down, Devon.

(Applause.)

DR. TUCKER: So Devon gets a few things for being employee of the quarter. He

gets -- first of all he gets a plaque, a certificate of achievement that proudly recognizes Devon Pattillo as employee of the quarter for July, August and September 2018. Put this up on your wall, and he also gets the Roving Statue. So the statue says "National Organic Program Employee of the Quarter in honor your outstanding service." So he gets to keep this for the quarter, and the he needs to mail it back. Joe will give you the code, so they'll mail that back to us. But this rotates and the employee of the quarter gets to keep it on their desk for that period. So that ought to increase your luggage fee significantly.

And then to keep, Devon had the choice of a clock or a suitcase, and he chose the suitcase. So most people choose suitcase. It's a roll bag for his various travels, to ensure organic integrity.

(Applause.)

DR. TUCKER: So Devon, congratulations and I'm going to give you a hug, and we'll do

pictures later. Okay. I think that takes us to the break.

MR. CHAPMAN: Yeah. I had a question. Is that luggage certified organic?

DR. TUCKER: You know, I get that question a lot, and you know, most items we have that have the seal is actually certified -- is actually organic cotton. But with a suitcase, you know, we've got to take a little bit of license here. Okay, thank you.

MR. CHAPMAN: That's good, and I think the Board also extends its congratulations to Devon. You're an amazing resource for us, and I don't think we could do our work without you. So thank you so much.

(Applause.)

MR. CHAPMAN: Okay. So with that, we will move to break. We're about 45 minutes behind schedule, but we'll make it up somehow. We will start back up -- sorry, my watch is on Pacific time. We'll start back up at 11:15 with public comments. Just so folks know, the first

public commenter up is Lynn Coody. So at 11:15. We're in recess.

(Whereupon, the above-entitled matter went off the record at 11:01 a.m. and resumed at 11:17 a.m.)

MR. CHAPMAN: Okay. We're going to get started. Lynn, give me one moment. I've got to run through some formalities.

DR. TUCKER: Okay. I'm just waiting.

MR. CHAPMAN: We're ready. Okay. We're going to come back to order. We have eight members present, which is a quorum. I ask members of the public to either sit down at this time or take their conversations outside. So we're going to start the public comment. Before we get to that, we're going to go over a quick couple of formalities on process.

I normally go through a lengthy review of our conflict of interest policy. In the interest of time, I'm going to keep it quite brief. But basically the NOSB's operations are governed by our conflict of interest policy. Our

conflict of interest policy can be found in our policies and procedures manual.

Prior to every meeting, a matrix of the proposals and discussion documents before the Board is distributed to the members. The members are asked to present any conflicts of interest. At this time, no conflicts of interest were disclosed, but for just flexibility I'm also going to allow members to express any conflicts they may have here at this meeting.

Seeing none, we don't have any conflicts of interest. So we normally go through that at the beginning of every subcommittee, but given that we have no conflict of interest disclosed here, we will not be doing that for the sake of time. Moving on, I'm going to really briefly review our public comment policy. So all persons wishing to comment to the NOSB need to sign up first prior, and it's a first-come, kind of first-serve format.

Comments are limited to one comment per person. No proxies allowed, and that's one

comment either at the in-person meeting or at the webinars. Persons are going to be called to speak roughly in order of what's on the speaker's list here. Clearly, we're running behind schedule so we may call folks late or call folks early, depending on how we run against that schedule.

If we skip over someone, we'll try to come back to you if time allows. We're going to try to keep everyone who's on our schedule for today in today. So that means we may cut some breaks short or run a little bit late if necessary.

I ask that members of the public please try to take conversations outside. I also ask everyone, members of the public as well as members of the Board to silence your cellphones or computers, so that we can clearly hear the speakers commenting to us. Use of media to document these meetings is allowed. I ask that members of the public who are using media to respect both of the stanchions, as well as the

speakers going up and try and limit their use of this so as not distracting to either the speaker or the Board.

Lastly, the commenters should refrain from making personal -- you can go to the second page Michelle -- I'll go through this. This is actually quick. So time robin is three minutes per speaker. We have -- do we have the color thing up there? I can't see it, but it's probably lower.

So it goes green when you start speaking. At one minute it will go yellow, and then when the time is expired it will go red and buzz? At that red buzzer, I do ask that commenters try to wrap up their comments on that last, their last sentence there.

We ask that commenters start with their name and relevant affiliates at the beginning of public comment. If any member of the Board has a question about the relevant affiliations of a speaker, I ask that you hold until the end of their comment and then ask any

additional questions at that time.

Again, commenters have three minutes, but once that three minutes is completed, then I will look for questions from the Board that they may have for that individual speaker. Individuals providing public comment to the Board are asked to refrain from personal attacks that might impugn the character of any individual. If we hear any of that coming, I will interrupt the speaker and ask them to refrain from that activity.

Then members of the public, I ask to clearly and succinctly convey their issues before the Board. With that, I think that's the formalities, and so we will start with the first commenter up. I will call Lynn Coody and on deck is Christine Badger. Lynn, if you could start with your name and relevant affiliations.

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

U.S. and internationally. In our comments to the NOSB, we express our own ideas and also provide a conduit for the voices of many certified growers who supply our businesses.

Ethylene for pineapples. OPWC has provided detailed written comments on 15 of the 2020 sunset materials specifically focused on how these materials are currently used and needed by produce growers and handlers. One of these comments is on ethylene for pineapple production. At the last Board meeting, Emily asked me for information about the horticultural need for ethylene.

In response, OPWC created a survey which we sent to all pineapple producers listed in the Organic Integrity Database, as well as agronomist researchers and handlers who work with pineapple.

We summarized the information they provided in our written comments, and concluded that induction of flowering is a critically important element of an integrated system of

horticultural practices used to produce organic pineapple, and at this time ethylene is the only commercially available option for floral induction.

Therefore, ethylene satisfies the evaluation criterion of necessity for this use, and OPWC strongly supports the recommendation for continued list of ethylene gas for pineapple.

Genetic integrity of seed. OPWC believes that finding ways to keep seed and planting stock free from contamination by genetic engineering is critically important. We support the proposal for a pilot program focused on seed corn. Our comments detail eight reasons why we think the proposal provides a reasonable way to transition from discussion of this critical issue into taking action to address it.

Sodium citrate. OPWC respectfully disagrees with the committee's recommendation to approve the petition. We agree that evaluation of sodium citrate presents broader issues. We concluded that NOSB review of inputs to inputs is

outside the scope of OFPA, and we think that taking action on this outlier material could have unintended consequences on the use of other natural materials that are long-standing organic inputs.

Paper planting pots. OPWC supports the request for technical review of this product's manufacturing process as a step towards further review as a production aid. We urge the Board to prioritize action as we know that many produce growers who are managing operations on different scales have been using this material in good faith with approval of their certifiers.

To avoid disruption of these certified operations, we urge withdrawal of the NOP's 2018 phase out requirement to allow time for NOSB to review paper pots. Thank you for the chance to comment.

MR. CHAPMAN: Thank you. Questions for Lynn? Harriet.

MS. BEHAR: I wasn't sure if it was working. Hello Lynn. Thank you very much for

your very detailed comments. I think anyone who does public comments could look at your comments and learn how to do a comment that makes it really easy for the National Organic Standards Board to review.

I want to especially thank you for pointing out not only what you dislike about a proposal, but also pulling out the items that you specifically like and specifically on the genetic integrity transparency so at least we learn if we're headed in the right direction.

I have a question about the sucrose octanoate esters. You I believe were the only public commenter both before and now to specifically state that you wanted to keep it. Many had no comment. So I'm just wondering, do any of your producers use it? Have they used it in the past and found it to be effective on their farms, in the crops section?

MS. COODY: Well, I have stated OPWC often doers these surveys of growers, and we did at the prior sunset period for this we did a

large survey about the good old 2017 materials, when there was a whole big batch of them, and that material was included on that one.

At that time, we got two growers who reported they were using it. So that's been a few, a couple of years ago now. But we suggested that the listing not be removed because we felt that it had met all of the criteria, except for possible, possibly people weighing in on it. And as has been noted here earlier, it's really difficult to get farmers to write in.

We have the advantage of having basically produce buyers connecting with these growers. So they have a reason to open emails from us. Even with that, we get -- it's difficult to get comments on these types of materials. So we are suggesting that when NOSB is taking a material off the list, that there be more due diligence to try to get information from farmers.

We suggested two methods to do that. One is to work with the Organic Integrity

Database to try to identify which type of growers who are likely to be using this and contact them directly, which is what we do when we have, we need information about that. So you can look at our comments for more information about that. That's the type of thinking we have.

It's hard to know who needs these materials with the system that we're using right now, in my opinion.

MR. CHAPMAN: Emily.

MS. OAKLEY: Thank you so much for your detailed comments on ethylene. I really appreciate that, and I also want to express appreciation for your very thorough reading of the marine materials discussion document. I wanted to ask you a specific question.

You expressed some concern, as a few other commenters have as well, that certifiers may not have the skills necessary to accurately or adequately certify seaweed or marine macroalgae to the wild crop standard.

MS. COODY: Yeah.

MS. OAKLEY: And I think that is a legitimate concern. But I wanted to ask you how do we address that in the face of the fact that we know those same products are being currently certified to the wild crop standard for stock feed and then also some cases human consumption?

MS. COODY: Yeah. I think that it definitely would take a specialty inspector to have that kind of information. I read a couple of different reviews about how one might go about assessing these seaweed areas, and it required a knowledge of the food chain, the substrate, the tidal, the tidal patterns, etcetera.

And so there could either -- there's kind of two ways to go about it. You can train certifiers to be, to have littoral ecologists on your staff, or you can have a dumbed down standard that is easy, that has really distinct, clear criteria for being able to evaluate it. So either way, I'm not sure that is -- that second one, I'm not sure it's really addressing the concerns about seaweed.

So I'm not sure exactly how to make it happen, and I'm not clear exactly how it is being certified right now, whether those certifications are meeting the true standards of expectation as expressed by the subcommittee in its document. So I don't know about that, yeah. Thank you, and thanks for reading all those comments.

MR. CHAPMAN: Okay. I've got Asa, Dave and myself, then I've got to cut it off there. Asa.

MR. BRADMAN: I just wanted to ask if you can elaborate a bit more on the comments on the AITC, and if any of your producers, have they specifically expressed interest in this, or is this something that you feel like, based on your experience, would be helpful? There's clearly disagreement there between your review of our proposal.

MS. COODY: Yeah, yeah. Thanks for that question. Luckily we can call it AITC because it's so darn hard to pronounce. It's a tongue-twister. So basically this is a product

that's derived from -- it's from mustard plants, and we suggested that one possible use for it would be to replace the materials that are currently used for nursery stock certification. So as you know, right now we allow some use of non-organic nursery stock, which can be fumigated with just about everything.

So I come from Oregon where there's lots of nurseries and lots of fruit stock being sent around the state. We were thinking it would be a great idea if we could find a way to use this particular material through a very discrete annotation just for that use, to foster the use of organic nursery stock.

It's really difficult to produce organic nursery stock because it's -- I mean like say for apple trees. It sits there for years before it's coming out of the nursery, and then it has to be a protected to a very, very high degree to pass these phytosanitary certifications.

So yeah, we do certify. I mean we do

have a lot of growers who are certified for fruit production and nursery production who would be happy to be able to access more organic nursery stock, especially nursery stock that, for example, is specifically designed to deal with fire blight and other really difficult issues that face organic growers more so than -- you know, they're challenged by this more so than conventional growers.

MR. BRADMAN: Would this material be accepted by APHIS or USDA to meet those phytosanitary standards?

MS. COODY: Well, that's a darn good question Asa, and if I had more time in this comment period I could have looked that up a little bit better.

But that's why we suggested that it come back again, and that there be a chance to assess that. We have -- there was some information in the TR stating that phytosanitary requirements are state by state, sometimes even region by region depending on which diseases and

insects are endemic.

So that's a good question, and I think probably we'd have to be talking to state departments of ag about that.

MR. CHAPMAN: Dave.

MR. MORTENSEN: Yeah, I mean I also just wanted to echo that I really like the idea of using the Organic Integrity Database in a more active effort on the part of NOP and OSB to get information from the growers who are impacted by some of these changes. I thought that was really, really wise. Thank you.

MS. COODY: Thanks, Dave.

MR. CHAPMAN: Okay, and I have one last question. You commented on silver dihydrogen citrate, stating I believe something along the lines of it not being necessary for production. We heard some different comments from other produce handlers. Is this something you could go into a little bit?

MS. COODY: Right. So we were not necessarily sure whether that one was necessary

for produce. We were actually favorably disposed toward that one when we first read it because it does have a different mode of action than most of the other things that we have on the list, and that's something that OPWC does support.

Our concern came up when we read the EPA's information that was in the TR, that stated something like, you'll have to look at my comments to get the quote. But it's something like when you use this, you must be able to notify the municipal water disposal system, because it has an impact on that.

So we were concerned about impacts on water, because we know that when in many cases when it's used for produce, it's not going -- the wastewater's not going into even a municipal system.

It's a rural system. It's sometimes, you know, ponds and different underground systems right on the site. So we felt like again, we needed more time to take a look at that issue, because we felt like it did have some legs.

So it wasn't a matter of not reading it or not feeling like it was necessary for produce. We just had a lot more questions about that material. So that's, that was our comment on that one.

MR. CHAPMAN: Thank you. Is it really brief? Jesse.

MR. BUIE: Yes, just really.

MR. CHAPMAN: Really brief.

MR. BUIE: Yeah. Was there any concern for beneficial, the effects on beneficial bacteria in the soil?

MS. COODY: We had general concerns for the use of that material in any capacity because of the warnings about wastewater. So since wastewater, in some cases in produce operations it is going onto soil or into, like I said, waste treatment systems that are other than municipal systems, yeah we had some additional questions on that based on the EPA's own words.

I know on the webinar, there were someone who directed Dave to go look at those,

that EPA document. So that's an important one, and I think it needs to have some more scrutiny.

MR. CHAPMAN: Thank you.

MS. COODY: Okay, thanks.

MR. CHAPMAN: Thank you, Lynn. Up next is Christie Badger, followed by Jaydee Hanson.

MS. BADGER: Good morning. My name is Christie Badger, and I'm speaking on behalf of the National Organic Coalition. Thank you for your service on the Board and for your commitment to organic integrity.

I have a comment regarding the limited comment period, but I think we've heard a bit about that. So I'd just like to say yesterday in the NOC pre-NOSB meeting we heard Deputy Administrator Jenny Tucker say that the open document is an under-utilized resource, and that she thinks we could come up with a process to use the open docket as a two-way communication tool between stakeholders and the NOSB.

We would encourage the use of this --

of the open document for questions from the subcommittee, and not just draft materials, and request this be taken into consideration. In addition, she shared plans to restart posting of subcommittee notes. Thank you Dr. Tucker. Your spirit of collaboration is greatly appreciated.

Paper pots. With much information and many comments shared regarding this ingenious low tech system, NOC would like to add our voice to those requesting the prohibition be extended on paper pots. NOC asks the NOSB to add your voice by putting forth a resolution to recommend the prohibition be postponed.

Natamycin. NOC supports the Crop Subcommittee's voice to add natamycin to 205.602, non-synthetic substances prohibited for use in organic crop production. As an antimicrobial substance that has medical application, and is known to result in anti-microbial resistance, nanomycin should not be allowed in organic crop production.

As demonstrated in research included

in the petition and reviewed in the TR, nanomycin has resulted in resistance in candida albicans. Anti-microbials with medical uses should not be used in agriculture, and particularly not organic agriculture. Further, NOC would ask the NOSB to put nanomycin on the livestock work agenda, to be listed at 205.604 as a prohibited non-synthetic.

Energy infrastructure impacts. Please add the study of energy infrastructure impacts to the work agenda, with an end goal of guidance for instruction developed by the NOP that would provide resources that could be shared with certifiers and producers, to aid in maintaining certification and improve consistent application of the standards.

One such resource that has been proven effective by the Ohio Ecological Food and Farm Association and has prevented decertification on more than one occasion is the Organic Agriculture Impact Mitigation Plan. We are not asking the NOP or the NOSB to take controversial action against any industry or practice. Thank you.

MR. CHAPMAN: Thank you. Emily.

MS. OAKLEY: Thank you for your comments on paper pots. I know that we discussed within our subcommittee the issue of precedent that the program is concerned about, and I just wanted to know if you saw any similarities between paper pots and some other issues.

MS. BADGER: Thanks, Emily. We definitely do. There are so many issues right now that -- I mean if we're being frank, sometimes come under the don't ask, don't tell, let's not talk about it. GMO vaccines. We need to petition them to be on the National List. Treated twine being used all over farms, sodium nitrate, inerts, naled and after the last TR perhaps paper itself.

MR. CHAPMAN: Steve.

MR. ELA: Natamycin. I appreciate your comments. It's one I go, I mean I tend to agree but I struggle with a little bit because it obviously could have use for anti-rot and preservation of fruit, and certainly with patulin

and some of those other things which are human health concerns as well.

It could help prevent some of those. I mean is your thought on banning it just it has that crossover on human health for treatment of human health, and you think that's significant enough to actually put that, to protect that use only for human health?

MS. BADGER: Steve, I am really glad you did ask that question actually. I do feel strongly enough. Do you know, one of the webinars which you know I take very close notes on, one of the speakers suggested that oh, in the U.S. it's not really used for human health. That's only in Third World countries.

It is amazing we had -- there were probably a dozen people on a NOC call when we were discussing this, and one of them who is new to our group, working with I'm sorry, I can't even tell, Maine Organic --

PARTICIPANT: MOFPA.

MS. BADGER: Thank you, MOFPA,

actually said -- he goes you know, I actually have personal experience with this. I had something wrong with my eye, and my eye doctor was like it really hard to find any medication that actually works for eyes anymore, and he said I had to use nanomycin, and it was the only thing that cured this.

Then the other thing that I just have to say, and so many people know I'm very kind of blunt. But I'm just going to say this, Steve. You know, the candida albicans yeast infection, the gentleman that never, that said that it's not used just must have never had one, but frankly, you know.

(Laughter.)

MR. CHAPMAN: I think we'll stop that comment there. Ashley, you ready to follow up that?

MS. SWAFFAR: Are you the one to ask about gums, or should I direct that comment, question to someone else?

MS. BADGER: It should be directed to

someone else. I'd be happy to try to answer it, but I'm not certainly -- that's not one of my strongest points.

MS. SWAFFAR: Okay. Would Abby be the better person to direct my question about --

MS. BADGER: Can you tell me what the question is, and then maybe I could --

MS. SWAFFAR: Well, you guys suggested that the gellan gum should expire, but you guys also suggested that we delist carrageenan and gellan gum. Is there a replacement for that? So I just -- and I said that when I voted for carra -- to remove carrageenan.

I was very concerned that the next time that gums came around, that everybody should see we shouldn't remove them from the National List. So I want to know some more detail on why you say that.

MS. BADGER: I am going to actually, if I could, refer that to our member organization, Beyond Pesticides, and again because it's just not my strongest area.

MR. CHAPMAN: Harriet.

MS. BEHAR: So I have a question about the energy infrastructure. So we have been struggling with this, of how it fits in. So your point of providing information to aid producers and certifiers in maintaining their organic certification during the activities of energy infrastructure moving through organic land.

This is -- so this is what -- this is the direction that you're looking, that you would like to take. Because so it's not a banning of it; it's just a matter of how to best, a best practice in a way or guidance for certifiers, so that across the country and across the world when this occurring, those operators and certifiers can deal with this, so it allows that land to retain organic production.

Is that the way you're looking, that our work agenda item maybe would look?

MS. BADGER: Right. So my next sentence I didn't get to, but I'll just say prohibited substances can be identified when

energy infrastructure occurs on organic farms, and alternative materials and practices that do not jeopardize the viability of certified operations are available and have been used.

We heard on one of the webinars from Doug Raubenolt, who is an organic inspector. He has been hired through these impact mitigation plans to oversee farms, organic farms where this work is taking place. He presented on the webinar four distinct questions that he had, and that was just one person.

So we've talked about putting together an expert panel that could come up with and inform this discussion with some very distinct points for clarification, that the Board could then discuss and some perhaps guidance for certifiers could be provided. Right now, there is nothing so everybody's winging it.

MR. CHAPMAN: Thank you. Thank you for your comments. We'll move along. Thank you for your comments.

MS. BADGER: Thank you.

MR. CHAPMAN: So up next, I had called Jaydee Hanson. Jaydee Hanson had provided comments previously on the webinar, and we only allow one comment in the webinar or in person. So I'll be moving to the next commenter, which is Gwendolyn Wyard, and Gwendolyn is Johanna Mirenda. Sorry for putting you on the spot there Gwen. Gwen, if you can start with your name and affiliation for the record.

MS. WYARD: All right. Good morning NOSB, NOP staff and ladies and gentleman of the gallery. My name is Gwendolyn Wyard. I serve as Vice President for Regulatory and Technical Affairs for the Organic Trade Association. First I'd like to welcome Dr. Greenwood and Mr. Schwartz, and I should also welcome Scott Rice's beard to this meeting.

(Laughter.)

MS. WYARD: All right. So I'm going to focus on two topics this morning, with one take-home message for each topic. The first is pull-u-lan, pullulan. The Organic Trade

Association is the petitioner of this material. In short, pullulan is produced via fermentation and this is used to make vegetarian capsules that are then used for encapsulated dietary supplements that are certified to the "made with" category.

Organic capsules are not commercially available, and the only alternative at this time is an animal-based gelatin capsule, which is not appropriate for vegetarian products. So why the petition? Since at least 2003, as far as I am aware of, certifiers have been classifying pullulan as agricultural and allowing it in the 30 percent non-organic portion of a made with product.

In response to NOP guidance that came out in 2014, certifiers are now classifying as non-agricultural, which means it must appear on the National List to be allowed in NOP certified products. Without its continued allowance, we estimate that the economic impact to the organic dietary supplement sector would be over $825

million.

Our take-home message on this topic is that we recognize that there is some debate about the classification status, and we agree that there's some ambiguity to it. For all the reasons that are documented in the technical report, which is well done and in our comments, we believe that it should be classified as non-agricultural, and more importantly, we want it to go through the full NOSB National Review process, appear on the National List and be under continuous NOSB review.

Organic seed usage. The Organic Trade Association emphasizes that organic seed is the foundation to a thriving farming, organic farming system, and in order to require operators to demonstrate continuous improvement of organic seed usage, over time a regulatory change is needed.

Take-home message on this topic is that this has been on NOSB's work plan for a very long time. There's been great work that's gone

into it, and while the proposal to update existing guidance continues to surface a swarm of discontent if you will, we believe that there's very strong support to revise the regulation to require continuous improvement.

We find the intent of your proposal to be clear on the regulatory change. We believe that wordsmithing, the ands, ors, commas at this point is counterproductive to progress, and we ask you to please pass this portion, make a single motion to pass the regulatory change that's in that proposal, and bring the guidance back to subcommittee for more work.

In closing, the Organic Trade Association represents 9,500 members across the U.S. and across the supply chain. We're here because we're committed to both promoting and protecting organic agriculture and making organic a part of everyone's everyday lives. The NOSB process is very important to our organization and to our members, so we thank you all for your time and dedication that you put into your work.

Thank you.

MR. CHAPMAN: Thank you. Questions from the Board? Lisa?

MS. DE LIMA: Do you have any insight on the time line on the availability of organic pullulan?

MS. WYARD: Availability of organic pullulan. So the company Capsugel has been working on organic pullulan for some time. Actually, the parent company is Lonza. They are European. They are committed to not only making the perfect product with the quality that meets everyone's specifications, but they're also committed to being able to meet the demand which is continuously growing.

I believe that they will be here today if you can direct that comment to them, but I think you probably will get the same answer, that they are working as quickly as possible. People are lining up out the door to use organic pullulan, because the only way that you can use -- put the USDA organic seal on a dietary

supplement is to use an organic capsule.

The weight of that capsule, if you're using non-organic pullulan-based capsules, only will allow it into the made with category. So there's a huge incentive to use organic. This petition is to keep the continued use in the made with category only. That petition's very specific to supplements in the made with category only.

When organic becomes available, we're absolutely confident that that's where companies will go, so that they can use that USDA organic seal.

MR. CHAPMAN: I had a question and then we'll go to Harriet. So did you indicate that pullulan's not allowed or not mentioned in international standards? What's going on in those markets? What are companies using as an alternative?

MS. WYARD: Yeah. So that's an interesting situation. We are unique in the United States in that we're the only country,

we're the only regulation that is actually looking at the capsules. So in Europe, they're not considered. They don't calculate them when they do the organic percentage, and they don't look at the composition.

So they're really, they're basically viewed as packaging. So that's why you're seeing it. I noticed in the TR-2 it goes through all the different international standards. It's either they're not on the list or it's not allowed.

But that's because they're not considering the capsule the way that we do, where not only do we look at the composition of the capsule that's used for a dietary supplement, but we also calculate it into the percentage of organic.

MR. CHAPMAN: Harriet.

MS. BEHAR: So thank you for your very detailed comments on the genetic integrity transparency document, and I had a couple of responses. As far as the level of purity, it

would be up to the producer of the seed to go within those specific level of purity just to make the database collection of information clear.

But if they wanted to have the specific level of purity, they could do that as well. It's not meant to constrict what information is being transferred. We're just looking for transparency, so that the producers who are growing out that seed know at least what they're starting out with.

And then there's some other aspects that we will be dealing with. I also wanted to ask you about your response to the paper pots and expanding it to other uses of paper beyond just pots, like seed tape and things like that. We really haven't had a chance to talk about it within the Crop Subcommittee, but we also have not clarified what our technical review will be covering, so we will discuss if want to be adding that.

I know that whatever happens, we don't

want to slow down our work on paper pots, but I don't know if adding those things would or would not. So would you encourage us to make sure if we took longer, that we should try to look at every use of paper that we could think of and try to get that covered in the TR, or would you be okay if we only did a TR just on the pots?

MS. WYARD: I'm going to stay in my lane on that question, and I'm going to defer to our Farm Policy Director, Jo Mirenda, who's up I think in a couple of commenters, if that's okay. All right, great. Thank you for the clarification.

MR. CHAPMAN: Thank you, Gwen. All right. Up next is Jo Mirenda, followed by Beth Unger on deck. Jo, if you could start with your name and affiliation for the record.

MS. MIRENDA: Okay, I have new affiliation. Good morning. My name is Johanna Mirenda and I'm the Farm Policy Director for the Organic Trade Association. I'll be commenting today on paper pots and marine materials.

The Organic Trade Association supports the allowance of paper to be planted in the soil when used as a planting aid, because paper is already allowed for equivalent uses such a mulch. In terms of the impact on human health or the environment, there is no meaningful difference between the allowance of paper as mulch and the petition use of paper. Both have direct contact with the soil; both uses allow paper to biodegrade.

In our written comments, we further address the issue of adhesives. In short, we support a technical review of those adhesives that are intentionally added after the paper is manufactured, to further formulate the paper into final products.

As the NOSB proceeds with its review, we strongly encourage the Board to take a broad approach for reviewing paper-based planting aids to be inclusive of generic products that are paper-based and used as planting or seeding aids. There's a broad spectrum of paper-based products

that are made from the same types of materials, paper, and used in the same manner, planted in the ground, but are designed in slightly different ways.

If the listing is limited only to pots and containers, you might find yourselves in this position reviewing new petitions for nearly identical materials that are designed in slightly different ways, such as the tapes that Harriet mentioned.

A broadened approach will make efficient use of your time to review this variety of materials, and will also allow for a scale-neutral review of paper-based planting aids, which could be designed by a variety of manufacturers for various scales of production.

On to marine plants. The intended goal of the Materials Subcommittee is to protect marine environments from potential contamination and destruction caused by marine plant harvesting, and we fully support this effort.

But we do have questions about the

feasibility of implementing a requirement that marine plants be certified organic as a means for achieving these specific sustainability goals. In our written comments, we identify several areas of study such as assessing the sustainability outcomes of the each, the crop's certification scope versus the wild crop's certification scope, and also assessing existing efforts of NGOs and other relevant organizations that are active in marine ecosystem sustainability.

We look forward to further discussion on this topic with OTA's members and with the NOSB. Thank you.

MR. CHAPMAN: I will start with Harriet and Sue and Emily.

MS. BEHAR: In your former life as working with OMRI, there is an OMRI mulch that's approved, that's listed. Weed Barrier I think it's called. I see it advertised and I see the OMRI listing. I'm just wondering, was that virgin paper, was that recycled paper? Did it

have adhesives, because you know, there's already a mulch that's a paper mulch, and I'm wondering how deeply OMRI reviewed that and if there's some synergy here with the discussion on paper pots.

MS. MIRENDA: The composition of that specific product I can't recall on the spot. But in general, when paper is being reviewed under its current listings on the National List, there is a mulch or a feedstock, it's a deceivingly complex listing, and I can guarantee that OMRI and many other certifiers have had in-depth conversations about what is paper, what are the different sources, what are the different composition fibers, what are the additives, when are they added?

If you add the adhesives and the inks before it's paper, those are okay. But if the paper is finished and then it's being further processed into a pot, how do we deal with those? In fact, this was a topic of training at the Accredited Certifiers Association training back in 2018, and the ACA is looking to build best

practices around this, because there's a lot that goes into this listing, there's a lot of different types.

In terms of virgin paper specifically, so we're looking at that term in contrast to recycled paper, because recycled is what's in the listing. There's no definition for recycled. So it's unclear whether that's limited just to paper that's 100 percent recycled content coming out of a commercial paper recycling facility, or is it you have some cardboard boxes ready to go to the dump, but instead you're using them on your -- as mulch or something.

So recycled, repurposed, reused, diverted from the waste stream, all of these interpretations are currently being used in the absence of a definition. And that -- I'll leave it with that.

MR. CHAPMAN: Sue.

MS. BAIRD: Yes. I'm sorry. We've heard overwhelmingly from stakeholders asking if we could intercede for a grace period for

implementation for prohibiting paper pots, and I know in your work you've reviewed a lot of this stuff.

Do you have any specific instances where there could be a prohibition by NOP, but they've said oh yeah, but we're going to give you a grace period to implement that?

MS. MIRENDA: Sure. On the first point, I'll just confirm that the Organic Trade Association in our written comments did support an extension of this 2018 phase out period. So that position is based on acknowledgment that we feel there's a negligible impact on organic integrity because synthetic paper with synthetic processing aids and additives is already being used in the organic system.

So this is really a question of implementation of this deceivingly complex of listing of paper and the annotations that surround it. And in terms of similar examples, the one that first came to mind for me is -- this is the handling example, but sodium and potassium

lactate.

So these are two individual substances. The NOPs, they're not currently on the National List, but they had been allowed under an old interpretation that if you combine two materials on the National List and you get a third new one, sure use it.

Obviously, that is not an interpretation is not is or should be used today. So the NOP issued a memo saying these materials need to be petitioned, they need to go on the National List. This Board did review those petitions, issued a recommendation to approve. Rulemaking is still in progress, and throughout this whole period certifiers are allowing these materials.

So to me that's a good example because there's differing interpretations. There's good faith effort on behalf of the certifiers who do their due diligence of reviewing these materials, and instead of disrupting the marketplace for certified operators that have been using these

approved materials by their certifiers, just sort of let the process play out.

MR. CHAPMAN: Thank you. Emily.

MS. OAKLEY: After that comment, can I have two, because now I wanted to ask Jenny what her response to that might be, and if that might provide a window for extending the grace period.

DR. TUCKER: I am sensing a theme. You know what I'll say is that we're going to take the all the comments from this meeting back, and I'll be providing an update to our senior leadership on the key topics that came up in this meeting. So I appreciate the comments.

MR. MORTENSEN: Just for the record, could Jo restate those substances? I couldn't make out what you said.

MS. MIRENDA: Sodium lactate and potassium lactate.

MR. MORTENSEN: Thank you

MS. MIRENDA: And I believe they were petitioned together, so there's one petition, one

recommendation.

MS. OAKLEY: So my actual question was about reading materials. Thank you very much for your detailed comments, and you expressed support for the concept of using the wild crop standard as a tool for trying to address the environmental impact. I was wondering if you could elaborate on that a bit.

MS. MIRENDA: Sure. So in our written comments, we did support the logic of using our existing organic certification system, very strong, gold standard, to evaluate the sustainable production of materials, including that may end up being used in crop inputs, because they align with the Organic Foods Production Act criteria for the National List.

That being said, we still had questions about what really is the problem we're trying to solve in terms of potential contamination and over-harvesting of marine plants. We really wanted to have this Board and the community have a better understanding of the

real problem, so that we're sure that whatever solution is proposed will address that problem.

So with the difference, different requirements for crops versus wild crops standards, and given the lack of specificity in the standards for marine agriculture specifically, at this point we're not fully convinced that this is the right solution.

We just have questions about it and support continued work either through a working group or an expert panel, bringing together other stakeholders so we can really get an understanding of this issue that we feel is important.

MR. CHAPMAN: Steve.

MR. ELA: Coming back to paper pots, we're wrestling in the Crop Subcommittee of how to ask like for a technical report, so we're not asking for approval of a product, but an ordinary thing. So taking paper as a planting aid is a great idea. How would you -- you know, does this say we're going to allow any adhesive obviously

is not, I don't think, a door we want to open because that's just ad hoc.

Do you have any suggestions of how we should approach the whole adhesive issue, so that it becomes something we can get a TR on, something we can annotate? You know, I guess I'd just appreciate your feedback on how we should proceed, in your opinion.

MS. MIRENDA: Sure. So there has been a lot of work done on newspaper and recycled paper. There was just a full technical report done last year, and goes into a lot of information about the adhesives, the glues, the inks, the dyes, the toners, the laundry list of things that are used in paper manufacturing.

So consider that as a starting point just to assess what's already been reviewed and approved, and then finding your sliver scope of something that could be used in a limited scope technical report. That could be a way to balance conducting a thorough technical review on the unique aspects of these paper-based planting

aids, without slowing down the process to do another full TR.

MR. ELA: I guess one of the issues though like the TR on paper or on newspaper, you know, it listed a few adhesives and then it kind of goes "and many others." That's where, you know, it's -- I mean we recognize there are many others and some are proprietary, etcetera, etcetera.

But in terms of allowing a use beyond recycled paper given the issues there, I guess we're still wrestling with if you try and approve just a few adhesives, how do you -- how do you know that? Kind of this could be a percentage, or how do we wrap our hands around that whole issue and contain it so it doesn't approve something that just becomes, excuse, becomes anything goes?

MS. MIRENDA: Well, the fact that the technical reports lists a ton of materials, then kind of goes on to say, you know, etcetera, there's just a lot, gives you a sense that

there's already lots of synthetics being used in paper that can be used as mulch directly on the soil left to biodegrade.

So consider looking at what additional risks might be involved with a paper pot. That might have some adhesives which may or may not be exactly what's already being used in paper, regardless of whether you may be able to identify those or not. But I'll stop there.

MR. CHAPMAN: Okay. Thank you for your comments. We're going to have to stop there.

MS. MIRENDA: Okay.

MR. CHAPMAN: Thank you. Up next is Beth, followed by Sam Welsch. Beth, if you can start with your name and affiliation.

MS. UNGER: Good morning. I'm Beth Unger, Regulatory Engagement Manager at CROPP Cooperative, and I want to thank you for the opportunity to provide comment. I apologize that I'm going to go over the same old ground you've been hearing for the last two days, but you know,

there's a few things that I wanted to bring to your attention.

So I'm focused on the Materials Subcommittee genetic integrity transparency of seed, the Crop Subcommittee's strengthening the organic seed guidance, and the NOP process for publishing information for the National Organic Standards Board meeting.

First, the genetic transparency of seed. A lot of thought and work went into the proposal. There's a lot of things that we really liked about it. Corn was the very right choice to start off with as being the highest risk. The GMO crops out there. Putting the burden on producers using conventional seed to obtain test results is a disincentive to use conventional seed. So it's really accomplishing two things at the same time.

Reporting results provides visibility on contamination levels. It's something that this committee has dealt with over the years, and it's information that isn't widely available. So

we think that that's a great idea. We also like the fact that the subcommittee included sampling protocol, which is really a key element for obtaining good data in the first place. The proposal would have had added clarity of organized in a manner to highlight the responsibility by stakeholder.

It was a little bit confusing that way, a little disconnect going on there. But and we did have information on that in our written comments that you could refer to. But overall, we think that that was a very well thought-out proposal.

Strengthening the organic seed guidance. As stated in previous comments over many years on this topic. CROPP supports the use of organic seed through our own internal policy. Although one can always improve on written proposals, there were key elements in the proposal the NOP can use to strengthen the guidance document, and also regulatory. We especially appreciate the recommendation to add

to the regulations at 205.204(a)(1)(i), requiring improvement in the search, sourcing and use of organic seed. We urge you to pass a proposal at this meeting.

On the process, I'm going to be really brief. We thought it would be a good idea. I know that these proposals don't all come at one time. If you would just get them through clearance and posted as they become available, to give us time to reach out to stakeholders to give better and more thorough public comment. Thank you.

MR. CHAPMAN: Thank you, Beth. Harriet.

MS. BEHAR: So I'm going to ask on a totally different. I hope you can answer. How do you feel about putting on the work agenda review of GMO vaccines and modifying the current listing in the regulation about allowing excluded vaccines, but only if they're listed? Or should that be removed completely and just allow, or I mean we probably should put it on the work

agenda. So that's my opinion.

I'm wondering if you think it should stay as is, or should we work on this to clarify that?

MS. UNGER: I believe that if you worked on that, that would be consistent with 205.600.

MR. CHAPMAN: Ashley.

MS. SWAFFAR: I just want to clarify. We did submit that as a work agenda request item.

MR. CHAPMAN: Thank you, Beth.

MS. UNGER: Thanks.

MR. CHAPMAN: Up next is Sam, followed by Zea Sonnebend. Sam, give us your name and affiliation.

MR. WELSCH: Yes. My name is Sam Welsch. I'm with OneCert. First, I want to discuss a couple of items on the National List. I support removal of the microcrystalline cheese wax, because it's not essential for mushroom production, and it can often contain antibiotics. I support the removal of sucrose octanoate esters

which are not being used, at least in the beekeeping area, and because they're probably not an effective treatment anyway.

Regarding the petition for pullulan, I want to advise you to be careful of claims that it can be certified organic. I've looked into that for years in trying to track down those who claim to have a certified organic pullulan, only to find out when we ask questions that the certifications are being surrendered or suspended. There are currently no certified organic pullulan on the Organic Integrity Database.

I know there's aspects that prevent compliance in manufacturing process, so be careful about accepting claims without evidence.

Regarding inspector qualifications, obviously I support high quality inspector qualifications, but I do oppose the licensing of inspectors, adding additional burdens there. We already have an accreditation that requires certifiers to have qualified staff, and it's not

limited to inspectors.

It includes our reviewers and others making decisions about certification. I also includes the NOP. So we need to look at all levels to have consistency in quality, training, education and I'm very pleased that NOP is working on that to ask that in conjunction with ACA, the Accredited Certifiers Association, which is also working very actively in developing best practices guidance for our members and others in the industry.

I think adoption of those is key. One example of an issue where we don't have consistency and we need some guidance from the NOP is recently we had found that somebody was selling product that was not on the National List, or they had -- or they had surrendered. The previous certifier was telling our client who was buying product from them that because they had a contract that was issued before they surrendered, they could still accept shipment of product as organic from that now uncertified

operation.

That's contrary to what I think is the general practice among certifiers. It turns out upon further investigation that that previous certifier had only initially inspected them one time. They had never been audited, and it was one of the operators who was, pled guilty to fraud.

So they were getting permission from a certifier to continue to ship organic product, even after they had surrendered their certification. We need guidance, instructions from the NOP to make sure no certifier is telling somebody when you're no longer certified you can still ship organic product.

MR. CHAPMAN: Thank you. Questions for Sam? Harriet.

MS. BEHAR: I'm unaware that the microcrystalline cheese wax could contain antibiotics. I'm not sure who's the lead on that. Where did you -- since you mentioned that we should always look for evidence if a claim is

being made, I'm just joking. But where did you get that information, because that's very interesting to me?

MR. WELSCH: That was on SDS sheets on products that we were requested to approve for use.

MS. BEHAR: So you actually saw an MSDS?

MR. WELSCH: Yeah. That's a bit dated. That was -- that was information we had at the time it was initially listed so we knew it was being done at that time.

MS. BEHAR: So we're talking probably 12 years ago or something like that?

MR. WELSCH: Yeah. So I'm not sure if that still is current. We've never approved the use of it. The people that wanted to went to other certifiers.

MS. BEHAR: Well, I wonder if any certifiers out there who are going to come up and give public comment could help clarify if they're still seeing that out there.

MR. CHAPMAN: All right. I've got Steve and then Ashley.

MR. ELA: Sam, when you say you would support delisting microcrystalline cheese wax, it seemed like in the public comments there was some -- it was unclear to me whether there were or were not suitable alternatives. Some people said there were, some people said there weren't. In your experience are there alternatives for those producers that do want to grow on logs?

MR. WELSCH: There seemed to be at the time when we were initially looking at it.

MR. ELA: Would those be --

(Simultaneous speaking.)

MR. WELSCH: Yeah. I think there's the ones that were listed, the soy waxes and things.

MR. CHAPMAN: Ashley.

MS. SWAFFAR: Okay, a couple of very different questions for you. The first one is SOEs. As an international certifier, I'd kind of like to get your scope on that. EPA doesn't have

a listing here in the U.S. for SOEs. Do you see SOEs being used anywhere else around the world? Do you certify bees at all?

MR. WELSCH: We do certify some beekeeping, but mostly wild harvested areas. We're not aware of anybody who's using it.

MS. SWAFFAR: Okay, and a follow-up question. Since you didn't submit written comments, my question is paper pots. What's your stance on paper pots?

MR. WELSCH: Well, I don't want to be too unpopular here, but we're one of the certifiers who never approved them, and we're in fact surprised that other certifiers had. We looked at it because of when we asked for information about what's in them, it was obvious that they included synthetic adhesives and other components that were not on the National List.

So you know, for consistency we've also supported the extended period for pullulan to continue to be allowed, even while it's being petitioned. So I'm not going to speak in favor

or against the extension, but I do understand. It's important to be consistent, and it's hard to be consistent when you make different rules on how popular the option is, rather than go back to the rule.

I tend to look at what's in the rule, what's in the law, what's in the regulations, and say that's what we should be doing. It should be extraordinary circumstances where we don't follow that.

MR. CHAPMAN: Thank you, Sam. I think that's it. Thank you. Up next is Zea, followed by Phil LaRocca. If you could start with your name and affiliation.

MS. SONNABEND: Greetings. I'm Zea Sonnebend from CCOF and Fruitilicious Farm in Watsonville, California. I'm a former member of the NOSB in the scientist seat from 2012 to 2016. I'm also one of the historical voices of NOSB, having been to one of the very early NOSB meetings here in Minneapolis in 1993 I believe, so I know a lot about the past.

Anyway, we would like to comment about strengthening the organic seed and the genetic integrity of seed. CCOF supports the rule change to 205.204. Certifiers really need something that they can use to justify that growers are continuing to improve in their organic seed requirement.

So we fully support Gwendolyn's position of at least pass that part of it, and maybe take back the guidance portion for further work.

On the genetic integrity of seed, we support the proposal strongly, that there be seed tags that have purity indications. We also very strongly support the retaining of a sample of seed, but we'd like it to be for 18 months instead of 12 months because you don't usually see a problem in the seed until you harvest the crop that resulted from that seed several months later.

And then at harvest if you find a problem, it takes some time to do an

investigation and trace it back, and that might take you through the next planting season. So 18 months would be better, and so that's our position on that.

We strongly support the excluded methods terminology which as you know we did a lot of the work spearheading that effort, and hope that work continues on that. I also just want to say a few things about the change to the inerts annotation, which I understand has fallen off the table and is not being worked on, even though the NOSB passed a recommendation.

There are two significant problems that still remain. One is that this effort started because the EPA came here and said they did not want their old List 4 still mentioned in the federal regulations. So they would really like that to change. Just because they haven't been back doesn't mean they don't still want it.

We worked with them for many years on the Inerts Working Group trying to get that changed, and we have a change they could agree

with and we could agree with so we want you to do it. And second of all, because it's in limbo, it's really inhibited new product development.

So all these potential tools that organic farmers could be using aren't being developed because don't know what to put in for inerts, because they don't know what the regulatory scheme is going to be.

So since the buzzer hasn't run, I will also say that historically there is quite a bit of precedent for grace periods and different practices that come into effect. CCOF does not have a position on paper pots. We also have never allowed them.

But personally, I would just like to point to the biggest grace period that happened in the past was when the inerts policy first came into effect it was quite a radical change from what was being done, and an 18 month period was given for inerts to come into compliance with the federal rule.

Eighteen months so that the EPA could

take another -- reclassify some manufacturers to reformulate, et cetera. Thank you.

MR. CHAPMAN: Thank you, Zea. Questions for Zea? Harriet.

MS. BEHAR: For the farmers retaining samples under the genetic integrity, do you feel we need to give a little bit more direction besides the 18 months on how to keep samples?

MR. SONNABEND: I think that easily could be done, and certifier training would be a good place to do it, and then certifiers can tell people. It's as simple as putting some seed in a mason jar, putting a label on it saying the variety and the date you put it aside. And you know, really very simple. It doesn't have to be an involved thing.

MR. CHAPMAN: Thank you, Zea. Thank you. Up next is Phil, followed by David Wallinga.

MR. LaROCCA: Good morning. My name is Phil LaRocca. I am the owner and winemaker of LaRocca Vineyards. I also sit as the Chairman of

the Board of Directors for CCOF and I am here to actually speak for some of our certified organic dairy producers in California. Jenny, thank you because you covered some of the issues that I'm going to deal with here.

First of all, I will say we are one of the rare bodies that actually asked for regulations, and there's a reason for that. It's these strict regulations that make us who we are. It also gives us a place, standing in the marketplace. Organic stands out. It is felt by some of our dairy producers that they are following the rule to where it should be, and this is what we are asking you, to make sure that the organic livestock and dairy standards are followed through the fullest, highest degree of precision.

It is felt that some of our producers are doing this, and by so doing are being discriminated a little bit in the marketplace by other growers that may not be following the practices. I'm not a dairy producer. I make

wines, so I'm doing my best to help some of our growers out.

But I'd also like to carry these statements and make them ditto onto egg and poultry production as well. Now this is my area here that's concerning me always, and that's drift. Drift is a problem that the organic community has faced on and on. We just recently had an issue where an organic peach grower was drifted upon.

Fortunately, his neighbor was a friend, a conventional grower who had insurance and was able to cover his crop because his crop was fully lost, and now he's going through the period of trying to regain his organic certification again.

What I would like to see happen is some form of government crop insurance, whether it be through the NAP program, where certified organic growers are protected from drift, whether it be pesticide, herbicide, fungicide or genetic drift.

On that same topic, it was brought up to me yesterday that we're going to have areas that have been affected by the flood and the hurricanes, and they are probably going to be dusted with some heavy chemicals for mosquitos.

So this Board should be aware that something's going to take place there, and that there may be some organic farms involved, so what are we going to do about it. On the last note, I want to say that I'm very grateful to be in this room, because I consider some extremely brilliant minds to be here.

We're all here for a great purpose and that is to grow healthy food and make this world a better place. I realize that if we all thought the same it would probably be pretty boring. But at the same time, we have to remember let's have our differences but also what we are trying to accomplish we'd like to see at CCOF.

Let's make organic the norm, that we all need to work together. We are only one percent of agriculture, and to gain into that

percentile we need to work together and respect each other. So thank you.

MR. CHAPMAN: Thank you, Phil. Harriet.

MS. BEHAR: This actually is more of a question for Jenny and Paul. I know when Miles was the deputy administrator, we were -- there was guidance on drift actually listed as an item that the National Organic Program was working on. I live in the Upper Midwest and drift is a very large issue for us.

And I don't know at one point at just stopped appearing on the list, with no explanation. So I'm wondering if there is anything happening within -- the NOSB never saw what Miles was working on, neither did the public, and I think that's an issue. I'm just curious what's going on with that.

DR. TUCKER: Yeah. That's a good, a good question. Can you hear me, yeah? A good question and I appreciate your asking about the status of that. There was, and it was talked

about I think during a couple of meetings a while ago, the possibility of looking at drift. I think it was in the form of guidance at the time.

And that, that document was distributed within, within USDA, and there were a lot of very, very good questions about it that sort of sent us back to really being, consider all the different variables that were associated with it. So the document has not moved forward since then because the complexity of this is really enormous.

So that continues to be addressed on an operation-specific basis with certifiers. But at this time, that guidance is not active on our work agenda.

MR. LaROCCA: Our comment. In California, we're trying to work on that. But it always seems that the fellow or person who has drifted was the guilty party. We need to reverse that. It's kind of like we're guilty until we prove ourselves innocent, and it shouldn't be like that. If you're drifted and your whole

livelihood is at stake, we should have some backing by either state or federal government to come in and say we're the innocent party here and we need to be covered, and we're not really seeing that.

MR. CHAPMAN: Thank you, thank you.

MR. LaROCCA: Yeah, thank you.

MR. CHAPMAN: Asa? Phil, sorry. We still have a question for you.

MR. BRADMAN: So just one follow-up question. Do you have a database or is there any central repository of information on the number of drift incidents and who is affected and what crops and the monetary loss?

MR. LaROCCA: I don't have that with me now, but I bet we have some of that at CCOF.

MR. BRADMAN: If you could submit something like that, that would be great.

MR. LaROCCA: Okay, thank you. That was the national database on that Asa that Purdue University keeps, that have 4.5 million acres of arable crop land was drifted on last summer, for

example, by specific compounds.

MR. BRADMAN: But that's not necessarily just organic though.

MR. LaROCCA: You can break it down to organic and conventional.

MR. BRADMAN: Okay great, thanks.

MR. CHAPMAN: Okay. Next up is David, followed by Glenn Kern. David, if you could start with your name and affiliation.

MR. WALLINGA: Good afternoon. My name's David Wallinga. I'm a physician and Senior Health Officer at the Natural Resources Defense Council, which uses science and public health and advocacy to protect public health and the environment.

So I am here to talk about the use of human antibiotics in organic poultry production, and how it bears on public health as well as consumer understanding of the organic label. Consistently, polling shows that U.S. consumers want meat and poultry products raised with fewer or no antibiotics, and most consumers do so under

the impression that buying those products is important for their own health and the health of their families and it is.

The CDC and the World Health Organization, for example, among other leading health authorities, agree that using antibiotics in food animal production ultimately increases the spread of antibiotic resistance that's now epidemic, and that poses a rising threat to all of us here.

So many consumers therefore seek out approved labels such as organic or raised without antibiotics because they think it means zero antibiotics used, and in a case of raised without antibiotics they would be right. But unfortunately that's not true of the USDA approved organic label.

When its own label fails to meet consumer concerns or understanding, that's a problem that the USDA should and needs to address. So specifically NRDC urges the USDA to support this Board's request for its work plan to

include a prohibition on use of antibiotics in organic agriculture without exception. This would include, for example, the current practice of routinely injecting gentamicin and aminoglycoside antibiotic by hatcheries into their eggs just before the chicks hatch.

Gentamicin is an important human drug that's injected into very sick patients when other drugs don't work. Among other things, for example, it's used in newborns who have life-threatening meningitis, sepsis or other systemic infections. It's also used in adults.

I suspect most consumers would be surprised to learn to gentamicin is routinely used in organic chicken production. When they do learn it, I think it would conflict with their common understanding of what a USDA organic label represents. The current exemption allows for antibiotic use in production before chicks turn two days old, and that exemption dates back to 1990 when the OFPA was passed.

At that point, day-old chicks never

having been given antibiotics were unavailable. But that was a generation ago, almost 30 years, and we're in a different era now. Now they are freely available. I would point to written comments from both the National Organic Coalition as well as Consumer Reports that make clear that this exemption is no longer necessary and in fact would be easy to fix.

So in summation, I urge the USDA to reconsider its denial of the Livestock Subcommittee's request to add this issue to its work plan. Thank you.

MR. CHAPMAN: Thank you. Ashley.

MS. SWAFFAR: Yeah. What data do you have that suggests that antibiotics are routinely used in organic poultry?

MR. WALLINGA: Well in the U.S., we don't actually collect data on usage by species or on the farm. So USDA has been consistently been asked to do so by advocates like myself. The General Accounting Office has consistently recommended it as well, but we still do not

collect on farm use data.

So we can't answer that question. However, when extension agencies, for example, or other publications talk about the use in poultry production, that's listed as a common use. In addition, we know from Public Health Canada having done a study several years ago, looking at hatchery production in Quebec, that it was almost uniformly used at that point.

MS. SWAFFAR: In a different country.

MR. WALLINGA: In a different country, right.

MS. SWAFFAR: Not in the U.S., in the U.S.

MR. WALLINGA: Not in the U.S., because again in the U.S. we don't actually track antibiotic use at the farm. So we're a little bit in the dark.

MS. SWAFFAR: Yeah, so I'm sorry. This is as a member of the poultry industry for a lot of years, I know that it's not a routinely used thing in especially the egg industry. So

that's --

MR. WALLINGA: I hope that's the case and with -- if the NOSB were able to put that in their work plan, maybe that's a fact that they could establish.

MS. SWAFFAR: Yeah, and my other follow-up to your suggestion on asking the NOP to let us work on that. I think that it needs to be elevated probably to the Secretary's level. So those comments need to be directly written in and lobbied to the Secretary level.

MR. WALLINGA: Okay, thank you.

MR. CHAPMAN: Rick.

DR. GREENWOOD: Yeah. I have a question. Do you have any data about the survival of for instance gentamicin, which is a protein after cooking? My thought is that if you cook an egg or you cook meat that has antibiotic, does it survive? So is it at that level not a risk anymore for resistance?

MR. WALLINGA: Right. I mean it's a common misconception that what we're talking

about is residues of antibiotics in the meat or in the food product. That's not the issue. The issue is that when you expose the bacteria in the egg or in the animal to an antibiotic, that it in fact spurs resistant bacteria to form and then spread.

So we do know that from the NARMS program that there are routinely antibiotic-resistant bacteria on food products where antibiotics are routinely used. So that's true for chicken as well as other species.

DR. GREENWOOD: I get that part of it. I'm thinking of a human gut changing to flora and developing resistance in an individual.

MR. WALLINGA: Well, you can get human gut flora changing by being exposed to antibiotic resistance bacteria on the meat or other food products that they eat, because those bacteria can transfer their resistance genes onto other bacteria in the human gut.

DR. GREENWOOD: No, I know that.

MR. WALLINGA: Yeah.

DR. GREENWOOD: I'm just thinking about a source, and I think there's too much antibiotics. I mean don't get me wrong, but I'm just thinking how much of that survives cooking for exposure to individuals. I've never seen any data for it, but it seems they won't survive cooking.

MR. WALLINGA: I don't know of that data. But again in my own personal opinion, that's a little bit of a distraction from the other issue that I'm talking about, which is the resistance among the bacteria that we know are on food.

DR. GREENWOOD: Thank you.

MR. CHAPMAN: Thank you. Asa, do you have something briefly?

MR. BRADMAN: Just very briefly. I just want to thank you for your comments. I'm a public health person. It's an issue that's worldwide and of concern to a lot of people concerned about health. So I think it's important that you raised this. Thank you.

MR. WALLINGA: Thanks.

MR. CHAPMAN: Thank you. Up next is Glenn Kern, followed by Peter Nell. Glenn, if you can start with your name and affiliation.

MR. KERN: My name --

MR. CHAPMAN: Thank you for your comments here today.

(Laughter.)

MR. KERN: That's it. My name is Glenn Kern, and I'm offering these comments on behalf of the Carolina Farm Stewardship Association or CFSA for short. CFSA works in a variety of ways to expand the footprint of organic farming in the Carolinas. A crucial component of this work is supporting conventional farmers who transition to organic production of our region's most reliable crops.

Many of these farmers have become important voices in support of transforming agriculture in the Carolinas to a more sustainable model. This is a transformation that is urgently needed. The CAFOs and chemical-

dependent crop farms that dominate the coastal regions of the Carolinas present unacceptable risks to human health and the environment, in the context of a changing climate.

Severe flooding like that caused by Hurricane Florence last month is predicted to become more common and with it, the risk of contamination for nearby communities and ecosystems. Organic management is a way for conventional farms in the coastal regions of the Carolinas to adapt to the risks of climate change.

CFSA is in favor of farmers growing organic sweet potatoes, soybeans, corn, wheat, vegetable and yes, organic tobacco, if this valuable crop is what they choose to grow in order to stay afloat. Indeed, more than half of all certified organic crop farms in North Carolina have made the choice to grow organic tobacco as part of their rotations.

Yet organic tobacco may soon be lost to farmers in the Carolinas. At the NOSB meeting

in Jacksonville, this Board considered a petition to add fatty alcohols to the National List for use as a sucker control agent in tobacco. This substance had been allowed by some certifiers for years based on the determination that it was a non-synthetic.

However, the Board classified fatty alcohols as a synthetic and then did not recommend it for addition to the National List. Regrettably, not a single grower of organic tobacco was heard from at that meeting. Without the use of fatty alcohols, many farmers who grow organic tobacco will have to abandon this crop and perhaps organic certification altogether.

Organic tobacco accounts for nearly 50 percent of all organic crop sales in the Carolinas, and there is every reason to think that the loss of this lucrative market will be more devastating to our organic farmers than the thousand year flood they experienced last month.

It's our understanding that a revised petition for fatty alcohols has been filed. If

and when the NOSB reviews this revised petition, you will hear from organic farmers in the Carolinas who grow tobacco. CFSA will make sure of that. I thank you for all the work you do on behalf of organic agriculture and for your consideration of these comments. I'm happy to try to answer any questions you may have.

MR. CHAPMAN: Emily.

MS. OAKLEY: Thank you for your comments. In the absence of fatty alcohols, what are organic producers using right now?

MR. KERN: That's a good question. I am -- I have spoken to some farmers and they have said that they are -- that mineral oil and soybean oil do not work. I have also heard third hand that some certifiers are continuing to allow the use of fatty alcohols, but that -- that's not something I can speak to directly.

MR. CHAPMAN: Thank you. Up next is Peter, followed by Kate Mendenhall. Peter, if you can start with your name and affiliation.

MR. NELL: Hello. My name is Peter

Nell, and I'm a policy specialist with CCOF. Today, I'll be commenting on the Materials Subcommittee's discussion document on marine materials and the 2020 sunset review of elemental sulfur.

CCOF, as you might know, is a non-profit organization governed by the people who grow and make our food. We certify over 3,000 operations in 44 states and three countries. CCOF shares the concern that marine materials are under threat of over-harvesting habitat degradation and destruction.

However, CCOF does not support requiring organic certification of marine materials to the wild crop standards. CCOF does not certify marine materials, and the discussion document notes that certifiers that do have difficulty adapting the National Organic Standards to aquatic systems.

The Board should establish a working group to determine the feasibility of integrating -- of integrating fishery certification,

sustainability verifications or attestations for all ocean source inputs, seaweeds, fish products, et cetera into the National Organic Standards.

We recommend that the Board determine a phase-in goal that all marine materials be sourced from third party verified and/or certified sustainable fisheries within ten years. Obviously we understand the complexity of this issue.

Additionally, organic claims on input products are currently outside the scope of NOP enforcement. Therefore, it would be difficult for certifiers to verify input compliance to the wild crop standards.

Regarding elemental sulfur, over 1,000 CCOF members list the substance on their OSP. Some list both dusting and wettable sulfur products, and use them in a wide variety of crops for pest and disease control, and also for soil fertility. CCOF encourages our members to comment, but they don't always have the capacity to directly submit their own comments.

In this case, we direct -- we conducted direct outreach to our members that list elemental sulfur on their OSPs. Some of them did submit written comments, and in many cases they responded to us and I included that comment, their comments in our written comments.

Given the importance of elemental sulfur to many organic producers, NOSB should carefully consider whether additional safety precautions or limitations should be required for its use. Thanks for your time.

MR. CHAPMAN: Thank you. Emily.

MS. OAKLEY: Thank you for your comments on marine materials. I know that you've stated also in your written comments that you're concerned that this would be difficult for certifiers to verify. If we were requiring that the ingredients, the marine macroalgae itself were to be certified to the wild crop standard, what's your concern there if they were to have a certificate and then would also be on the Organic Integrity Database for that product?

I'm not totally sure how that's different from verification of other materials, other naturals that we have right now.

MR. NELL: Sure. I think our assumption was that the entire product was to be certified. However, yesterday at the NOC meeting you did mention that it was going to be a single ingredient. I'm happy to talk with our team and discuss that further. But at this time, I'm not sure.

MS. OAKLEY: If you do discuss that with your team and you have further thoughts, if you'd post those to the open docket that would be really helpful.

MR. NELL: Absolutely. Thanks Emily.

MR. CHAPMAN: Thank you Peter.

MR. NELL: Thanks.

MR. CHAPMAN: Up next is Kate, followed by Michelle Smolarski. Sorry if I butchered that Michelle. Kate, if you could start with your name and affiliation.

MS. MENDENHALL: Thank you. Thank you

members of the National Organic Standards Board for the opportunity to speak before you today. My name is Kate Mendenhall. I'm the Director of the Organic Farmers Association, and I'm also an organic farmer in Iowa.

The Organic Farmers Association was founded in 2016 as a national grassroots membership organization that provides a strong and unified national voice for domestic certified organic producers.

Organic Farmers Association works to build and support a farmer-led national organic farmer movement, and national policy platform by developing and advocating policies that benefit organic farmers, strengthening and supporting the capacity of organic farmers and farm organizations, and supporting collaboration and leadership among organic farmer organizations.

What sets us apart is that we are farmer-led and farmer-controlled. Only certified organic farmers drive our policy positions. All domestic certified organic farmers are invited

annually to submit policy priorities, which are then vetted by an elected policy committee of certified organic farmers.

OFA organic farm members vet these policies and then vote on them, following our restrict one farm-one vote policy, where all farmers have an equal seat at the table. Our membership and network of certified organic farmers is diverse and spans across all 50 states and U.S. territories.

Organic Farmers Association greatly supports the work and role of the NOSB in maintaining the integrity of the USDA organic label. We urge the NOP to complete its work on the NOSB recommendations that remain in the status of outstanding and in process. Farmers and consumers trust and rely on the NOP enacting the NOSB recommendations in a timely and transparent manner, and we ask that you make this a priority for 2019.

We urge the NOP to issue guidance based on the 2015 proposed origin of livestock

rule and publish a final rule in 2019; to put more resources and attention into pasture rule compliance; to implement the organic livestock and poultry practices rule; to stand by the 2010 NOSB vote and recommendation to not allow certified organic hydroponics; and to immediately stop labeling and material listing as invalid listing, as no definition nor explanation of procedures for determination and management for the term exists.

We submitted a number of specific recommendations in our written comments. Most notably, our national farm membership has prioritized organic integrity as their number one concern. This is directed at both domestic integrity, with consistent enforcement of the pasture rule specifically, but all organic standards nationally across region, farm size and certifier.

Also import integrity is essential. We must act more swiftly and effectively to protect American organic farmers against import

fraud. Thank you for the opportunity to address you today.

MR. CHAPMAN: Thank you. Questions, Emily?

MS. OAKLEY: I just wanted to say thank you for being here. It's really nice to have a farmer organization at the table representing farmers.

MS. MENDENHALL: Thank you.

MR. CHAPMAN: Harriet.

MS. BEHAR: In the positions that you've put in your written comments, were they split positions or was it a pretty universal agreement on those items?

MS. MENDENHALL: We have a pretty strict policy for how our policy positions come forward. We are split up into six regions nationally, and so for any policy position to be accepted, it has to go -- it has to receive national support of 60 percent, and then it also has to receive two-thirds of the regions also showing 60 percent.

In our last year, we just started in 2016, so we've only been through one round of annual policy resolutions. But all of our policies pass, I believe, are over 80 percent nationally and in each region. So we're quite united as a national farmer voice, and that was really I think comforting and exciting to see in this first year.

MR. CHAPMAN: Thank you. Thank you for your comments.

MS. MENDENHALL: Thank you.

MR. CHAPMAN: Up next is Michelle, followed by Tom Harding.

MS. SMOLARSKI: Good afternoon. My name is Michelle Smolarski, and I work with the International Food Additives Council, an association representing manufacturers of food ingredients. IFAC supports the Handling Subcommittee's recommendations to relist several sunset review substances, and we thank the Board for the opportunity to provide comments today.

IFAC strongly supports the

subcommittee's recommendation to retain xanthan gum on the National List. Xanthan gum contributes unique thickening, stabilizing, emulsifying and texturizing attributes to foods and beverages, and is widely used in foods for populations with allergies and celiac disease, including gluten-free products.

Production of xanthan gum does not harm the environment, and aligns with organic principles, as it relies on a natural process with no harmful metabolites or byproducts. In addition, since xanthan gum is produced through the natural process of bacterial growth, IFAC believes it more appropriately fits the description of a non-synthetic, and suggests the NOSB consider moving xanthan gum to 205.605(a).

IFAC also supports the subcommittee's recommendation to relist gellan gum. Gellan gum is also produced for bacterial fermentation and provides the organic industry with unique stabilizing and thickening properties needed for a variety of applications, including suspending

important nutrients in foods and beverages, in fortified beverages.

Furthermore, gellan gum provides the organic community with a gel source suitable for vegetarians and those with cultural or religious dietary restrictions. In addition, IFAC strongly supports the relisting of lecithin de-oiled at 205.606. De-oiled lecithin has a unique functionality higher than that of powdered lecithin, and is commonly used in oil and water emulsions.

De-oiled lecithin provided to the organic industry by IFAC members does not contain modified proteins and is fully compliant with the prohibited use of any ingredients derived from genetic engineering in organic foods.

Finally, IFAC would like to express our support for these subcommittee's recommendation to retain gum arabic, locust bean gum, carob bean gum and guar gum on the National List. Gum arabic is used worldwide as an emulsifier in common foods like granola bars and

salad dressings, allowing these products to be shelf stable and therefore more accessible. It's also used to impart texture and thicken foods.

Carob bean gum, also known as locust bean gum, delays ice crystal formation and is used as a stabilizer, thickener and fat replacer, as well as an adjunct gelling agent and texturizer to other hydrocolloids in dairy deserts, baked goods and dressings and sauces.

Guar gum is preferred due to its superior water binding and viscosity abilities that are not replicated by organic alternatives. Because of guar gum's unique technical attributes, it keeps frozen dairy products consistent through freeze-thaw cycles from manufacturer to consumption.

In closing, we would also like to express our strong support for relisting alginate, mono and diglycerides, magnesium stearate, phosphoric acid and tragacanth gum. Thank you for the opportunity to comment.

MR. CHAPMAN: Thank you. Questions,

Harriet.

MS. BEHAR: Has anyone looked into possibly producing in the like the locust bean gum or the carob bean gum as an organic product?

MS. SMOLARSKI: Unfortunately I am not a technical expert. I know that there has been -- at this point, I don't -- I'm not able to phone a friend. I cannot call on our technical experts in our membership. But I'm happy to follow up to provide some more historic information.

MS. BEHAR: And submit something to the docket. We would like to see that.

MS. SMOLARSKI: Yeah.

MR. CHAPMAN: Thank you. Up next we have Tom Harding and I think we will break there then for lunch. So Tom, you could start with the name and affiliation.

MR. HARDING: Thank you. Tom Harding. I'm here representing Green Ag Supply as a consultant. First of all, I want to thank you all for the good work that you continue to do,

not that it's easy. I'm here representing Green Ag Supply, who petitioned fatty alcohols for the use on organic corps, specifically organic tobacco crops.

We have taken the recommendations of the NOP, the NOSB and the Subcommittee and others who have been very involved, and we have submitted a new and revised petition to the NOP for the use of fatty alcohols on organic tobacco crops. It contains much new and additional technical information, field trials, et cetera, material trials. Hopefully it will be considered, reviewed, received and final approval for the National List.

If we can be of assistance in any way, our scientists, our farmers will be ready to answer of the additional questions you may have, and we hope that they will be all be here when this final review. Once again, we want to encourage the Board to put on its work list the materials appeals process.

I know that you have a lot on your

work agenda already, but I think it would save a lot of time and money if we had an appeals process, versus having to go back through the whole resubmission. Separately from Green Ag Supply, I want to speak on behalf of the term the gold standard, which is the National Organic Standards Program, the NOP, the OFPA were as organic as it is regulated within 205, that it is the gold standard.

We have to be very careful. I've participated in a number of panels in the last few months, and I see all kinds of programs coming out even using the term organic within the framework of their name, or in some parts of their work.

I'm not against any of those things. I think we must do everything possible to make and keep the NOP legal standards the gold standards, which can include incrementally improving these standards through the process established within OFPA.

It does us no good to argue about

these points, but it's most important that we protect the term "organic." I think we have to be very careful. When over 75 percent of the current marketplace recognizes the USDA organic seal, it's really important that we must legally protect and value the word "organic."

I can tell you that without this protection, we will have a confused marketplace which continues to have to some degree a lot of confusion right now. I want to thank you all very much.

I want us to work together on behalf of the term "organic," and I want to remember one thing. NOP organic standards are the gold standards. I thank you very much.

MR. CHAPMAN: Thank you. Questions for Tom. Emily.

MS. OAKLEY: Thank you for your comments. I wanted to ask you the same question that I asked Mr. Kern. In the absence of fatty alcohols, what are organic producers using right now for sucker control?

MR. HARDING: Well, we just came through a whole series of field trials this season, and they have tried mineral oils. They were doing soybean oils. They were doing peanut oils, a number of things, all of them trying them. The problem with that is they don't work. It's a significant amount of additional labor.

Almost all of it has to be done, to some extent I should say, by hand. It exposes them to green tobacco disease, the workers. It's a health and wellness issue as well. So frankly we're not using anything that really does a good job. There are a number of competitive products on the market that use similar processes.

But we know that fatty alcohols work. We've had a debate about that. For years, it was recognized as a natural product by the detergents industry and also the cosmetics industry. It's derived from palm kernel. It's a natural oil. Where we lose the whole issue and drift over into the synthetic side is in the fractionation, the esterification process. So we haven't found

anything that works like it.

MR. CHAPMAN: Dave.

MR. MORTENSEN: Yeah Tom, just so that we're clear, because we spent a lot of time discussing this and working through this, the fatty alcohols are used effectively as a growth regulator clipping chemical.

MR. HARDING: Specifically sucker control.

MR. MORTENSEN: Right, right, and so in the absence of the chemical and it sounds like these other compounds are not working in field trials, it would be done by hand as it used to be done before the growth regulators were used, is that right?

MR. HARDING: Yes, and at that time we were a little less than 25 percent of the marketplace. We're now substantially grown since then. We'll probably lose 50 to 60 percent of our organic growers. The trouble with that is we also lose the sweet potatoes. We also lose many other crops that are grown organically.

So we would have a reduction for sure in growers, because most of them are pretty sophisticated today, small, medium and large. They use machines wherever they can.

MR. CHAPMAN: Emily.

MR. MORTENSEN: Thanks.

MS. OAKLEY: So I'm just unclear. I don't want to belabor this, but are people still using fatty alcohols right now?

MR. HARDING: Well of course right now we don't need them anymore. But at the point, yes. We have certifiers arguing about that point. One of them approved them on the basis of natural.

We go through the whole petition process with him, and there's a debate going on. Of course, that's why we came to petition the Board, so we could get all of that behind us, and really make sure our growers are within the system and the framework it is.

MR. CHAPMAN: Thank you, Tom.

MR. HARDING: Thank you.

MR. CHAPMAN: Okay. It is 1:02 right now. We are going to take just an hour break for lunch. So we'll be reconvening at two o'clock sharp. So folks know, the first two people up after break are Peggy Miars and then Mark Kastel. We are in recess.

(Whereupon, the above-entitled matter went off the record at 1:02 p.m. until 2:05 p.m.)

MR. CHAPMAN: All right. If Board members can take their seat. Members of the public could take their seat, we're about to get started. Okay. The majority of the Board is present, as well as the DFO, and so we will come back into order and proceed with public comment.

Up first is Peggy Miars, followed by Mark Kastel. Peggy, if you can start with your name and affiliation for the record.

MS. MIARS: Good afternoon. I'm Peggy Miars, Executive Director of OMRI, the Organic Materials Review Institute. I missed the last two NOSB meetings due to travel commitments, but I understand at the spring meeting this year that

some disparaging remarks were made about OMRI during public comments.

So I'm going to start by repeating some of the comments I made at the April 2016 meeting, where I explained OMRI's role in the organic community. At that time, an NOSB training presentation was posted on the website, and on the screen I have a slide from that presentation.

But there is a piece missing, and there still is. Okay. OMRI is an important stakeholder in the organic community. The NOP, in its interim instruction for material review, allows certifiers to consult with OMRI, and we have worked on technical reports. OMRI has provided information and assistance to NOSB members whenever requested, and we provide comments during meetings to assist the organic community.

Certifiers subscribe to OMRI to receive technical assistance, and they rely on OMRI product decisions. Certified operations

also rely on the OMRI products list when sourcing inputs for which the certifier has final approval. Consumers rely on the OMRI listed seal when they choose products at their home and garden retailers.

So you'll see OMRI commenting at every meeting, and we're a resource for material review information and technical assistance. So while OMRI is not called a certifier in the U.S. organic sector, we are accredited by the USDA to ISO 17065 to certify input products.

Since 2011, when the NOSB unanimously recommended that the NOP establish accreditation for material review organizations or MROs, OMRI has advocated for such accreditation. The NOP did not implement that recommendation. However, in the interim instruction for material review, OMRI was named, along with the California Department of Food and Agriculture Organic's Input Material Program, as MROs that certifiers may consult with.

Being ISO 17065 accredited, OMRI is

obligated to accept applications from any company that applies. OMRI is also obligated to review any input products that submit the required information and that meets the scope of our review program. Finally, OMRI is obligated to list any products that are compliant with the organic standards.

We do not make decisions based on personal opinions or a company's reputation. Decisions are objective and based on fact. OMRI does not take positions for or against materials. Our job is to review input product compliance to organic standards.

We are a neutral MRO that was created in 1997 as a non-profit organization by and for the organic community, and we continue to provide a valuable service through our rigorous review program. Thank you for allowing me to clarify OMRI's role once again.

MR. CHAPMAN: Thank you, Peggy. Any questions for Peggy? Steve.

MR. ELA: Could you provide your

thoughts, and I'm coming back to, like, paper and paper pots, and how we as a board should address. I mean obviously it's a petition for a product, which we don't deal with, but how we can address it as a generic issue and deal with the issue of adhesives that perhaps are added after the paper is made.

We know there's many adhesives in the paper, but do you have any thoughts of how, what would be a good way to proceed?

MS. MIARS: Thank you for that question, and I am going to defer that to our technical director, who's on the list coming up later today.

MR. CHAPMAN: Any other questions for Peggy? Harriet.

MS. BEHAR: So do -- how do you consult with the certifiers then? Do they pay a fee to you or can anyone call you? How does that work?

MS. MIARS: We have a subscription program. We have a certifier subscription

program where they sign a contract with us. We are basically a contractor for them doing work just like a lab or an inspector or that sort of thing. There is an annual subscription fee. We also offer subscriptions to the general public. Anyone who wants to pay an annual fee can then contact us for any kind of technical assistance.

For example, we have subscribers that are libraries, colleges, universities, that sort of thing, so that they get our newsletter, they get our list and information so that their clientele can refer to it. So in other words to answer your question, anyone from the public can be a subscriber and get assistance from us.

MR. CHAPMAN: Thank you, Peggy. I'm sorry, Dan.

DR. SEITZ: How do you select people to do the technical reviews? In other words, I'm very glad to hear that you approach your work very objectively and so forth. But someone's background, whether that they've been in industry or academia, can color sort of the approach that

they take to reviewing a material.

So what are the checks and balances that you have to make sure that the technical reviews we get are as objective as possible?

MS. MIARS: So I just want to clarify. Are you talking about the product reviews that we do or are you talking about technical reports?

DR. SEITZ: Well, the technical reports for the NOSB, if I understood you correctly, yeah.

MS. MIARS: Yes. Well, what we have done is we typically rely on our advisory council members. These are people with decades of experience in the organic community. Many of -- or I won't say many, but some of them have Ph.D.s, and so they understand chemistry and science.

So the review is first -- I'll tell you about our review process. First we do an administrative review, make sure we have all the documentation and paper work and so forth. Then it moves on to a technical review, where we have

a technical reviewer who then looks at the ingredients, the manufacturing process and so forth, all that kind of detail.

Once we have all the information and all the answers that we need, then the staff puts together something called a findings of fact, and that spells out all the information and a recommendation. For most products, the decision then goes to an external review panel, who are again made up of people with experience in the organic community. We have certifiers and so forth that sit on those review panels.

Some products, if it's really simple and we've seen that kind before and it's pretty easy, those will be determined by an internal review panel of qualified and trained staff.

MR. CHAPMAN: Emily.

MS. OAKLEY: Just a clarification. That was for your internal product review, right?

MS. MIARS: Oh. I'm sorry, yes.

MS. OAKLEY: That's okay. That's okay. I just want to be sure that Dan --

MS. MIARS: I got confused. I asked the question, and then I got confused, yes.

MS. OAKLEY: No, it's okay. I just want to make sure Dan understood.

MS. MIARS: But thank you for clarifying that. So anyway, yes. For the technical reports, we typically rely on our advisory council members as I said, to either author or to have a technical review. It depends on the substance, it depends on the time line, it depends on the availability of people. So sometimes the staff will be the author. Sometimes our advisory council members will be the author.

MR. CHAPMAN: Thank you, Peggy.

MS. MIARS: Thank you.

MR. CHAPMAN: Up next is Mark Kastel. On deck is Shannon Helms. Mark, if you could start with your name and affiliation.

MR. KASTEL: Thank you, Mr. Chair. My name is Mark Kastel. I am with the Cornucopia Institute. We are a farm policy research group.

Who owns the organic label? We all do. First of all, we wish Dr. Tucker well. She's inheriting a troubled program.

When we founded the commercial organic movement in the 1980s and asked Congress to pass OFPA, this was viewed as a social and economic justice vehicle for family farmers. $50 billion a year later, how's it working? Farm gate prices for milk are down 25 to 50 percent, 50 percent. Farmers are selling out.

Some organic fresh market vegetable producers are telling us that CSA and market sales are down as much as 30 percent. They can't compete with pseudo-industrial organics or hydroponics. Organic world crop producers can't compete with phony imports from China or former Soviet bloc countries, untrustworthy countries in any kind of commerce.

While the NOP and this Board focuses on important microissues, organic farmers are losing their livelihoods. Conflicts of interest, closing the revolving door. What if we had a

former certifier head the NOP? Congress charged the USDA with oversight of certifiers specifically, and past OIG audits were damning in their criticism of the accreditation program.

What if that farmer, what if that former certifier becomes a cheerleader, the cheerleader-in-chief at the ACA meetings on behalf of the certifiers he's supposed to be overseeing? What if he makes secret, behind the scenes deals with those certifiers which are worth millions to them?

What if based on FOIA documents, the largest certifiers that are found guilty of major improprieties are let off the hook? Then what if he leaves the USDA and goes to work gaining some lucrative consulting contracts with the same certifiers that he favored in the decisions while he was running the program? How would that look to the public?

What if a former NOP leader overrules a certifier and allows an operator to substitute a small porch holding maybe three to five percent

of the birds in a hen house, when the law clearly states that all organic livestock, all must have access to the outdoors?

And then what if that same former NOP official waltzes through that proverbial revolving door and becomes a lobbyist for the same ag producer that that favorable ruling benefitted? What if now you can close that loophole and close that revolving door? Thank you.

MR. CHAPMAN: Thank you, Mark. Questions for Mark? Dan.

DR. SEITZ: First, I want to say Jenny, I really appreciate the NOP's focus on enforcement, and I think it's so key, and Mark, your organization has for a number of years highlighted what you consider to be non-adherence to various pasture rules and other aspects of the dairy industry.

So just in a couple of sentences, what do you see are the main areas where certain dairy farms are not in compliance with the rule, the

rules of the NOSB?

MR. KASTEL: Well first of all, this criticism isn't directed at Dr. Tucker, and I'm from Missouri, so I'm waiting for them to show tangible results from this new program you're instituting. So farmers right now can't sell -- farmers can't even go out of business, I'm not exaggerating.

So farmers are on suicide watch, and I'm not exaggerating. Their co-ops are getting them psychological help. They can't sell their cows. They can't -- they have loans on their cows. They can't quit milking unless they sell their assets. There's no market for organic cows. They can't sell their farms.

So the NOP accreditation program has allowed some of these dairies -- I don't have to visit them, although if you look at our website I've visited them. There's photographs. We don't have to hire airplanes to fly over. We've spent thousands.

If you look at the manure management

plans, the nutrient management plans that the state regulators have publicly available for these CAFOs, the average organic farm in this country has about one cow per acre. Some of these have ten cows per acre, and if you don't think that's a funny enough joke, some of those CAFOs in their organic systems plan have them cutting hay off the same pasture.

So we don't know how much annual growth they cut, but if it was 50 percent, that would be an effective stocking rate of 20 cows per acre. That ain't funny to me. And then so what's the tie-in here with the revolving door, conflict of interest, certifiers not doing their job, QAI?

It's a matter of public record. If you go to the Cornucopia Institute website, we have a tab which is called under Programs, Projects called the FOIA reading room, and you can see the basis for some of these statement. So Shamrock, with thousands of cows in the desert outside of Phoenix, was criticized by the USDA,

found guilty of breaking the law.

QAI was criticized. What happened to them? Nothing. CCOF, certifier -- I'm almost done here, Mr. Chair, thank you. CCOF certified Rockview in Amargosa Valley, Nevada. They had 5,000 cows, 2500 organic. They were forced to reduce that to 300 after our complaint. They never should have been certified in the first place by CCOF.

Finally Aurora, after the Washington Post story gave us all a black eye in this community, was found by the NOP to have been inspected by their certifier, the Colorado Department of Agriculture in November of the previous year, after pasture took place. All that, Doctor, happened during the last administration at the NOP, and the result is that farmers are losing their livelihood now.

So we really applaud the initiative that's going on now, cautiously optimistic and we'll be hoping to positively critique it when it's done. If not, we'll resume our criticism.

But thank you for the initiative.

MR. CHAPMAN: Thank you, Mark. Any other questions? Thank you Mark.

MR. KASTEL: Thank you for the opportunity.

MR. CHAPMAN: Up next is Shannon Helms, followed by David Meyer. Shannon, you can start with your name and affiliation.

MS. HELMS: Yes. Hi, my name is Shannon Helms. I'm Regulatory Manager for CP Kelco. CP Kelco has provided comments in support of the relisting of gellan gum and xanthan gum. CP Kelco's customers and organic community benefit from the use of gums because while they are used in very small amounts as ingredients in foods and beverages, gums provide options for healthier choices in dietary considerations such as fat replacers, replacements for gluten or replacement for traditional thickeners.

CP Kelco supports the continued listing of gellan gum. Gellan gum is an approved additive under the FDA, and gellan meets the FDA

definition of a stabilizer and thickener, and as such gellan gum may be used to achieve the technical and functional effects as listed in the standards of identity.

Gellan gum provides the Organic industry with unique properties to formulate products for consumers across various application segments. Gellan gum can be used in fortified beverages to suspend proteins, minerals, vitamins, fiber and pulp. Calcium fortified beverages such as rice, soy and almond are of great interest to the organic community.

Gellan gum also provides the organic community with a non-animal gel source suitable for vegetarians, vegans and those with religious or dietary restrictions. Based on the unique functionality of gellan gum and the numerous organic applications, this substance is essential to organic food production and should be retained on the list.

Xanthan gum. We would like to reiterate our previous request that the NOSB

consider listing the substance as a non-synthetic under 205.605(a). Xanthan is a natural extra-cellular polysaccharide, and is produced through the natural process of bacterial growth, so it may be best placed at 205.605(b).

Xanthan gum is produced from natural sources. Fermentation is a natural process used in food production for centuries. Xanthan gum contributes unique attributes to food and beverages, thus allowing many more organic products to be formulated and marketed to the consumer.

Xanthan gum functions as an effective thickener, stabilizer and emulsifier, with texturizing attributes that are attractive to many applications. The typical amounts of xanthan gum used are small, less than one percent of the process food, and usually less than .25 percent due to its effectiveness.

This also makes xanthan gum preferable to other gums, which may require much more of the addictive to be used to accomplish the same

effect. Xanthan gum is used in various food and beverage formulations. Xanthan gum is also an important ingredient widely used in foods for populations with allergens and celiac disease.

Production of xanthan gum does not harm the environment, and aligns with the organic principles as it relies on natural processes with no harmful metabolites or byproducts. As xanthan gum is safe, aligns with organic principles and lacks organic alternatives, CP Kelco urges that the substance be relisted.

MR. CHAPMAN: Thank you. Harriet.

MS. BEHAR: There was a public comment that there was a possibility that genetically modified organisms are used in the production or could be or may be used in the production of gellan gum, and I'm wondering if you can speak to whether that is a possibility, and if that's something that certifiers and material review organizations should be looking at when they are allowing this substance?

MS. HELMS: There are possibly

products used in the formulation of some gellan gums, not our gellan gums, that could be considered GM. Many of our gellan gums go through a third-party certification for non-GMO, and it really is manufacturer to manufacturer.

MR. CHAPMAN: To clarify that, gellan gum can be made non-genetically modified?

MS. HELMS: Yes, it can.

MR. CHAPMAN: Thank you. Any other questions?

MS. BEHAR: Have you noticed any increase in purchases of gellan gum, especially since it seems the natural foods industry is moving away from carrageenan?

MS. HELMS: I'm going to let either David or Wanda actually address that. They're closer to the sales and the technical, but yes.

MR. CHAPMAN: Thank you. Up next is David Meyer, and then Wanda Jurlina. Dave, you can start with your name and affiliation.

MR. MEYER: Good afternoon. I'm David Meyer. I'm the Midwest Technical Service Manager

for CP Kelco, and I'll be talking about xanthan gum today. So we just heard a little bit about it, and I'm going to go through some reasons that it's very unique and very important in food science, and in making different food products.

So xanthan gum provides thickening. It can provide suspension, it provides cling, and one very unique property is that it's cold-soluble, and this is very important in the production of a lot of foods. It also has excellent syneresis control, which is unique and a very important attribute as well.

It stabilizes emulsions and it stabilizes foams. It's used in a very wide range of pH, temperature and it is enzyme-stable to most enzymes. It provides high viscosity at very low concentrations as you just heard, and it's not chemically modified.

So what food applications is xanthan gum used in? It's used in dressings and sauces and syrups, toppings, baked goods, especially gluten-free baked goods, bakery fillings,

beverages, dairy and non-dairy, confectionary, batters and breadings, low-fat spreads. This is a small list of the thousands of different products that xanthan gum can be used in.

One very unique attribute that xanthan gum has, it's a very long molecule, and when you add shear and you add heat, it actually unwinds and unfolds, and then it snaps back into place when the heat, when it's cooled down or the shear is no longer there. That's very important for suspension. So that's why it can be used in salad dressings and hold particulates up.

This slide is really hard to see, I understand. But I just want to point out a few. This compares xanthan gum to carrageenan to gellan to pectin to guar and to locust bean gum across many different food products. Some things to understand, baked goods in especially gluten-free baked goods, xanthan gum is very unique.

It's cold-soluble, which is quite unique there. So it's very good in dry-mix beverages. It's used in dressing and sandwich

spreads, as I said. So there's a lot of important attributes that it has that makes it unique and very important in the food industry.

Xanthan gum has a high elastic modulus, meaning it's very good at suspension, and it has very high pseudoplasticity, meaning at rest it suspends everything, and then when you pump it or you mix it or when you're swallowing it, it gets really thin. It thins out almost like water under heat or under stress. But when you stop, it snaps back into position.

As I mentioned before, it's cold-soluble and it's salt-stable after hydration, which is also very important for many different applications. Thank you for your time.

MR. CHAPMAN: Thank you. Any questions for David? Thank you. Up next is Wanda Jurlina, and on deck is Robin Hadlock Seeley. Wanda, if you'd start with name and affiliation.

MS. JURLINA: Okay, and it's that button? Okay. All right. Wanda Jurlina. I am

Technical Service Manager for the Americas for CP Kelco. I've spent my entire career working with hydrocolloids, and I'm going to be talking to you today about gellan gum.

So as I've talked to you before in the past, when we talk about these hydrocolloids and gums, people kind of lump them all together. But each one of them has a very unique set of properties. Up here, I've put up a slide that's talking specifically about those that can create a gel. David's just told you about gellan gum, which is a thickening ingredient and very unique in its properties.

I'm going to be talking about both high and low acyl gellan gum. High acyl is the one that is up for relisting at this time. Low acyl we've submitted a petition, and would like to see it added to the list.

If you look at these properties like solubility, whether they can be used in applications like capsules, how heat-stable the gels are, the functionality of these ingredients,

you'll see that there's a range of Xs across the chart, designating different places where each one of these gelling agents can perform.

The thing to see with these really is that not all of them can be used for everything. So when talking a little bit more about the two different types of gellan gums, high acyl is the one that is on the right-hand side. So these ingredients that we're talking about are all polysaccharides.

So long chains of sugar molecules linked together. In nature, the bacteria sphingomonas elodea that makes gellan gum puts some side chains on that molecule. That's the high acyl. You've got two side chains, one on the top and one on the bottom, an acetate and a glycerate group.

If we leave those molecules on, we get the high acyl with its unique properties. We remove those side chains and we have low acyl, which has very unique properties as well. If we look at those properties and we start with high

acyl, because that's the one that's already approved as a non-synthetic, it's really pretty easy to use in the world of gellan gum.

It gives us opaque gels and suspensions. We use it extensively in non-dairy milks and in organic dairy milks for suspension of nutrients, flavoring components. The low acyl gellan gum, one of the areas where it has some unique properties really comes down to that capsule application, where it has some stability benefits over other ingredients.

I've listed here a few of the applications just to familiarize you with the types of products that they go in, give you a feel for where they have overlap, but where they're each unique. They offer the organic producers alternatives to other ingredients that are on the list at this time.

MR. CHAPMAN: Questions for Wanda? Harriet.

MS. BEHAR: When gellan gum was first put on the National List, how come it was only

high acyl? Was the petition for --

MS. JURLINA: I would say that's an excellent question, and I don't know if you can find good results or good information within the program's records. We originally submitted the petition for both of them to be added, and were told that only high acyl would be added.

MR. CHAPMAN: Steve.

MR. ELA: So we also have a petition before us now on tamarind seed gum. I know each of these gums have different properties, I fully understand that. At some point, I mean even though they have different properties, is there a maximum number of gums that we need to pretty well cover the spectrum?

MS. JURLINA: It depends on how efficient a manufacturer wants to be in solving a specific problem. So tamarind seed gum has been promoted to the dressings and sauces industry as a clean label thickening ingredient for those types of applications. It has a pretty unique texture and consistency, can be along the lines

of very gloppy and very structured.

So a lot of it comes down to what a particular manufacturer is hoping to do with their products. They're trying to produce an organic product that looks like a commercial non-organic product at this time. It will be challenging to do that with something like tamarind seed gum.

MR. CHAPMAN: Thank you.

MS. JURLINA: All right, thank you.

MR. CHAPMAN: Up next is Robin, followed by Jessica Walden on deck. Robin, if you can start with your name and affiliation.

MS. HADLOCK SEELEY: Yes. Hello from Down East Maine. I am Robin Hadlock Seeley, recently retired from Cornell University, where I served as a senior research associate in the Department of Ecology and Evolutionary Biology and a faculty fellow at the Atkinson Center for a Sustainable Future.

I'm now a faculty affiliate at the School of Marine Science and Ocean Engineering at

the University of New Hampshire. One of my research foci is state and federal policy on seaweed harvesting around the North Atlantic Ocean, particularly the U.S. and New England, and the environmental impacts of seaweed harvesting.

The best way to gain an understanding of the importance of preserving old growth seaweed forests is to dive underwater or to spend hours watching shore birds foraging in the seaweed. But since we can't do that today, let's just spend a few moments looking at some underwater video, looking at how vulnerable fish populations use these forests.

(Video plays.)

MS. HADLOCK SEELEY: And I will mention that the National Maine Fisheries Service has recently designated these rockweed beds as essential fish habitat for juvenile cod, which are in deep, deep trouble in the New England area.

These rockweed forests, also known as kelp in the organic market, are suffering under

the heavy demands for organic agricultural products that contain this seaweed. How much are they suffering? Dr. Heike Lotze of Dalhousie University in Nova Scotia recently observes that we don't have any old growth rockweed forests left in Nova Scotia, because everything has been harvested.

The seaweed industry in Maine has admitted that the demand for organic ascophyllum or rockweed or kelp drives them to take seaweed from conservation areas in Maine, wild islands under protection from the U.S. Fish and Wildlife Service, Maine Coast Heritage Trust, the Nature Conservancy, National Audubon and others.

One pressing question for the NOSB and the organic community is whether seaweed harvests should be and can be held to the wild crop harvest standard in 205.207. There's a lot of debate about this, but I want to close by pointing out that in the comments submitted to you, there have been a lot of good ideas and a lot of cautionary notes.

A working group is essential, I think, to hash out the details of how this could work, and find common ground, examining impacts on the organic sector and to wild native marine ecosystems.

So please support the notion of creating a working group, so the good ideas that have already been proposed can be further explored and teased apart for organic integrity, but also to keep the organic label from degrading the integrity of this wild native marine ecosystem.

MR. CHAPMAN: Emily.

MS. OAKLEY: Thank you, Robin, for your comments. Could you elaborate a little bit, based on the written comments that you've provided on some thoughts for the working group and ways that you would see it being led and being most effective.

MS. HADLOCK SEELEY: Yes. In my written comments, I suggested that it could be co-led by a marine conservation biologist and an

industry member, so that those two sides could lead and there wouldn't be dominance by one side or the other. I've been in groups where a professional facilitator is involved, and that was extremely helpful when the sides are quite far apart.

Another thing I wanted to mention is that this working group could go through the sustainability certification from the marine -- I forgot what the initials are, MSC, from MSC. Not that you would adopt the MSC standards wholesale, but there's certainly elements of the MSC certification that they spent a long time working through that would be helpful to NOP, I think.

MR. CHAPMAN: Rick.

DR. GREENWOOD: A quick question in terms of percentage of harvest. I assume all of the kelp is not harvested by organic individuals. So do you have an idea if it's 50-50 or 80-30, and where I'm going with this is maybe it's a broader issue than just for the organic community to look at.

MS. HADLOCK SEELEY: Oh, it certainly is a broader issue, but you guys are organic, so I'm coming to talk about the organic. I have no access to data that would tell me how much of the market is organic or not. Emily visited Maine, and she might know better, but I certainly don't know.

MR. CHAPMAN: Thank you. Dan.

DR. SEITZ: Well, Rick just asked one of my questions, but my other question is are these kelp beds being harvested illegally? You mentioned that there's harvesting going on in protected areas, places where fishermen have certain rights over protecting the beds for the sake of the fishing industry. So are there still just open season on these kelp beds, or are things happening illegally?

MS. HADLOCK SEELEY: So for 90 percent of the coast, there's virtually no regulations on seaweed harvest. There's no limit to what you can take, the amount you can take. There's no limit on where you can take it all -- except for

the federal lands. The federal lands are off limits, but everything else is open.

And right now, there's a lawsuit at the level of the Maine Supreme Court, because land owners, including conservation land owners, are making the case that they have ability to turn seaweed harvesters away because of their ownership of the seaweed. But that's still in the courts and quite complicated. So we're just waiting for a decision on that.

MR. CHAPMAN: Asa.

MR. BRADMAN: You just hinted at the question I was going to ask, but who -- when you say land ownership, you know, and we're talking about a marine environment where you know in many places once you're out past the mean high tide mark, it's not -- land owners don't control that environment. So I'm curious about tensions between both federal, state and then individual jurisdiction, and how to approach that.

Because I know for me it's distressing to hear about, you know, possibly damaging a wild

resource for organic agriculture.

MS. HADLOCK SEELEY: Well, this could be a 30-minute law lecture, but in Maine and Massachusetts, Maine and Massachusetts are subject to the colonial ordinance, which means that the upland land owner owns down to mean low water, not high water the way it is in other states in New England, but low water.

So the upland land owner actually owns everything in the inner tidal zone. But subject to fishing, fowling and navigational rights that were in that 1620 ordinance. The question is, is seaweed part of the public trust right to fish or not. Now the seaweed companies are saying that seaweed is a fish, and so by rights because they come in a boat and take it in a boat, it's therefore a fish.

So by the colonial ordinance, they are within their rights to come in and fish for a plant, and the land owners are saying no, it's really a plant. So since it's a plant, you don't have a public trust right and come and take it,

and that's what the lawsuit is about.

So any minute now we expect the high court of Maine to come and tell us whether seaweed is really a fish or not a fish.

MR. CHAPMAN: Briefly.

MS. OAKLEY: Even within this discussion, you know, we're conflating ascophyllum nodosum with kelp, which you and others have helped us realize over time it's actually not kelp. And so one of the questions that we had in the discussion document was the feasibility of listing the species on the ingredients list, to help understand what it is that a producer is using.

I know some of the public comments actually referred to a desire not to associate rockweed with kelp, so that consumers aren't confused by the potential changes in benefits. What are your thoughts on listing species?

MS. HADLOCK SEELEY: Oh I think they absolutely have to be listed, and there's elements of the seaweed industry that request

that it be separated out too, because sometimes a consumer will want to buy rockweed for one purpose and go to a bag and see that it's listed as kelp when it really is rockweed. Yeah, I think that's essential, because otherwise it misleads the consumer.

And part of that is a biological reason, because consumers are getting more and more educated about these seaweeds. They know that kelp grows really quickly. It regrows a centimeter a day, whereas rockweed will grow four centimeters in a growing season. So educated consumers are now wanting to turn away from rockweed and use the rapidly growing kelp, not only because it grows rapidly but because it can also be farmed.

Rockweed can't be farmed. So if you buy kelp, you'll often be buying something that was farmed. But you'll never be buying farmed rockweed, because it doesn't exist.

MR. CHAPMAN: Thank you.

MS. HADLOCK SEELEY: Thank you.

MR. CHAPMAN: Up next is Jessica Walden, followed by Alexis Randolph. Jessica, if you can start with your name and affiliation.

MS. WALDEN: Okay. Hello, I'm Jessica Walden with QAI. Today I'll be commenting on the sunset material calcium carbonate. The Handling Subcommittee proposal doesn't describe whether certain forms of calcium carbonate, namely precipitated calcium carbonate, are covered under the subcommittee's recommendation to approve its continued listing.

Certifiers often refer to the technical report when determining whether a particular form of a material is covered under that national listing of the material. So if you look at the most recent TR posted in 2018, the TR refers to precipitated calcium carbonate as synthetic, which is confusing.

It's unclear whether or not the authors of the TR are aware of the NOP's classification of materials document and criteria for determining synthetic versus non-synthetic.

The TAP review carried out in 1995 did include precipitated calcium carbonate as one of the other names for calcium carbonate that was approved for listing way back in the day.

This contributed to the allowance of precipitated calcium carbonate, I'll call it PCC from this point onward, in processed organic products by organic certifiers. So we suggest that the NOSB clarify that the TRs are not necessarily the place to inform certifiers and the industry of the formal material classification status, and that it is the NOSB's responsibility during their review of the materials to make that determination.

QAI's written comments pointed out that the starting substance is mined calcium carbonate, which does undergo a chemical change during the purification process, and then is reformed into calcium carbonate. So this is the PCC processing steps. In other words, the starting material is chemically the same as the final material, which according to the NOP

decision tree would result in a non-synthetic material.

The situation is similar to purification steps for other non-synthetic materials on the National List like lactic acid and citric acid, which QAI discusses in greater detail in our written comments. So we hope that the final recommendation for calcium carbonate will address the following:

Clarification that the TR should not be the place to advise the industry on the final material classification; clarifying that where a non-synthetic material may have gone through a chemical change during purification steps, if it is reformed into a pure grade of the starting non-synthetic material, the classification status of the purified product does not change, since the final product is a purified version of the starting material and not a new material that has been created through a chemical reaction.

Or, that you clarify that this particular issue will be addressed in the future

by the NOSB, but for now the status of PCC is not affected while further research is carried out. Thank you.

MR. CHAPMAN: Scott.

MR. RICE: Thanks for your comments, Jessica, and I know Oregon Tilth also expressed similar observations. One question for you. Would you say there's any other info in the most recent TR that would suggest a synthetic classification, or is it just perhaps a different read or not recognizing the decision tree?

MS. WALDEN: The TR is a little bit confusing. I have read it a couple of times and in one place it talks about the main manufacturing process as being this particular process, where a chemical change does exist, and then later it calls it out as a synthetic form of calcium carbonate.

So I think it really just -- it was hard for me to follow, but because we rely on, you know, as we're a certifier for reviewing the calcium carbonate, if we're looking at a PCC spec

sheet, and under the TR that's classified as or called out as synthetic, then we would think that that material's not allowed under the National List, under NOP.

So I think the TR informs how calcium carbonate can be manufactured, but it's just unclear which would be allowed under the National List listing and which wouldn't.

MR. RICE: So I guess a follow-up for the program in terms of a process to address this, would that be, in terms of respecting how that decision tree is used by a certifier or by the TR, I'm not recalling an instance where we've run into that, and would the process be to address something like that?

DR. PAUL LEWIS: Thanks, Scott. So I think the best way to look at this is relying on a decision tree that is shared in terms of the TR. Again, it's just a document that the Board uses to help in terms of developing recommendations, and the Board can look at the TR as a guide. But it's not the sole document in

terms of providing direction, providing decision tree.

Obviously for the public to look at the recommendations that the Board provides, taking into account the TR and public comments that are brought up at a meeting like this.

MR. RICE: Thank you.

MR. CHAPMAN: Other questions? Harriet.

MS. BEHAR: Would this bring up an issue that perhaps the PCC should be petitioned for 605(b)?

MS. WALDEN: Well, I guess it depends on how it's assessed. I don't think there was an opportunity for the Handling Subcommittee to actually make determination on this particular form of calcium carbonate because it wasn't included in the proposal.

You know, QAI would look at it as it would be a non-synthetic material based on precedent with other non-synthetic materials on the National List because it is a purification

step. It's not forming a new material. But it would be up to the subcommittee to look at it and make the determination based on the decision tree. But I don't know, think it needs to be petitioned. It's just rather including that in a review.

MR. CHAPMAN: So in looking at the PPM, the Policies and Procedures Manual, a technical review is defined as a report prepared by a third-party expert under contract addressing the environment, human and industrial impact of a petitioned material per OFPA and regulatory evaluation criteria, to aid in the thorough evaluation of that material by the NOSB.

So in our own definition, it does not refer to it as a tool to be used by certifiers to make determinations, or that it being a determining document, rather an aid to the NOSB itself. But you don't think that is sufficient?

MS. WALDEN: No. I think that that is completely fine, so long as the -- I guess then the proposals or the final recommendations needs

to encompass the forms that are being used, perhaps in a more thorough fashion, at least for this material.

Maybe it wasn't necessarily known of the forms that are used in handling, but yeah. So there needs to be -- something needs -- certifiers need to be able to look somewhere, to try to determine whether a material would be included.

Or maybe not. Maybe we just assess it. But it causes confusion amongst certifiers about the status. So it's just letting you know.

MR. CHAPMAN: Thank you. Any other questions? Seeing none, thank you, Jessica.

MS. WALDEN: Thank you.

MR. CHAPMAN: Up next is Alexis, followed by Charlotte Vallaeys.

MS. RANDOLPH: Okay, this one?

MR. CHAPMAN: If you could start with your name and affiliation.

MS. RANDOLPH: Okay, thanks. Hi, everybody. My name is Alexis Randolph. I am

with QAI, an organic certification agency from San Diego, California. I'm here today supporting the proposal for a risk assessment approach for accreditation.

QAI has a very robust risk assessment program for our own operators, and I'd like to share some concepts with the Board and NOP. In our industry, risk is a loss of organic integrity. Determined by the likelihood it will happen, given the facts available, risk factors can be a combination of elements applicable to all operations and specific to certain operation types.

Potential for loss of organic integrity increases when an operation has multiple risk elements at play. Additionally, some risk factors can be significant as they indicate an already compromised system. QAI applies a risk assessment three times in the annual certification process for each operator: at application review, post-inspection and after the operator mitigates any corrective actions.

We utilize a scoring system that results in a high, medium or low risk, and each risk factor has a weighted value. Here's an example of some questions and our method used when applied to all operators. A number one is added to the pink column by the reviewer for each item applicable to that operator.

You can see questions have been given a weight value of five to twenty points, and an item such as prior suspension indicates a previously compromised system. Therefore, it has more weight in the risk calculation. Whereas an operator using a lot of inputs is something to look closely at, but isn't in itself a significant risk.

The form calculates a risk score in the right-hand column and the higher the total score, the higher the risk. We have 32 total risk factors for operators. This is just a few, but you can see that they fall into three basic categories: operator history, commitment to organic and site-specific conditions.

The NOSB recommendation has done a nice job identifying risks across all these areas for evaluation of certifiers. Commitment is important and sometimes overlooked. I think a few more items in this category could be added once the NOP takes up the proposal, such as attending NOP trainings, this NOSB meeting, online webinars and other activities that indicate the certification agency is engaged and staying current on the issues.

It's important to have an outcome-based action from any assessment. QAI's outcomes include inspection frequency, additional sampling, unannounced visits, inspector selection and specific instructions that focus on specific areas in the next audit. High risk operators will always have additional actions taken.

For medium risk operators, our file reviewers have latitude to decide if additional inspections or sampling is mandatory prior to certification, even though the operator did not score as a high risk.

Low risk operators may also randomly be selected for five percent unannounced or sampling, or they're otherwise not on our radar. The NOSB recommendation is an excellent start for risk assessment programs are never static.

It's important to analyze the effectiveness. How many high risk scores are there, did the result match your experience with the company and if not what needs to be adjusted.

Lastly, risk assessments are just one tool. We always need to focus on the big picture. Thank you.

MR. CHAPMAN: Questions. Scott.

MR. RICE: Thanks, Alexis. I appreciate all your comments here and written. I think you echoed some other comments from the public on this being not an exhaustive list, and we tried to communicate as well of just a starting point. So I think having the metric of risk assessment is a really great tool as well, and I think the intent of the proposal is to give the program something to jump off from and

continue to evolve and work on and keep improving.

I think similar to the inspector qualifications discussions that we've had, I think it's the interest of the Board and the community to continue that dialogue with the program, and not just have this be something that is delivered and never seen again. So I think your comments are a good stepping off point for that.

MS. RANDOLPH: Thank you. As far as continuous improvement process, we have the starter risk assessment program based on the EU standards requiring it for operators in order to determine how many annual inspections to have. Once we started that, we realized the value in it and we continue to refine our program year after year.

So I look forward to the NOP implementing such a program for their accreditation process, and I think it will be beneficial for everyone and be refined over the

years to come. So thank you very much.

MR. CHAPMAN: I have a question for you too.

MS. RANDOLPH: Sorry.

MR. CHAPMAN: Hold on. Are you able to share your 16 risk assessments? Yours is for the certifier not --

MS. RANDOLPH: Correct.

MR. CHAPMAN: Yeah, yeah.

MS. RANDOLPH: Yeah.

MR. CHAPMAN: So are you able to share that to the open docket?

MS. RANDOLPH: I am able to share it. This was very high level. Three minutes is hard. It's super-complex. So it's much more complex than what I just presented, because we go into a lot of the detail about how did we decide what the risk factors are, and then how do we verify those with operators, sort of along the lines of what the NOSB proposal looked like in terms of what steps to take.

So I can share that, but you'll

probably have questions. So I'm happy to do that and happy to answer any questions by the Board or the program afterwards.

MR. CHAPMAN: Yes, that would be great. How common of a practice is this amongst certifiers, the risk assessment, to the best of your knowledge?

MS. RANDOLPH: Well, I mean to my knowledge, I know it's very common with certifiers that certify internationally. Like I said, it's a requirement for the EU, and certifiers are also always sharing information and our best practices with each other. So I think more certifiers have been taking this on as one tool.

MR. CHAPMAN: All right. But each certifier kind of sets their own criteria and weightings?

MS. RANDOLPH: Yes, yes. Each certifier sets up their own system, and then actually our -- our assessment system is looked at when we have our EU accreditation visits.

MR. CHAPMAN: Okay, thank you.

MS. RANDOLPH: Yes.

MR. CHAPMAN: Thank you. I keep seeing movement from Dan. I assume he's raising his hand, but I think he's just typing. Sorry.

(Laughter.)

MR. CHAPMAN: Up next is Charlotte, and on deck is Jackie DeMinter. Charlotte, if you could start with your name and affiliation.

MS. VALLAEYS: Good afternoon. My name is Charlotte Vallaeys. I'm a senior policy analyst with Consumer Reports, an independent non-profit organization that works side by side with consumers to create a fair, safer and healthier world. One of our areas of focus is food labels, which we rate to empower consumers with knowledge to make better and more informed decisions when shopping for food.

We also do nutrition and sensory ratings of packaged foods, and we recently incorporated whether a food is certified organic into our nutrition rating system.

Copies of the October Consumer Reports magazine are available to you and for you on the table back there. So please check out our nutrition bar ratings and our note about why we give more points to products that are USDA organic.

On the magazine's cover, it tells the story of banned drugs found in meat. Our food system is broken in many ways. We think it's critical therefore for consumers to have access to foods from a system that is backed by strong and meaningful standards, with additional oversight and enforcement, and that is easily identified on the foods label.

We end our cover story by telling consumers that one thing they can do is choose organic. But when the Organic label falls short, we ask you to strengthen the standards. Thank you to the NOSB's Livestock Subcommittee for putting in the work plan request, and we urge the USDA to support it, prohibiting the use of antibiotics in organic agriculture without

exceptions.

Eliminating the routine use of antibiotics in animals that aren't sick is a top priority for Consumer Reports, given the connection between the overuse of antibiotics and the development of antibiotic resistance, especially in pathogens.

While the organic standards prohibit the use of antibiotics, there is an exception. OFPA exempts day-old chicks from organic management. That means that all organic chickens and turkeys could be treated with antibiotics while they're still in the egg and on the first day of life, and sold as organic.

We often write about what organic means. Again, in this magazine you'll see it in the nutrition bar story. When we're talking about livestock and meat and poultry, can we write organic means no antibiotics were used? No, we can't. We have to put in a disclaimer, except for day-old poultry. Can you please just fix this?

We asked the USDA to take action on this for the first time in 2015. The Secretary of Agriculture at the time responded, quote, the NOP will be requesting that the NOSB provide a recommendation on management practices for day-old chicks, end quote. This is not a controversial issue.

Even Tyson and Purdue have entirely stopped using antibiotics in hatcheries and day-old chicks. At Consumer Reports, we're not beholden to any interests other than telling consumers the truth, and we'd like the truth to be that organic means no antibiotics, period. Thank you.

MR. CHAPMAN: Ashley.

MS. SWAFFAR: Charlotte, I just want to say thank you for all of your diligence in bringing this up for many, many years. Obviously you've heard what the program said this morning, that it would require a change in OFPA. I know you've done some legal analysis on that. Could you kind of go into what, how you see we actually

could work on this?

MS. VALLAEYS: Sure, yes. The fact that the exemption is in OFPA is obviously an issue. So before we brought this to the Secretary of Agriculture in 2015, we had a full legal analysis done. Essentially what it boils down to, well first of all I encourage everybody to read it. The summary of it is in the comments that we submitted.

But what it boils down to is that OFPA exempts the day-old poultry from organic management in general. It does not prohibit that a singular component of the organic standards, in this case prohibiting antibiotics, be applied to day-old poultry.

So we're not asking change OFPA, require organic management as a whole for day-old poultry. We're just asking in the regulations to put in a singular prohibition on antibiotics, that's it. So according to our legal analysis, that requires NOSB action. In 2015 the Secretary of Agriculture said that that would be requested.

So we think it shouldn't be that difficult to do.

MS. SWAFFAR: And Charlotte, just like told the commenter earlier this morning, I think we need to elevate this to the Secretary level again.

MS. VALLAEYS: I agree, and we will.

MS. SWAFFAR: Yeah, thank you.

MS. SWAFFAR: Charlotte, I really appreciate that Consumer Reports is focusing on the health benefits of eating organics. Occasionally, there are backlashes against organic food, and there was a study that came out of Stanford that claimed that there's no difference between organic food and conventionally grown food, and was picked up I saw by a magazine like the Harvard Health Magazine picked that up and some others.

Have you looked at those studies, and what do you think is happening in those types of studies that get pretty wide circulation, because they're somewhat sensational in terms of their findings?

MS. VALLAEYS: So we actually wrote a story on Monday. It's on CR.org under News, and it's reporting on the new study published in JAMA, and it's prospective cohort study out of France that found a 25 percent risk reduction for breast cancer and lymphoma when people eat organic food. So again, after we posted that story there was backlash to us picking it up and telling consumers about the benefits.

What we see consistently is that they tend to criticize that it wasn't a well-run study. It absolutely was, or that you can't draw a conclusion based on one study, which we agree with. So you know, we do what we can to tell consumers when studies like this come out and they support eating organic, that it doesn't prove anything, but it's another piece of evidence to support this kind of bigger picture that organic does have health benefits.

MR. CHAPMAN: Thank you.

MS. VALLAEYS: Thank you.

MR. CHAPMAN: Up next is Jackie, and

on deck is Rudy Amador. Jackie, if you can start with your name and affiliation.

MS. DeMINTER: Good afternoon. My name is Jackie DeMinter. I am the Certification Policy Manager at MOSA. We certify about 2,125 operations throughout the United States. I will be commenting today on paper pots.

At the spring meeting, I commented on this topic to bring your awareness to the issue, and since then I've taken part in submitting a petition for your consideration. While the petitions were for a specific paper chain pot, MOSA recognizes that all paper pots are being impacted by this conversation.

In 2019, we will have to prohibit all paper pots including newspaper pots, recycled cardboard boxes and the paper chain pots. While we weren't the first certifier to allow paper to be used as a pot, we were probably the first to allow the paper chain pots. The rationale then is the same as it now.

Paper is on the National List as a

compost feedstock in mulch. The additives used in the paper pots are included in other paper we would allow. In fact, we would allow these exact pots to be removed and composted. Secondarily, but worthy of mention, the additives are also allowed as inert substances in pesticides.

Originally, we didn't consider the recycled nature of the paper. However, with the publication of 50.34-1, we now align with the best practices recently presented to certifiers for the review of paper, which supported a liberal interpretation of what it means to be recycled, and did not feel that an analysis of the full manufacturing process of the paper is necessary.

Allowable sources of recycled paper include any paper that has been diverted from a waste stream, has been previously used in any manner, or includes any amount of recycled content, and of course newspaper including virgin newsprint. Recognizing this new focus on the recycled nature of paper, the petition broadly

lists other paper and includes hemp paper.

It would seem contrary to practical judgment to say that paper or fibers from organic hemp could not be used to make a paper pot. Farmer comments have spoken to the efficacy of the paper pot system, specifically the reduction of fossil fuel use, plastic, mulch, money, labor, time, etcetera. There has to be value on sustainability in organics.

Rather than a specific focus on this one paper chain pot, we ask that you consider the generic category of paper as a crop production aid in your discussions, and we also again ask the NOP to extend the phase out requirement. We approve paper pots in good faith in what we thought was solid rationale and practical application of the standards, and so did many other certifiers.

We recognize that the standards do not spell out everything for us, and we don't expect them to. There is room for interpretation, and try as we might, certifiers do not always agree.

We'd argue that far more farmers have been allowed to use the paper pot system than have not been, and we also certify a number of farmers that use other paper pots too. Seeing negative impacts to farms using any paper pots is disheartening.

MR. CHAPMAN: Emily.

MS. DeMINTER: I had one more sentence, to thank the NOSB for their work.

(Laughter.)

MR. CHAPMAN: You can always add that in.

MS. OAKLEY: This is a question for the program. Could we consider this paper recycled by the time it's applied to the soil as a mulch for the transplant itself, because it was originally used in the greenhouse as a first-time use for growing the seedling?

DR. TUCKER: So I think we're hearing a lot of great information on paper pots at this meeting. I look forward to taking this feedback back. So seriously, keep the comments coming.

This is very, very helpful. I think this is why we have public meetings, is to have this kind of diversity of opinion. So it's all useful.

MR. CHAPMAN: Harriet.

MS. BEHAR: So again, also for Jenny, I mean if someone rolled up newspaper into a pot, I mean are we -- so I think the reason for MOSA and the other certifiers was they were looking at the generic material, and not its necessarily its use. So we see now that we need it listed and annotated by a production aid.

But we also feel that the -- at least I do, that the original rationale for allowing it was not highly flawed in putting something that wasn't already allowed on the land.

So again, and I think there were quite a few certifiers in the public comment who said they did not allow it, but they did agree to an extended phase out period, to give the NOSB their time to put it on the National List in the correct place with the right annotation.

MR. CHAPMAN: Do we have a question

coming?

MS. BEHAR: So the question is what do you think the economic impact will be on your producers, and would there be any economic impact to MOSA if the paper pots do go away at the end of this year?

MS. DeMINTER: I certainly think that there will be economic impact to MOSA, because we have had clients tell us that they will have to choose between their certification and the pots, and the pots are going to win, because the pots are what makes their farm sustainable. Certification is secondary to that farming.

Their clients know they grow their products organically, so that doesn't sound like as big of a factor in their business considerations. But I certainly don't want to speak to the farmers, and there's a number of them out here that I know are going to be speaking.

In fact, the petitioner John Hendrickson is here, and he'll be speaking in

just a bit, and can speak far more about the farmers that he works with on the ground and that use this system. As far as we are concerned, you know, there will be clients that aren't able to or will need to choose to certify, excuse me, drop certification for either a portion of their operation or their entire operation. It might just not become feasible for them anymore.

MR. CHAPMAN: Thank you. Jenny, and then Steve.

DR. TUCKER: I just wanted to make a brief comment on material reviews, and this is sort of a general comment for folks. When we do get a material conflict at the NOP level, we do take into consideration good faith reviews. No certifier received a notice of non-compliance for having approved paper pots.

MS. DeMINTER: Thank you for that.

DR. TUCKER: So I think that as I shared this morning, there were good reasons why certifiers said they were allowed. There were good reasons why they said they weren't, and we

agreed with that group. So but that doesn't mean that we -- material reviews are really important, and are really, really important for certifiers to do well, and occasionally certifiers are going to come to different answers.

If we find that a certifier really did a frankly crappy job at reviewing a material, then that can lead to a notice of non-compliance, because they really need to raise their game on material reviews. But I did want to emphasize that certifiers who did approve paper pots did not receive any kind of non-compliance on this issue.

MS. DeMINTER: If you didn't hear me, I said thank you for that.

DR. TUCKER: Okay, thank you.

MR. CHAPMAN: And we do have the administrator saying "crappy" in the record now, so that's also pretty sweet. Steve.

MR. ELA: Same question I've been asking others, paper pots. As we look in Crop Subcommittee on that petition, and we've heard

that probably --

I mean we can't do it as a product, so we have to make the generic, which I mean I think we're kind of coming around from hearing comments here to paper as a planting aid, how would you -- how would you approach this, because it's not a material. It's a whole, it's hemp, it's paper, it's adhesives.

How would you suggest we approach that to list it without opening up the whole world to any adhesive out here, or limiting the amount of adhesive or trying to make it as concise and focused as we can while not running into this problem in the future?

MS. DeMINTER: I think that we would encourage you to follow the same process you followed with compost, feedstock and mulch. The technical reviews there, as Jo Mirenda pointed out I think, that there are a number, I mean a wide array of synthetics included in just generic paper.

So if we want to hone in on specific

categories of those in your technical review, I don't think that, you know, as a certifier we're not going to be opposed to that necessarily, but I think we would recognize the discrepancy on allowing all of those additives to be used as mulch between the rows and then the pots in the rows can only have a certain amount of additives.

So it's this consistency. Part of my job is to try to explain to farmers why we do the things we do, and I need to be able to explain that reasoning. Right now, we allow the paper pots because it makes sense to allow the paper pots. Mulch and compost feedstocks are allowed, and to try to explain to a farmer than you can do those things and you can put the compost right around the plant in the hole, but you've got to take that pot off, it just -- the logic doesn't work for the farmers.

So that's what I -- your goal is to give us something that we can work with, that makes sense and is reasonable and is practical.

MR. CHAPMAN: So do you have any -- I

mean in a case like the paper pots, where we're adding adhesives after the paper, I mean recycled mulch we're just taking the product. We're putting it out there. I can see in the future we can oh sure, we're taking this paper pot, but we're having to use it after the fact.

That kind of opens up the door for if we just say paper is an aid or something. It would open, potentially open the door to materials we really don't want in paper pots added after the fact. So I'm trying to figure out how do we limit just, you know, I mean we were talking about antibiotics and microcrystalline cheese wax earlier.

Or, you know, how do you limit in an annotation or some kind of wording, so that it's kind of, the same adhesives used as in paper or --

MS. DeMINTER: If you -- well, you guys probably didn't see the original petition that I had submitted on behalf of MOSA that was geared toward a very generic categorical listing,

because we're not supposed to petition branding products. So it was a very generic categorical listing for paper, and it did just that, including additives typically added to paper.

It was trying to broadly allow all of -- well, maybe not all of, but the common ingredients you would see in paper that's used as a mulcher or compost feed stock, because if it's allowed in those uses, those same ingredients are allowed in those uses, why does it not logically make sense to allow them to be used in the manufacture of the pot.

It's used in the manufacture of an envelope or a cardboard, you know, piece that I can use on my farm as recycled paper. So that's the challenge I think you're up against to some degree. But if you -- if I were in your shoes and really wanted to hone in on these, the additives, I'd probably get with some of the manufacturers out here that make these products, and see what additive categories or types are really necessary in the manufacture of these

types of products.

To not use additives, breaks down the product maybe and there's input that they could give you that would be helpful in determining which additives you want to consider.

MR. CHAPMAN: Thank you, Jackie. Thank you. We're going to have to move on now, but thank you for your comments.

MS. DeMINTER: All right, thank you.

MR. CHAPMAN: Up next is Rudy Amador, followed by Richard Mathews. Rudy, if you can start with your name and affiliation for the record.

MR. AMADOR: Yes good afternoon. My name is Rudy Amador, I work with Dole Tropical Products, and I'm Director of Sustainable Agriculture there.

I want to start off by thanking the Board, because I'm a bit cut off there at the end. So thank the Board first for your service, NOP for hosting, and Michelle, I wish I had five percent of your organizational skills, and I'd be

a much better employee.

I'm basically here today to talk about the importance of ethylene for the tropical fruit products that we produce and export to the United States. We basically have been working with organic bananas for about 25 years, organic pineapples for about 15. We work basically in those five countries that are on my slide there.

I wanted to point out that I'm slightly biased because I'm from Costa Rica, and may mention them more than the other countries during this talk. But I would want to point out that we also work with organic fair trade bananas and Organic fair trade pineapples, and that is relevant to my exposition here and we'll explain at the very end.

You'll be hearing probably tomorrow from some growers that came from Costa Rica to explain how they use ethylene in pineapples. I just want to say that it's basically the most important agricultural practice in pineapple production. Ethylene is used to trigger

flowering and that has impact on determining the ability to produce weekly values, also the ability of controlling pests effectively.

So without ethylene in pineapples, there wouldn't be pineapples basically. And also we work with ethylene in bananas. I don't know if most people know this, but bananas are harvested green and shipped green. They need to be shipped green in order to survive the transport period through the markets.

And when the bananas are out in the markets there are facilities, ripening facilities sometimes owned by retailers or other groups, that will use ethylene to ripen the fruit and get it to the supermarket with a uniform. Without ethylene again in bananas, there wouldn't be a banana product for the consumers.

Alternatives. There was a webinar last week and there was someone from Dole, our research director of Pineapples, that explained the issue of alternatives. So you go back to the information he provided last week. But I do want

to say that the ethylene's purpose was determined by nature, so you really cannot replace ethylene.

What you can maybe try to do is try to force the plants to produce more of their own ethylene and get that same effect. But that will be discussed also tomorrow by one of the growers who's bringing some research that was done in Costa Rica earlier in the year.

Regarding the international regulatory situation, while ethylene is approved in organics in the United States, by the European Union, by Canada, in Costa Rica also, there's going to be someone from the Ministry of Agriculture from Costa Rica referencing that tomorrow.

Here I just wanted to point out that within the codex system, it has also been reviewed and the U.S. delegation has voted for that. This is my last light. Basically the impact of ethylene removal in the growing area, the growers would be converting back into conventional, which we don't want.

There would be a loss of thousands of

jobs in the source countries. There'd be no organic pineapples or bananas for the U.S. consumer in this case. Also, a loss of growing market for retailers processors.

MR. CHAPMAN: Thank you for your comments. I have to stop you there.

MR. AMADOR: Okay, yes.

MR. CHAPMAN: Harriet.

MS. BEHAR: What is the rotation crop with pineapples?

MR. AMADOR: There is no rotation crop. There's a fallow period that goes between one crop and the next. Normally we use macuna bean as a green manure between the crops.

MS. BEHAR: And how long is that fallow period between growing? So a field could be growing pineapple for ten years, maybe get eight crops or something from it? It's not a full year is it?

MR. AMADOR: It's a perennial. Normally you can do two crops. So you will -- in a farm, you basically have it separated in

sections. You'll be rotating around the sections, so that that farm is going to be producing product on a weekly basis to be able to supply what the market needs.

MS. BEHAR: So what's the fallow time between?

MR. AMADOR: It's going to depend -- in our country, it rains quite a bit. It's going to depend a lot on weather. So if it's raining a lot, the fallow period is going to be longer, because you're not able to get in to prepare. But it could be anywhere from six weeks to ten, twelve, uh-huh.

MR. CHAPMAN: Dave.

MR. MORTENSEN: In reading through the materials, it raised a question in my mind. When you go into the marketplace in the Northeast, at least the stores that my wife and I shop in, organic bananas are always more green than the conventional labeled bananas are by a good bit. I've wondered, does that have anything to do or the way or the amount of ethylene that's used in

the ripening process?

MR. AMADOR: Not in the case of organic bananas. That's more an issue of how the ripener wants to, or the supermarket that's ordering the color that they want. So in that particular market, they may want the bananas to be greener. That's a decision that can be made.

In the case of pineapples, however, it is true. When you see organic pineapples, the shell color is essentially going to be green, because in organics we cannot use a synthetic that allows the degreening of the pineapples. However, I would like to point out that the inside of the organic pineapple is actually much better than conventional, because the product's going to be out there one or two weeks more. You're going to have a sweeter pineapples, so definitely go for organic pineapples when you see them, even though they're green.

MR. CHAPMAN: Okay, thank you very much. Next up is Richard Mathews, followed by Jennifer Berkebile. Richard, if you'd start with

your name and affiliation.

MR. MATTHEWS: Richard Mathews, Executive Director of the Western Organic Dairy Producers Alliance. First of all, I want to thank you for considering our comments, encouraging you to relist the livestock materials.

Now shifting gears, in 2000, we were asked to include split operations in the final rule. We also included a provision that once something left organic for conventional management, that it could not come back. Why am I telling you this?

Because we have a certifier who was allowing organic farmers to convert organic calves born of organic mothers on an organic operation to conventional, for raising as conventional for nine to twelve months, and then conversion back to organic.

We filed a complaint on August 16th. On October 1st, we were told that the case was closed with no action. This is not a policy

issue. This is about violations of Section 201(a)(5) and Section 236(b)(1). These are willful violations. Now historically the National Organic Standards Board has been more than willing. They haven't been shy about telling the USDA when they are wrong.

It is now your time to tell the USDA that they are wrong, the decision is unacceptable, and the decision needs to be reversed immediately.

(Applause.)

MR. MATHEWS: Any questions?

MR. CHAPMAN: Ashley.

MS. SWAFFAR: I have a sunset question for you. On hydrated lime, you were like the only person that realized we asked anything about maybe changing the annotation in the future. Do you think any of your producers, if they could use hydrated lime for deodorizing animal waste, would that be a beneficial tool for them or not?

MR. MATHEWS: I'm not in it -- well, I can't really say that it would be a beneficial

tool.

MS. SWAFFAR: Thanks.

MR. CHAPMAN: Harriet.

MS. BEHAR: Can you speak to the economic impact on that decision that that's had on the members of WODPA, which you are the executive director of?

MR. MATHEWS: There's only one reason -- well, there's two reasons for any farmer to do this. First of all, it's cheaper to raise calves conventionally than it is organically. They save about a $1,000 per animal.

So it's an economic incentive tool. It also allows them to disregard the feed provisions, the livestock healthcare provisions, the livestock living conditions provisions, the pasture provisions.

So while these certifiers are allowing these two violations, there are multiple additional violations. It all gets back to economics. Who wants to do it? The very large farmers want to do it, those who have trouble

raising animals. The good farmers don't need that.

And so every farmer who is following the rules is placed at an economic disadvantage. You multiply that thousands of dollars a head by tens of thousands of animals, you are creating severe economic disadvantage to all the farmers who comply with the rules.

MR. CHAPMAN: Thank you. Thank you, Richard. Briefly Dan.

DR. SEITZ: You know, would you just please close the lop on what you've just described? So the herd is transitioned back to conventional, and then is the whole herd sold to some farming operation to then be -- as a one-time sale to be used as -- for organic milking operation? What happens to that herd once it's converted back to conventional?

MR. MATHEWS: Well, it's not a conversion of a whole herd. It's an organic operation that is already required to follow the regulations.

Now they might fall in the two track origin of livestock issue, where those who had taken advantage of the feed exemption are now required to only source organic animals as replacements or additions to their herd, versus the one that's at 100 percent organic feed, who because of a glitch in the regulations has been allowed to continuously transition animals that were conventional to organic, to either build the herd or provide replacement animals.

This isn't that at all. This is an organic operation seeking economic advantage, and wanting to skirt the rules because it's easier than it is to raise an organic calf. It's that simple. Does that answer your question?

DR. SEITZ: Not quite, because what happens at the end of that year with those animals that were transitioned back to organic? I don't understand --

MR. MATHEWS: They go right into the milking herd. Yeah, they go into organic livestock management.

DR. SEITZ: Oh I see, okay. So meat sales, milking sales, whatever that may be. Okay, great. Thanks.

MR. CHAPMAN: Yeah, Richard thank you. Thank you for your comments. I have a question for Jenny, which might be the same question for you, which is Jenny, can you provide any more context to what we just heard?

DR. TUCKER: Sure, and you know, I think I'm going to spend a little bit of time on this, because I've been getting a lot of questions on this one. So I think I'm going to share sort of broadly how we think -- how when we get a complaint like this, what do we do? What are we thinking about?

Because I think having the community understand the thought process and the kinds of questions that I and our team ask might help in this dialogue.

So when we get a complaint, I mentioned this morning one of the things that we look at is it is -- is it a policy complaint or

is it -- so that involves looking at sort of the regs, looking at the evidence, looking at what we have.

When it is a complaint that comes in, we think often okay, what would happen, just hypothetically, what would happen if we did an adverse action here? So what is that? That's like a proposed suspension or a proposed revocation. So let's -- let's just follow that thread on hypothetically what would happen.

And then the next important question would be and what if that was appealed? So proposed adverse actions are appealed, often appealed. So then what would happen on appeal? What would the lawyers on the opposite side argue? So how would they read the regulations in a different way than we read the regulations, and is that argument -- is that argument actually believable?

I have to look at that question from the viewpoint of an administrative law judge, who is not in the organic community, doesn't

necessarily know about organic production, is a lawyer, is an administrative law judge who is going to take all the evidence.

So first, I've been doing appeals now. I've reviewed appeals for the program with certifiers actions against operations that are appealed to the program level.

I've been looking at those for about five years now. So we're getting actually pretty good at anticipating what the arguments might be on the other side. We have to be very cognizant of what would happen on an appeal should we lose, because we have been down that road before. So setting policy through complaints and the appeals process, we've really tried very hard to avoid doing that, okay.

Now that's sort of the general comment on complaints. Now I'm going to turn in terms of origin of livestock, and again am putting myself in the viewpoint of a lawyer for another, for an opposite, an administrative law judge. What would likely get pointed to in an origin of

livestock case is the documented known regulatory uncertainty in this part of the regulations.

So this is an area where NOSB has made recommendations. This is an area where the OIG has had findings in two organic milk audits related to origin of livestock, and he has written that there is differences in interpretation between certifiers. We have a proposed rule that was published in 2015. That rule has not been finalized.

So there's a whole trail of documented regulatory questions on origin of livestock, where it's sort of acknowledged in a lot of places, including proposed rule, that there's regulatory uncertainty in this particular area. Now there are lots of different areas where one could be uncertain in this area, and people can reference very specific parts of that section of the rule and say this is why we are right.

Then other people are going to point at other parts of that section and say this is why we are right. We have to have full

confidence that we would win -- and an administrative law judge to feel comfortable taking that kind of action, given the uncertainty with origin of livestock. We did not feel comfortable and we can't take an adverse action in this particular case.

Now there are many parts of the livestock regulations, such as the pasture standard, which are much more regulatorily clear. We have a final pasture rule, it's been passed. We've done a whole bunch of training on it. That right now, when we're looking at the Pasture Compliance Project, the Dairy Compliance Project, that's where our focus is, is in the parts of the regulation that are very clear on grazing season, on all the different aspects of pasture.

That's -- and antibiotic use and all sorts of other parts of the organic regulations related to livestock that are very, very clear. That is where we are focusing. Origin of livestock is regulatorily uncertain ground. A good lawyer is also going to look back at OFPA

and see what OFPA has to say about origin of livestock.

So those are all of the kinds of variables that we have to take into account when we look at specific complaint. So I just want to share. I know a lot of you will disagree, and you'll tell me where in the regulations you're looking.

The lawyer has a whole other different perspective on that. We have to be pragmatic in how we view these complaints, and setting policy through complaints and appeals processes is very dangerous territory indeed. Thank you.

MS. BEHAR: So Jenny, would there be -- what is the thought within the program for dealing with this regulatory uncertainty?

DR. TUCKER: Origin of livestock, I tell everyone this too, so thank you for allowing me to sing this song again. So I appreciate the challenges, particularly for small producers in writing letters to the Secretary. It doesn't mean it doesn't work. So there are lots of

avenues for communicating.

This is not an area -- honestly, I hear a lot about origin of livestock, not an area that has been heard as a distinct and incredibly high priority issue back at USDA. So generally when an origin of livestock gets brought up to us, it is one of a list of many things.

We want you to do this, this, this, this and this and origin of livestock is somewhere in that last. Sometimes it's even number one, but it's one of, you know, five or ten things. And so there has not yet been a -- when you think about all the different things that people are interested in, origin of livestock has not been the clear melody in the song.

And so I would as an industry, as a community, this is an area you want to get behind and say here are the economic arguments for finalizing a livestock, origin of livestock rule. Here are the benefits, here are costs, here's what we thought of the proposed rule in 2015.

That communication is helpful.

Then the administration can make a decision on what it wants to do moving forward. But until we hear, the administration hears a unified voice on this topic, it is hard to -- it's not on the regulatory agenda right now.

MR. CHAPMAN: Thank you, and I think we need to move on with public comment at this time. Just so folks know we were planning to take a break at 3:45, but given how far we are behind on the schedule, we will be working through that break. So if any Board members do need to take a break, please feel free to stand up and quietly walk out of the room and do what you need to do.

Right now, we're tracking to wrap up around six o'clock. There is another event in this hotel that is using the public space around six o'clock, so I would really like to wrap up at that time, because it's going to become loud and distracting.

So I guess I am looking at the Board

members and saying choose your questions wisely, because I will probably start curtailing the questions asked to keep us moving along, and to give every commenter a chance to speak. With that, Jennifer is up and then Jenny Cruse is on deck. Jennifer, if you can start with your name and affiliation.

MS. BERKEBILE: Sure. Good afternoon. My name is Jen Berkebile. I'm the Materials Program Manager at Pennsylvania Certified Organic. We certify over 1,500 organic crop, livestock and handling operations in the U.S. Today, I'll be reiterating my written comments on marine materials, paper pots, sodium citrate and sodium chloride for the generation of chlorine dioxide gas.

First regarding marine materials. I really appreciated Emily's comments at the NOC meeting on this topic, especially addressing the slippery slope fear, because that is also my fear.

I want to express my support for a

working group on this topic. I would like to see it not just address the wild crop standard, but also the availability of organic marine vegetation.

Some aquatic plants are listed at 205.606. But if they are possibly not commercially available for use in processed products, are they commercially available for use in crop inputs? I would also like to see the working group recommend an adequate time period for manufacturers and producers to come into compliance with these annotations should they be adopted.

Next, I want to add my voice in with those who are requesting that the NOP reconsider, and that the NOSB support a reconsideration of the use up period for paper pots. In allowing paper as we control and as a compost additive, you as a Board have already said that paper used as a crop input is compatible with organic farming, and safe for human health and the environment.

Therefore, there is little to no risk to organic integrity to extend the used up deadline. Next, I want to express my concern with a listing for sodium citrate for use in blood meal. PCO has traditionally considered anti-coagulants and other processing aids to be a part of the standard of identity of blood meal, and therefore outside of the scope of review.

This can be thought of similarly to paper, which is allowed without additional review of the processing aids used during the manufacturing process. I'm very concerned that a specific listing for sodium citrate will unintentionally lead to the prohibition of blood meal, due to the presence of other non-approved processing aids.

I recommend that the NOSB either consider processing aids in blood meal as a part of the standard of identity, therefore allowing them without review, or take a look at all additives in blood meal and address them together.

Finally, I want to comment on sodium chloride for the generation of chlorine dioxide gas. As written, this annotation is a little confusing, and it is unclear whether or not we need to review other ingredients used during the generation process. I want to reiterate that the listing for chlorine dioxide at 205.605(b) should be updated to read "Chlorine dioxide gas generated from sodium chloride." Thank you all for your time and dedication on the Board, and for the opportunity to comment here today.

MR. CHAPMAN: Emily.

MS. OAKLEY: Thank you for your written comments on -- why does it seem like -- here we go. Is that better, okay. Thank you for your comments on marine materials, and you said of the 19 crop inputs in aquatic plant extracts that PCO approves, seven already contained certified organic marine macroalgae.

MS. BERKEBILE: Uh-huh.

MS. OAKLEY: Could you tell me a little bit about that?

MS. BERKEBILE: I believe the -- from my memory, I believe they contained thoravin kelp, which is a certified organic and I think unrealistic as well. And then some of the other ones that I mentioned, we don't know whether they're certified organic, whether they're marine, so any other questions?

MR. CHAPMAN: Thank you.

MS. BERKEBILE: Thank you.

MR. CHAPMAN: Up next is Jenny Cruse, followed by John Hendrickson on deck. Jenny, if you can start with your name and affiliation.

MS. CRUSE: I'm Jenny Cruse with the Accredited Certifiers Association. Our primary mission is to ensure consistent implementation of USDA organic regulations through collaboration, education of accredited certification agencies. We have 53 certifier member organizations.

Today I'd like to highlight a few key points from the ACA's written comments that were submitted to the docket. Our comments are generated through working group participation,

survey feedback and Listserv discussion. On the subject of paper pots, we support an amendment to the National List that would enable the use of paper as a mechanism for planting and transplanting.

Using paper in this way could reduce reliance on plastics, and it seems that the environmental effects would be comparable to use of paper for mulch or compost feedstock, both of which are currently allowed. We also support an extended deadline for discontinuing the allowance of paper pots as this petition process plays out.

Please note that these comments relate to paper only. We're not advocating for the use of any commercial paper padding systems or for the allowance of any additional materials used in the manufacturing of those systems.

On the subject of organic seed search requirements, we applaud the Crop Subcommittee's stated intention to develop language that allows farmers to use non-organic seeds, as long as they demonstrate their organic seed search is valid

and improving. However, the proposed language doesn't seem to yield that level of flexibility.

Any final language should discuss improvements in terms of long-term patterns as opposed to year over year comparisons, and should be careful about the "and" language. Requiring improvements searching sourcing and use of organic seed every year is actually a fairly inflexible requirement if read literally.

Sometimes use cannot be improved in a given year, even if searching and sourcing improvements are grateful of this. We'd also like to repeat that seed search quality would be greatly enhanced through use of a comprehensive organic seed database funded or established by the NOP.

On the CACS Subcommittee proposal on training and oversight of inspector and certification review personnel, what I'd like to highlight is that the ACA has done extensive work on this question, on the question of inspector training and qualifications over the last couple

of years.

We attached the ACA guidance on inspector qualifications to our written comments. This was developed by a working group on the topic in 2017 and early 2018, with participation from Margaret Scoles of IOIA. IOIA also worked with the ACA to develop a survey of accredited certifiers on the subject of inspector training, and the survey had a response rate of over 50 percent.

One interesting observation is that around a quarter of responding organizations reported that they did not have a mechanism in place to ensure timely feedback on the inspection reports of new inspectors, once they had completed basic training and field training.

The ACA board agreed it would be useful for all certifiers to put such mechanisms into place. A redacted version of those survey results was attached to our written comments, and we believe the information can be useful to consider as the conversation moves forward. Than

you all for your hard work and for the opportunity to comment.

MR. CHAPMAN: Harriet.

MS. BEHAR: Thank you for sharing that survey. That's going to help us with setting our priorities, I think, on what should be done in the inspector training.

I had a specific question. You had an evaluation form in there for evaluating inspectors specifically, and I was wondering how these certifiers felt if there was a consensus to all share the same evaluation form, so they could then be used universally between agencies or not?

MS. CRUSE: We included that as an attachment to the instruction document that was published early in 2018, as a tool for optional use. I know that there are some certifiers who would be in favor of using it and others who have forms that they've developed that they prefer to use too. So I don't feel I could get a unified response to that.

MR. CHAPMAN: Thank you. Up next is

John Hendrickson with Stephanie Rose on deck. John, if you can start with your name and affiliation.

MR. HENDRICKSON: John Hendrickson, organic farmer, Stone Circle Farm and owner of small farm works, a business dedicated to providing innovative tools to small farms, including paper pots. I want to begin by bringing up a procedural issue regarding the petition I submitted to get paper pots allowed on organic farms.

I was told I could not submit a petition for a specific commercial product. Rather, the petition had to be for a generic material. With Jackie DeMinter, a petition on the generic use of paper as a paper pot was submitted in advance of the deadline to get on the agenda for this meeting.

This petition was returned with a request for detailed information about the particular paper pot product that I use and sell. This seemed to go directly against petition

guidelines. The strategy I was trying to follow was first to get the use of paper as a paper pot added to the organic rule, and then the company that makes the paper chain pots would submit their specific product to OMRI for review.

This seemed a logical and procedurally correct path to follow. This strategy was based on my reading and understanding of the technical reviews that have been conducted on paper, which acknowledge that a great many synthetic materials are known to be components of recycled paper, given that recycled paper is a waste stream product.

As you know, paper has commanded the attention of the NOSB in the past. Several technical reviews have been conducted. The technical reviews are quite clear that paper and paper products, including recycled paper, contain a great deal of additional ingredients. The decision to allow recycled paper has been made knowing that the exact materials contained in recycled paper are largely unknown, as well as

about any clear definition of recycled.

As the rule reads now, the paper pots that I sell could be shredded and applied to the ground as mulch or added to the compost pile, but not used as a paper pot. I would like to contrast the use of these thin strips of paper pots with the use of plastic mulch. Does anyone know how many miles of plastic mulch are used on certified organic farms?

I don't either. But the use of small amounts of paper certainly pales in comparison to the environmental impact of manufacturing, applying, removing and disposal of plastic mulch, which I have chosen not to use on my farm. Not allowing paper chain pots will have severe economic impacts, including but not limited to farmers facing a very difficult decision between using paper pots or continuing to be certified, certifiers losing clients, farmers having unusable equipment and unused inventory of paper pots, farmers dropping crops from their rotation, farmers having to hire more labor in a tight

labor market, or buy new and different equipment for transplanting, and reverting to less efficient and less productive planting systems.

The company that makes the paper chain pots is committed to compliance with organic standards. They are willing and eager to submit their product for OMRI review. I urge the NOP to allow the use of paper chain pots on organic farms while the NOSB considers the petition, conducts any reviews deemed appropriate, and votes at a future meeting. Thank you.

MR. CHAPMAN: Thank you. I'm going to actually put someone from the program on the spot, but probably Devon to speak to the first petition. Devon's not here. Maybe Clarissa. And I was somewhat involved and I think Steve was somewhat involved, so maybe he'd be able to speak to it as well.

I do not believe it was rejected because it was a generic. It was rejected because it wasn't deemed sufficient at the time of submittal, which is a common occurrence in a

first-time petition. Is that --

MR. HENDRICKSON: Yeah, I acknowledge that, and believe that to be correct. However, asking for the very specific ingredients and amounts of those ingredients in the particular product that I sell seemed to go above and beyond. The purpose of that petition was just to get the use of paper as a paper pot added to the organic rule.

MR. CHAPMAN: Yeah, Steve do you want to --

MR. ELA: Yeah. I mean I agree with what you're saying, although it comes back to kind of the adhesive issue too, of adding adhesives after the paper is made was I think where we got hung up a little bit.

MR. CHAPMAN: Yeah.

MR. ELA: It's a tough one, and I agree with Tom. I think I did see that original submission. It just wasn't complete enough for us to act on it.

MR. CHAPMAN: Yeah, and then once we

get the information, there was a need to seek information to determine how similar or different this was from paper, and without knowing that, it's hard to come to that conclusion. It would, you know, there is a strong likelihood that you would have gotten questions from the program or from the subcommittee asking for that clarification later. That would have also delayed the petition.

And then just so you're aware, even an earlier submission may not have been sufficient time to make this meeting as well. The general time line on, I would say on average a petition at a minimum is generally about 18 months.

MR. HENDRICKSON: Which is again why, why I would really urge the extension of the deadline on use of the paper pots, to allow the petition process to unfold.

MR. CHAPMAN: Fair point. Questions from the Board? I see Dave.

MR. MORTENSEN: Yeah, thank you John. We heard from two callers last week in the public

comment about the displacement of the need for and reliance upon the plastic phase, because and I for me personally, that clinches it, because I have seen many farms with just piles of plastic in one of the fields, because they simply don't know what to do with the plastic that they've generated.

So to me this is a very clear need that we -- with both environmental and economic impacts. Thank you for outlining that.

MR. HENDRICKSON: Thank you.

MS. BEHAR: Do you know if anyone in the United States is looking to produce these pots? There were some public comments about looking at domestic production.

MR. HENDRICKSON: I can tell you that a company in Japan is very interested in opening up a factory here in the United States.

MR. CHAPMAN: All right.

MR. HENDRICKSON: I would note that in addition to the paper part of the system, there are a bunch of other components which you know we

are manufacturing all of those things domestically now, creating jobs in our local community.

MR. CHAPMAN: Thank you. Okay. Next up is Stephanie Rose, followed by Nate Lewis.

MS. ROSE: I'm Stephanie Rose. I'm representing PQ Corporation, a manufacturer of aqueous potassium silicate. I would like to address some of the concerns raised by the Crop Subcommittee during the sunset review of potassium silicate.

I appreciate the huge task that is set before the NOSB and overall, and I agree that materials on the approved list should have clear benefits to the organic grower. Those are where I supply the NOSB with five independent studies, four journal articles and 13 additional extension publications covering a variety of crops, including blueberries, basil, oranges, grapes, haps and pumpkins, for efficacy as a fungicide and an insecticide.

Another benefit to the organic farmer

is minimizing resistance through rotational use with other fungicides and insecticides of different mechanisms. Regarding systematic mechanisms concerns. It is important to keep the application method in mind when discussing this critical issue. Potassium silicate for disease and insect control is applied via foliar application.

As noted in several Michigan State Agricultural Extension publications, potassium silicate is a contact protected-type fungicide applied to the foliage. A reference utilized in Technical Report 2014 on aqueous potassium silicate is a study on the horticultural effects of silicon on sunflowers.

The article states that the effects on sunflower traits depend upon source and concentration of silicon. Silica when applied to the soil is taken up by the roots and deposited in cells. The efficacy data submitted to you that I mentioned earlier utilized foliar application, not root application.

The applications are not the same, the mechanisms are not the same, and this should be kept in mind when reviewing information on the effects of silicon on plants.

Two additional studies referenced in the 2014 Technical Report on aqueous potassium silicate. One, a study conducted by Mattson on morphological traits of several flowering plants utilized a substrate drench. The second, an article by Mayland and Shewmaker discussing the changes in forage. Again, the silica is taken up by roots. Foliar application is a different application and different mechanism. It works as a surface protectant.

Regarding the concerns over digesting silica to containing plants, unfortunately the information is limited and conflicting, even within the article by Mayland and Shewmaker. Therefore, I was not able to find a clear answer for you. In this case, it feels best to revert back to the basics of silicon accumulation in plants.

It is well-documented that the persona of silica that a plant will accumulate varies from plant to plant, from .1 percent to 10 percent. Grasses and rices are very high accumulators, while plants like tomatoes accumulate so little they're considered non-accumulators.

MR. CHAPMAN: Questions? Asa.

MR. BRADMAN: I just want to clarify. So you're saying that when you're applying it as a foliar application it's not necessarily being incorporated into the structure of the plant, that it's acting as a contact pesticide against fungi or perhaps other pathogens? And can you tell us what the mechanism is against those pathogens, and is there any structural change to the plant?

MS. ROSE: No. It is my understanding that when it's taken up into the plant, deposited in the cells, it's taken up through the root system, okay. The MSU Extension was clear to state in most of their publications that this

should be applied, that it's a surface protectant, but it's not a systematic.

There were several comments about these are systematic mechanisms, silica matrix is not. So we guessed through their efficacy trials that they have determined that it is definitely not, doesn't act as a systematic.

MR. BRADMAN: Okay. By systematic, you mean systemic?

MS. ROSE: Sorry, sorry. Systemic. It isn't real clear what the mechanism is. There's some theories over providing a surface, you know, a coating on the surface of the plant, and I guess I can't answer all of your questions.

MR. BRADMAN: Okay.

MS. ROSE: That is what I found in doing research. I'm looking on what recommendations are and what studies have said.

MR. BRADMAN: Okay, thank you.

MR. CHAPMAN: Dave.

MR. MORTENSEN: Yeah. In the technical literature that we were looking at, and

I was the lead on this particular one, there was -- it was strongly implied that the compound was systemic, whether it was applied to the soil or applied to the leaves.

And the implications in what we were reviewing and what we had in front of us were that uptake in the leaves was occurring across the cuticle and across and through the stomata, so that the compound actually enters the inside of the plant.

That was what gave rise to our concern about human exposure to vegetable, green leafs, and such grown and harvested after being sprayed.

I also would like to thank you for the additional efficacy data that you provided, because we did not have very much to look at when we were going through this process, and it's helpful to see that now. We did not have very much of that before. Thanks.

MR. CHAPMAN: Thank you. Up next is Nate Lewis, followed by Taylor Ivy. Nate, if you can start with your name and affiliation.

MR. N. LEWIS: Sure. Thanks for taking all these public comments. My name's Nate Lewis. I'm an associate consultant with Wolf DiMatteo and Associates, and an organic farmer in Olympia, Washington, where we hold all four scopes of certification, a thing I like to tell everybody.

But the comments I'm going to present are on behalf of Wolf DiMatteo and Associates. So, I'm here instead of Bill Wolf, but I wanted to bring forward one of his themes, which is to always think like an earthworm, and bring it through a couple of items.

So, when evaluating films and fibers like paper pots or compost feedstocks or biodegradable mulch film, think like an earthworm. Use those ASTM standards that are incorporated by reference for biodegradability and compostability. They're good, objective tools for at least looking at that aspect of those particular materials.

Earthworms don't care about whether or

not the product's bio-based. They care about whether it is biodegradable. And so we encourage you as a Board to take another look at that mulch film recommendation and listing around the bio-based content, because right now there are no products available on the market to replace polyethylene film.

Liquid fish products. They're good for the soil. Organic farmers use them and need them. We support its continued renewal. We also agree with the Crop Subcommittee that taking a look at sustainability of our planet's fisheries is absolutely a critical element in these reviews. It's a bigger issue than what can be covered in the sunset. So, come back to that, but let's complete the sunset process for liquid fish.

Sodium nitrate, not so good for earthworms. The time has come, I think, for the USDA to move forward on rulemaking to completely prohibit sodium nitrate. There's consensus in the organic community that it should be

prohibited. It's bad for the soil. There's growing concerns about perchlorate contamination, which poses a health risk, and there's really no reason for continued delays in the process.

And, with that, maybe we can regain a little bit of time for future commenters, unless there's questions.

MR. CHAPMAN: Questions for Nate?

MS. SWAFFAR: So, what do you think we should do about paper pots moving forward?

MR. N. LEWIS: Paper pots. Well, I guess there's -- the way I look at it, there's two competing tracks of issues here. One is an enforcement issue, which has to do with the deadline for stopping its use; and there's another issue, which is the petition process and the adding it to the National List process.

So the first one, the enforcement, that's really USDA's job. I see the program as the one who runs enforcement, and I actually agree with personally -- and I should say I'm going to take off my Wolf DiMatteo hat and put on

my small farmer hat, because we haven't really come to a position on these specific issues at Wolf DiMatteo and Associates.

But as a small farmer and a stakeholder, I actually agree with USDA's interpretations of the regulations. I think being strict about how we look at those annotations is critical. I don't like to see people massaging annotations to allow for materials.

So I agree with their approach, but I also see -- I see it as a correctable violation if someone would use a paper pot in the future. Paper is on the National List. It's just restricted for use. So it's not a prohibited substance application, in my view, and if someone used paper pots past the deadline, they would certainly deserve to receive a notice of non-compliance. But I don't believe that their land would should be out of certification for three years, requiring that transition.

So I don't use paper pots on my farm,

but if I did and it was as important to me as I'm hearing it is to a lot of other farmers, I would just keep using it and I would get that non-compliance and I would appeal that non-compliance -- or I'd wait 'til it was a proposed suspension, and I would appeal that proposed suspension and I would just drag it out until you all got it on the National List.

(Laughter.)

MR. N. LEWIS: But that's what I would do. If someone chooses to withdraw certification, if you all could also agree that it was not a prohibited substance application, then they could come back into certification when it was on without that three year wait period.

I think the National List process is cumbersome, and Steve you brought up a lot of those issues, but I don't think you should request a TR. You have all the information you need to make that determination with the current TR.

MR. CHAPMAN: Steve, briefly.

MR. ELA: Actually, it's a quick question for Paul, I guess, that Nate brought up. I mean, in terms of the sodium nitrate issue, where it's sitting on your desk, and I think a public commenter brought up the issue, that it's not in our sunset reviews now because we pulled it. I mean, the Board voted to pull it out. So actually it's kind of this weird thing where we have this product still being used, but we're not reviewing it because it's on your desk. But if we're going to keep using it, we should review it.

DR. P. LEWIS: The sodium nitrate issue is a complicated issue. We've had conversation internally in the department about the issue overall, but there's really no movement on the issue at this time. That's really where we are on this issue.

MR. CHAPMAN: I have a question for Nate about sodium nitrate. Has Wolf DiMatteo and Associates considered petitioning to have it listed on 205.602?

MR. N. LEWIS: Well, it sort of seems like it would be redundant to -- there is already an outstanding recommendation to have it prohibited. So I don't quite understand what would be accomplished by an additional recommendation to have it prohibited. I think at this point it's --

MR. ELA: It would potentially get it back on the work agenda.

MR. N. LEWIS: Oh, I see. So then the NOSB could continue to agree that it should be prohibited.

MR. ELA: And then put it back out there under a new --

MR. N. LEWIS: It's certainly something worth considering.

MR. CHAPMAN: Anything else for Nate? Nate, thank you.

MR. N. LEWIS: Thank you.

MR. CHAPMAN: Up next is Taylor Ivy, followed by Kelly Abbott. Taylor, if you could start with your name and affiliation.

MR. IVY: Okay. My name is Taylor Ivy. I work for Isagro USA. We are the manufacturer of AITC. AITC is not new to this Board. I've seen the petition submitted to you, and it's both thorough and detailed in terms of technical details supporting its approval.

Instead of rehashing those details, I'd like to briefly highlight where we see the greatest needs at the grower level. One, for remediation of soil that has become infested by newly emerging or exotic plant pathogen or nematode. A good example of this would be the increased prevalence of macrophomina in strawberries in Florida five to ten years ago.

It was relatively unheard of, not talked about very much. Last year, I unfortunately found myself standing in a five-acre field of strawberries that had over 20 percent plant mortality due to macrophomina, and there are plenty more examples close to that one.

Two, over time, even with proper growing practices, certain diseases in nematode

populations can grow to levels well beyond control of current organic treatments. In instances like these, the farmer is forced to either stop farming or to become a conventional farmer.

An example is verticillium wilt. This is a very big problem in California. Microsclerotia, which is the resting structure for verticillium, can remain viable for 14 years in the soil. So rotation is clearly not an option.

And, three, as stated by our first public commenter, plant nurseries who wish to sell to organic growers in some situations have no way, other than conventional fumigants, to reduce disease and nematode populations to a point where the plants can not only survive until they're sold but also pass soil tests to attain nursery stock certifications.

We believe that AITC, given its natural origin in the plant family Brassicaceae and biopesticide status is clearly the best

solution for organic growers who are in desperate need of significant disease and nematode reduction. Thank you, and I have no comments on paper pots.

(Laughter.)

MS. BEHAR: Steve.

MR. ELA: So, as a Board, I mean, and as an organic industry, there are certain organic natural products that we don't allow because they're so broad spectrum, and those we put on the prohibited list. This is a very broad spectrum material. It does come from a natural source, I agree, and so it's very tempting in that sense.

But it's non-selective. It's broad spectrum. I mean, those big red flags for me. And so can you address how you would respond? I mean how is it really different than metam sodium or some of these others? It's still killing most things in the soil.

MR. IVY: Understood. When you -- we have a growing body of evidence, and we would I'm

sure be willing to share that data with you in the not-so-distant future, that after treatment with AITC, the microbial diversity is much greater than after a treatment with something like, as you said, MITC or methyl bromide or Pic 60. You know the list.

So we have growing evidence showing that, although it is considered broad spectrum against many disease pathogens and nematodes, it is leaving more of the non-pathogen communities intact. And there is certainly research that shows that the primary way that this product is broken down in the soil is as a food source to certain microbes. I hope that helps.

MS. BEHAR: Any other questions? Dave?

MR. MORTENSEN: I was curious. So, a number of mustard cover crop species produce high concentrations of various forms of isothiocynates. And I was curious, do you have a sense for the concentration relative to a cover crop concentration of isothiocynates in the soil?

MR. IVY: Cover crops achieve much lower concentrations than one can achieve with AITC in its purest form. With AITC, you can adjust your concentration to whatever is necessary for the targeted pathogen or nematode species. It can be as low as you'd like it to be or as high as you choose for it to be.

With a cover crop, it can only achieve a low concentration of AITC and your results will be limited, based on research and what we've seen.

MS. BEHAR: Emily.

MS. OAKLEY: I'm a huge cover crop fan, so I appreciate your comment, but you can also grow cover crops over successive years to achieve results over the long term.

MR. IVY: Understood, thank you.

MS. BEHAR: Thank you. Abby Youngblood's on next with Kyla Smith on deck. Please state your name and affiliation.

MS. YOUNGBLOOD: Hi. This is Abby Youngblood, Executive Director at the National

Organic Coalition. And I'm extremely grateful for the work that you do as members of the NOSB.

On marine materials, NOC agrees with many other commenters that the NOSB and National Organic Program should establish a working group to develop standards for seaweed harvesting as a crop input and to provide more clarity for algae that is certified as organic under the wild crop harvesting practice standard.

NOC strongly opposes the petition for silver dihydrogen citrate, and we urge you to reject it. SDC poses health and environmental risks, particularly the risk of increasing resistance to antibiotics in silver-based medications.

Although the petition does not mention nanotechnology, nanosilver would be allowed if the petition is approved without an annotation to exclude it, and we're dismayed that, despite the NOSB's recommendation in 2010 to prohibit nanotechnology in organic production, there's still no clear prohibition.

In the absence of a clear prohibition, persistent oversight from public interest groups is required to ensure that the NOSB does not approve a petition for an engineered nanomaterial. It also results in extra work for the Board in reviewing petitions that include nanomaterials.

On excluded methods, thank you to the Board for keeping this issue front and center, and for continuing to review additional next generation GE techniques. We support the proposal to list embryo rescue in plants as not an excluded method.

Regarding transposons, at this time NOC is arguing that only transposons developed via use of in vitro nucleic acid techniques should be determined to be excluded. Transposons that induce via chemicals or irradiation should be considered under the method of induced mutagenesis.

NOC recognizes that seed used in organic production is at risk for genetic

contamination, and we want to make progress in our efforts to protect the genetic integrity of crops. Much of the proposal on genetic integrity transparency makes sense to us, but our members do have some specific concerns with this proposal, and we urge the NOSB to work to address those concerns as you look at moving this effort forward.

The need to collect more data has been an overarching theme in the efforts to develop a seed purity standard, and one way to begin data collection would be to start a pilot project with organic seed suppliers for a set timeframe, as we describe in more detail in our written comments.

This would provide anonymous information on the range and concentration of contamination levels, and would inform conversations about a reasonable threshold level.

Regarding GMO vaccines, we need to ensure that organic livestock producers continue to have access to essential vaccines, while at the same time bringing consistency and

eliminating GMO vaccines in organic that are unnecessary. GMO vaccines are being used in organic production, but they should first be reviewed and then placed on the National List. For a variety of reasons, that's not happening.

Thank you.

MR. CHAPMAN: Thank you. Questions for Abby? Asa.

MR. BRADMAN: If I remember correctly, your comments also opposed the delisting AITC?

MS. YOUNGBLOOD: Yes.

MR. BRADMAN: And I'm curious if you have any thoughts about a proposal earlier today, or suggestion, that it should be considered for nursery as perhaps a way to avoid the use of more harsh, prohibited materials. Is there a possible window there that you might support or agree with or understand? I'm curious about that.

MS. YOUNGBLOOD: I would need to bring that back to our membership before I could answer that, but I can discuss that further with some of our members and see if that came up in our

conversations.

MR. CHAPMAN: Any other questions?

Thank you, Abby. I believe we skipped over Kelly Abbott. Kelly Abbott's next, and on deck is Kyla Smith. Kelly, if you can start with your name and affiliation.

MS. ABBOTT: Thank you and good afternoon, or good evening I guess at this point. My name is Kelly Abbott, and I am the technical supervisor for farm and livestock at Oregon Tilth. I've been in the organic certification industry for nearly 20 years, but I am going to admit this is my first NOSB meeting.

I appreciate this opportunity and would like to focus my brief comment period on genetic integrity transparency of seed. Oregon Tilth fully recognizes that GM contamination is a top concern and that there are increasing challenges of preserving genetic integrity in organic seed, especially in corn seed.

Oregon Tilth supports the principle of collecting data to establish a baseline of GM

contamination in organic crops, and Tilth would also support such a baseline as an essential measure to establishing GM thresholds under the NOP.

Oregon Tilth cannot, however, support a mandate of purity disclosures for corn seed. Such a mandate would create an increased liability for labeling patented GM content, increase financial burdens on the farmers, and ultimately could lead to a reduction in organic seed diversity and availability. We would like to recommend that the data being continuously collected by private verification companies be utilized on a confidential level, as has been offered at previous NOSB meetings.

We encourage the Board to continue the conversation to increase transparency with regards to GM contamination in organic corn seed production, but feel this mandate is premature and will cause not only financial burdens but affect the availability of organic corn seed diversity. Thank you for your consideration.

MR. CHAPMAN: Questions? Harriet.

MS. BEHAR: Are you aware of -- do you certify any corn seed dealers or growers?

MS. ABBOTT: I don't have the facts on how many we have, but --

MS. BEHAR: Are you aware,0 are any of them doing any genetic testing and sharing that information with their growers or buyers of the seed?

MS. ABBOTT: I'd be happy to put you in contact with our program manager, who drafted this guidance. I think we're more looking at a broad base of how this would affect corn production and farmers in general.

MR. CHAPMAN: Thank you. Up next is Kyla Smith, with Molly Schaus on deck. Kyla, if you can start with your name and affiliation.

MS. SMITH: Good afternoon. My name is Kyla Smith. I am the interim co-executive director at Pennsylvania Certified Organic. PCO certifies over 1,500 operations throughout the U.S. I'll be commenting on the Crop

Subcommittee's proposal on strengthening the organic seed guidance, as well as the Materials Subcommittee's proposal on genetic integrity of seed.

Regarding the seed guidance proposal, I'll focus my comments specifically on the proposed regulatory language change. We did provide written comments that cover the entire proposal. We support the concept of continuous improvement in the use of organic seed, and the proposed language definitely conveys that sentiment.

That said, as certifiers we hang our hat on the specific language in the regulations. Placements of commas and ands versus ors do matter. When the language is unclear, certifiers interpret and enforce inconsistently. This leads to these items needing to be further clarified through best practice documents, program handbook documents, or may even find their way back onto your work plan, all of which take additional time and resources.

The proposed language does not give certifiers enough flexibility to both enforce continuous improvement and evaluate the operator's entire system. The proposed language will lead certifiers to issue non-compliances when an operation, one, does not improve in the areas of searching, sourcing, and use due to the use of the word "and" versus "or," and does not improve the -- or does not -- and/or, it's important -- or does not improve their seed usage every year for circumstances outside of their control, such as seed being unavailable due to crop failure.

PCO supports the recommended language submitted by the Accredited Certifiers Association. The ACA's proposed language would allow farmers some flexibility while still improving in the areas of searching, sourcing, or use, which seems to meet the intent of the subcommittee.

We don't have a preference on when in the process this wordsmithing takes place, but

encourage that it does take place prior to being published in the Federal Register in the final form so we don't come up against the barriers of implementation and enforcement that I've described.

Regarding the genetic integrity of seed proposal, PCO respectfully asks for the proposal to go back to subcommittee for additional work. The document references sampling and/or testing, obtaining purity levels, et cetera, but lacks clarity on who will hold these roles and responsibilities, which is critical to give clear intention and direction to the NOP. Thank you all for your service and for the opportunity to comment.

MR. CHAPMAN: Questions? Dave.

MR. MORTENSEN: I just wanted to say thank you for pointing out the need to be precise with language, and also for the constructive input. We're trying to get this moving, and the feedback was very helpful and constructive. Thank you.

MS. SMITH: Thanks.

MR. CHAPMAN: Emily.

MS. OAKLEY: I'm curious, as a grower, if I use organic seed and couldn't obtain it the next year due to a crop failure, would you truly interpret this language to mean that I wasn't compliant? Because when I read comments like that, I'm a little surprised, just because it seems like an overly strict interpretation of that language and a punishment of the farmers. So just more of a curious question.

MS. SMITH: I think that that's part of the problem, that some certifiers could take a very strict interpretation and some would not. I mean, we've heard about issues in vagueity of language in regards to origin of livestock and pointing at different parts of the regulation, and being very confident in one's interpretation. And so unless it is uber-clear, we'll run into that issue.

MS. OAKLEY: Thanks.

MR. CHAPMAN: Thank you.

MS. SMITH: Thank you.

MR. CHAPMAN: Up next is Molly, followed by Michael Crotser. Molly, if you could start with your name and affiliation.

MS. SCHAUS: Yeah. Molly Schaus, Minnesota Food Association. My name is Molly Schaus, and I work as the farm director for Minnesota Food Association, which is a program of the Food Group here in Minnesota. Thank you for hearing this statement.

Minnesota Food Association operates a 100-acre certified organic farm in the St. Croix Valley that serves as a land-based education program and business incubator for beginning farmers who want to start their own independent vegetable farms. We seek to address the specific barriers that beginning farmers of color and immigrant farmers face, barriers that are amplified over the ones faced by their white counterparts.

Currently, there 11 farm teams at Minnesota Food Association, all of them certified

organic. There are farmers from seven different cultures. We offer land access, weekly classes, in-field technical assistance, and access to shared equipment and infrastructure. We seek to offer training that is tailored to farmers' individual goals. We also provide education and market access by aggregating a CSA from all growers in the program, operating two weekly farmer's markets, and fulfilling wholesale contracts. The farm is a diverse and supportive community.

I tell you all this because Minnesota Food Association and the farmers in the education program believe deeply in the value of organic certification. It is a tool that allows them to access markets with higher price points, and it is a tool that allows farmers to build health within their own communities.

I am asking you to consider how the decisions you make impact beginning farmers of color and immigrant farmers.

How can you work to build increased

access to organic certification? For example, long-term land access is a major challenge that beginning farmers of color and immigrant farmers face as they seek to become certified organic since there are systemic barriers to access of land and credit. With less capital and credit, it is much more difficult to purchase land.

For the last three years, we have offered technical assistance to a farmer who wanted to transition his farm and his parents' farm to organic. He was participating in our classes, implementing organic growing practices, filling out a Practice Organic packet, learning how to keep the records needed for certification, and where to find organic inputs.

However, he was unable to begin the three-year transition to organic because he and his family were never able to get a land lease that lasted longer than the one season. This past season, he was finally able to become certified organic when a small portion of certified land became available for rent, but he

still does not have long-term land access.

How can organic standards and regulations address the needs of farmers who want to transition to organic, but cannot because they do not have stable land access? I want to farm in a community where all farmers have equitable access to organic certification and the tools required to achieve it.

I believe that as you, the members of the National Organic Standards Board, consider, revise, and write regulations, you have a responsibility to consider how what you do will impact all members and potential members of the organic growing community and to address the specific needs of beginning farmers of color and immigrant growers. Thank you.

(Applause.)

MR. CHAPMAN: Thank you. Any questions for Molly? Asa.

MR. BRADMAN: I've worked with groups in California that have programs that sound similar to yours and also raised similar issues.

I've been on the Board now for two years. I'm curious if you have any concrete suggestions on how we could further some of the issues that you've raised, and maybe, if not, that's something that we could get input on from the organic community.

MS. SCHAUS: I have a couple of ideas. I figured someone was going to ask this. So, barriers that come up often are the cost of certification, and while there are cost-share programs in many states, and we're fortunate to have one in Minnesota, it's a reimbursement rather than a lowering of the upfront cost. So the farmer still have to front at least $700, even if they're going to get 550 of that back.

I personally think there's some worth in considering transition time when there are institutional barriers that prevent people from having land access, that it's unreasonable to expect that people can farm like -- to require that someone farms for three years on the same piece of land if they want -- like if it's

because they cannot access land for longer than that.

I think that there are also -- some of the regulations involving saved seeds and saved seeds that are culturally important to someone or to their family, when certifiers might not see the cultural importance of like that specific plant versus like -- so like what's the importance of this mustard that you're growing versus like one that seems identical that you can buy in the seed catalogue, but actually it's like the seeds that you brought over from your country of origin? Those are a couple of ideas that I have.

I also just think that it's important when you write rules and change rules that you consider impacts that spread throughout the system.

MR. CHAPMAN: Dave, is it a question or a statement?

MR. MORTENSEN: Yeah. I guess just add on, that in Lincoln, Nebraska where I work

and in Pennsylvania, one other thing that's working and I don't know that we've ever thought about how all this interfaces with the regulations, I know I haven't, is the use of public land and all sorts of interesting and creative leases on public land.

So if we were able to think more actively about local and regional use of public lands, that it enables a lot of cool things to happen in a longer term.

MS. SCHAUS: Yes. Yeah. I mean we, for the most part, all of us farm on land that was taken, and so how can you restore common spaces?

MR. MORTENSEN: Thank you for raising this important issue.

MS. SCHAUS: Thank you.

MR. CHAPMAN: Thank you. Up next is Michael, followed by Anne Ross. Michael, if you could start with your name and affiliation.

MR. CROTSER: I'm Michael Crotser, the certification manager at CROPP Cooperative. I

want to thank the NOSB and the National Organic Program for the opportunity to speak. My first comment will be to discuss the feasibility of requiring organic seaweed in organic crop production.

Certification of seaweed as a fertilizer would provide a level of verification that does not currently exist. Mandating organic seaweed use would assure that the harvest maintains or improves the natural resources of aquatic ecosystems. However, this would set up a precedent that other natural materials may need to be certified as a crop input.

Sourcing seaweed as a fertilizer is a way to circumvent natural nutrient cycling that organic farmers are expected to follow, and encourages nutrient sourcing under an input-based model. Classifying seaweed as an organic input does not address this concern. Using fresh water materials is a commendable suggestion and should be explored. Eurasian milfoil is infestive weed infesting fresh waters and should be considered.

A working group would benefit measuring the environmental impact of harvesting marine algae. Experts could provide harvest strategy guidelines to mitigate environmental risk. The working group may conclude that marine algae should not be used in organic production.

My second comment will focus on strengthening and unifying enforcement. Working with roughly 2,000 farmer members and numerous organic certifiers, we have a unique window to see varying policy and practices of standard enforcement.

It is critical that we maintain our market and our commitment to consumers. We encourage the May 2018 Organic and Enforcement Action Plan for pasture surveillance program and the interim instruction document on organic inputs. We also support the collaborative work on the proposed rule for strengthening organic enforcement.

We welcome rulemaking transparency and the opportunity to provide input. As a member of

the Accredited Certifiers Association, we support the working group in developing a best practices guide. We must maintain a strong USDA Organic seal. We are seeking solutions for uniform standard enforcement.

We recognize three paths forward listed in the order of logical preference. One, encourage the NOP to publish clear and consistent expectations. This will direct a level playing field among certifiers.

Two, ask accredited certifiers to comply with ACA best practices to create certifier consistency.

And, three, anticipate additional third party certification to meet consumer and business needs.

We appreciate the work accredited certifiers do. As a former certification specialist, I know what hard work it is, and their work is critical. I want to thank the National Organic Program and the National Organic Standards Board for their time today.

MR. CHAPMAN: Thank you. Questions? Emily.

MS. OAKLEY: Just a comment. I just want to say that I appreciated your comments on marine materials. So, thank you.

MR. CHAPMAN: Thank you.

MR. CROTSER: Thank you.

MR. CHAPMAN: Up next, we have Anne Ross, followed by Nicole Dehne. Anne, if you could start with your name and affiliation.

MS. ROSS: Good afternoon. My name is Anne Ross, and I'm an attorney working as a farm policy analyst and researcher for the Cornucopia Institute. One of my primary job duties has been to investigate import fraud.

Not long ago, I received an anonymous tip that a certified organic grain operation located in Eastern Europe hired an individual away from their certifier to manage the certified operation's organic division.

According to the tipster, this individual was scheming with his former

colleagues who were still employed by the certifier to fraudulently label conventional grain as organic. Anonymous tips providing such limited information can be dead end or can take time to sort out, but I think there's a lesson here.

When a certifier's employees, consultants, or board members are subsequently hired or retained by an operation that the certifier certifies, there's a potential conflict of interest. This is also true when employees or consultants change employment in the opposite direction, from certified operation to certifier, or even between the NOP and these entities.

To be fair, the revolving door can function in a good way, in that it allows different sectors of the organic community to make good use of the knowledge and expertise of individuals who have dedicated their work in this area, but only if we make rules and policies around a conflict that could arise. Why? Because potential conflicts of interest are in

fact conflicts of interest only if they're effectively managed. So let's manage these conflicts of interest by formally recognizing they exist, and are a risk factor for certifier fraud, and let's manage them through disclosure requirements.

The NOP should recognize if a certified operation hires an individual previously employed by a certifier, there's a potential conflict we need to manage. If a certifier hires a former NOP employee as an employer-consultant, there's a potential conflict we need to manage. The NOP should require that the nature of these relationship be made publicly available.

Requiring public disclosure would be consistent with other industries, professions, and governing bodies that require disclosure in potential conflict situations. These industries recognize that this is not a hypothetical problem, but circumstances faced by good people by virtue of their positions and capitalized upon

by a few unethical opportunists.

Adding this risk factor and disclosure requirement helps in fraud detection. It protects all of the ethical certifiers and their employees from the appearance of bias, and it increases public confidence in the organic label. Addressing the revolving door scenario allows us to focus on productive conflicts, conflicts of ideas, and not on breaches of trust that all too often accompany unmanaged conflicts of interest.

I've also submitted written comments on this topic which includes more detailed recommendations. Thank you very much for your time and service to this Board, and I'm happy to take any questions.

MR. CHAPMAN: Good timing. Emily.

MS. OAKLEY: Thank you. I read your comments that were detailed. How would you suggest that the NOSB approach this issue? Or do you consider this a NOP level concern?

MS. ROSS: I think the NOSB can address it and that there's a very easy way to

address it now, and that's to simply add former employees as a risk factor. Employees are already in there as a risk factor in the documents. I think it's page 39 or 40. So simply add former employees there. That's the first step.

And I think eventually we need to move to disclosure. It helps public trust, and rarely do I think transparency is a bad thing. So I think the very first step is just simply add former employees in what the committee has already put forth.

MR. CHAPMAN: Thank you.

MS. ROSS: Thank you.

MR. CHAPMAN: Up next is Nicole, followed by Phoebe Judge. Nicole, if you could start with your name and affiliation.

MS. DEHNE: Hi. My name is Nicole Dehne. I'm the certification director for Vermont Organic Farmers, LLC. We're the certification program of NOFA Vermont. We certify over 700 organic producers in Vermont.

I'd like to thank the NOSB for all of your hard work, and the opportunity to give comment today on a number of agenda items.

We strongly support the CS's work on the proposal to strengthen the NOP's organic seed guidance. We agree that progress towards full adoption of organic seed and planting stock is far from being achieved, but we commend the NOSB's work to clarify the goal of continuous improvement and to work with certifiers and growers to implement reasonable measures towards this goal.

It was clear that the CS adopted public comments on this revised proposal, and we agree with the changes made and feel the result is a much stronger proposal. One area that remains problematic is the section that states that non-organic seed can be used if there's no organic seed available of equivalent variety with the desired level of purity from GMO contamination.

It seems unlikely that organic seed

will have more GMO contamination than conventional seed. It also seems unrealistic to expect non-organic seed companies to tag their seed with information about GMO purity. If only organic seed companies comply with this new requirement, then producers will be choosing between a known contamination and an unknown contamination, and this may encourage the use of non-organic seed.

Paper pots. I am going to comment. The paper pot transplanting system has been a game-changer for our producers, our veggie producers in Vermont. The 2017 TR on newspaper and other recycled paper contains descriptions of inks and adhesives used in these products. This means that these items were considered when this material was reviewed and approved for addition to the National List. We strongly feel that if newspaper and other recycled paper is allowed for organic crop production, that paper used for paper pots should be allowed for organic crop production as well.

We strongly recommend that the NOSB ask the NOP to extend the current allowance of the material through the 2019 growing season to allow the NOSB to review the petition and to officially approve the material for use on organic farms and for the NOP to engage in rulemaking.

Also, in general, we support the efforts of the CACS to outline areas of improvement for the training and oversight of inspector and certification review personnel. We support the document and its goals, but would like to ensure that the NOSB recommends to the NOP that the program develop and articulate skills and knowledge that inspectors and certification staff need, but allow for flexibility for how those skills and knowledge are taught. Thank you.

MR. CHAPMAN: Harriet.

MS. BEHAR: On the transparency of the genetic contamination, do you feel it's more beneficial for farmers to know what the amount of

genetic contamination might be, or would it be better just as it is now and they just don't know? But then, of course, neither way would they lose their certification on the final crop. But, I mean, would it cause stress by knowing or something? I don't know.

MS. DEHNE: I think it's the usefulness of the knowledge. So, if we're using it but we're using it to make a choice, then if we don't have the other information then the choice -- then the knowledge isn't very useful.

So, in this particular case, when we're saying, you know, that if you can choose non-organic seed if the organic seed has some GMO contamination, it's only valuable if we can compare apples to apples.

MS. BEHAR: The proposal requires all seed planted on organic land to have that level of purity testing. So either the organic seed supplier, the non-organic seed supplier, or the farmer would have to produce that. So there would be knowledge at some point in the system.

MS. DEHNE: Right.

MS. BEHAR: You know, I guess it wouldn't have to happen before purchase, if they chose. I mean, it would be nice to know, but they would know at some point and it would be part of the organic system plan, so we would have that database to track.

MS. DEHNE: Harriet, if that were the case, that would make sense. I'm just concerned about how we regulate the non-organic seed producers, even if it's on the organic farm. That seems tough to me.

MR. CHAPMAN: Thank you. Up next is Phoebe Judge, followed by Kiki Hubbard. Phoebe, if you could start with your name and affiliation.

MS. JUDGE: My name is Phoebe Judge and I work at Vermont Organic Farmers as a materials review specialist. I appreciate all the thoughtful work from the members of the NOSB and for giving me the comment period.

Firstly, I would like to stress how

vitally important it is for organic producers to be able to utilize technologies that help them improve efficiency and reduce labor. The paper pot transplanting system is one of these technologies. Expanding the use of paper, including paper from hemp, to be used as a tool applied to the soil as a planting aid, including as pots and seed tapes, is a low-risk expansion from allowing newsprint and recycled to be a compost, feedstock, or a mulch.

We strongly encourage the NOSB to ask the NOP to extend the use-up period for these paper pots to the end of 2019 growing season while the Crops Subcommittee reviews the petition to add paper as a planting aid.

Secondly, as the NOSB considers the use of vaccines as a tool for organic livestock production, it is important to ensure the use of non-organic -- non-GMO vaccines are used when possible. VOF currently allows only the use of non-GMO vaccines on our certified farms. We require vaccine manufacturers to sign an

affidavit stating which of their vaccines comply with the NOP's and the NOSB's working definition of non-GMO production methods.

We would, however, support the use of GMO vaccines in the case when no non-GMO vaccine is available for the treatment of a disease. If GMO vaccines are to be used in organic livestock production, however, we ask that the vaccines be added to the National List according to 205.600(a).

Lastly, we appreciate the NOSB's attention to the issue of Bisphenol A, or BPA, in food packaging, and support continued research into alternatives to BPA.

More broadly, we urge the NOSB to add the issues of phthalates in organic milk and dairy to its work agenda. Phthalates are a group of chemicals that have been linked to a wide range of reproductive and neurodevelopmental problems, and they have no place in the consumer's idea of what organic means.

We share the concerns of our

colleagues at the Center for Food Safety and elsewhere that phthalates in organic milk and dairy products must be reduced. We would also ask that the NOSB request input from organic dairy producers and processors on which products and suppliers they use for equipment containing phthalates, and to generate ideas for reducing these contaminants. Thank you again for your work.

MR. CHAPMAN: Questions? Ashley.

MS. SWAFFAR: So, when you ask those vaccine manufacturers, what are the excluded methods that you list?

MS. JUDGE: We supply the affidavit that includes both the NOP's definition of a non-GMO production method and the NOSB's working definition.

MS. SWAFFAR: So transposons aren't included in that at this time?

MS. JUDGE: No.

MR. CHAPMAN: Thank you.

MS. JUDGE: Thanks.

MR. CHAPMAN: Up next we have Kiki Hubbard, followed by Pat Kerrigan. Kiki, if you could start with your name and affiliation.

MS. HUBBARD: Good afternoon. My name is Kiki Hubbard. I'm the director of advocacy and communications for Organic Seed Alliance. We are a mission-driven organization that works nationally to ensure that organic farmers have the seed they need through research, education, and advocacy.

My comments today will touch on three topics. First, OSA is very supportive of the work of the Materials Subcommittee to provide further clarity on excluded methods. We support passing this proposal and encourage ongoing clarification of definitions per our written comments.

Secondly, OSA appreciates the hard work of the Materials Subcommittee on the incredibly complicated issue of genetic integrity and transparency. We're pleased to see ideas fleshed out to move the conversation forward, and

we're especially happy to see a proposal that underscores the importance of sourcing organic seed when it's available to incentive broader adaption of this critical organic input, when appropriate.

However, we do believe the proposal could use more work, and we don't support it at this time, at least as written.

OSA agrees that testing for and monitoring unwanted trace developed through excluded methods is a very good idea, and we hope to gain more clarity about the purpose and goal of this proposal and how the findings of any type of pilot project would be used at this meeting.

Lastly, we're very happy to see the organic seed proposal back on the agenda this week. It's important that these changes to the seed regulation and guidance for certifiers move forward for a number of reasons, not the least of which is to spur the development of more organic varieties that help organic farmers stay competitive and adapt to changing climates and

markets.

As the availability and diversity of organic seed increases, policy must follow suit to ensure increased adoption in a measurable and reasonable way. OSA supports amending the organic regulations at Section 205.204 as written in the proposal.

We support most of the proposed changes in NOP's organic seed guidance document. In particular, we're pleased to see stronger language that emphasizes the role of on-farm trials and aspects of non-compliance. We do offer additional changes to the guidance to consider in our written comments.

OSA's research team has seen first-hand that many organic farmers are increasingly conducting organic variety trials, and so this is why we're again very pleased to see trials highlighted in the proposal.

Seed represents profound potential for transforming how we farm and what we eat, and it helps the success of farmers who grow

organically. So we're very grateful that the Board continues to make organic seed policy a priority, and we're very grateful for your time and your service. Thank you.

MR. CHAPMAN: Harriet.

MS. BEHAR: I want to thank you, Kiki, for helping me get in touch with seed suppliers and flesh out some of those issues on both of those proposals, organic seed and genetic integrity. That was very useful to talk with them, and I think some of them will be giving public comment as well.

MS. HUBBARD: You're welcome.

MR. CHAPMAN: Emily.

MS. OAKLEY: Thanks, Kiki. I have a question on the Crop Subcommittee's proposal to amend NOP Guidance 5029 and the section for 4.1.3(d), contamination from GMO consideration: non-organic seed can be used if there is no organic seed equivalent available, or available of equivalent variety with the desired level of purity from GMO contamination.

Because, as an organic farmer, we've discussed this in the Crop Subcommittee, you know, organic seed is about more than just non-GMO contamination. So I'm curious. As was mentioned in the previous comment, how extensive do you think this would be applied? Do you think this is a very small percentage of seed that would be opted out for in this level of the document?

MS. HUBBARD: Well, it of course depends by crop type. We are concerned -- first of all, I think already that can be used as a reason to not source seed that has levels of contamination that might exceed a desired level of purity, especially per a contract agreement or something like that.

We are concerned with that existing language right now, with references to seed purity, because there currently is not an industry standard. And so it is potentially confusing and potentially difficult to enforce. So as this time, we recommend leaving out

references to seed purity until the Material Subcommittee provides more direction through their work on genetic integrity and transparency.

MR. CHAPMAN: Thank you, Kiki. Up next is Pat, followed by Alan Lewis.

MR. KERRIGAN: Hello everyone. I'm Pat Kerrigan with the Organic Consumers Association and Regeneration Midwest. To NOSB members, NOP staff and organic stakeholders, Southwestern Minnesota organic vegetable farmer Jack Hedin recently quoted in The Star Tribune as saying "In an era of more frequent and more intense rainfall during the growing season, the Upper Midwest may simply be becoming too wet, too often to grow fresh market vegetables profitably."

It's hard to imagine that many of us will be left in 20 or 30 years, much less how he industry can grow in response to consumer demand. One of the most sobering editorials of the many sobering editorials I've read this year.

His farm, Featherstone Farms, has been

instrumental in helping to build a thriving Twin Cities organic food scene, which features dozens of restaurants selling locally and organically produced foods, and the largest food co-op network in the country.

But as Jack Hedin points out, our producers are facing a grave and growing climate change threat. Climate change is the elephant in the organic room, and we simply can no longer ignore because it is not part of the NOSB work agenda. We cannot continue to ignore what's happening in the world around us and across the Midwest.

Our climate change crisis and how the organic community can respond needs to be a perennial part of the NOSB's work plan. Improving soil health and soil resilience is not only good land stewardship, but it's becoming more and more critical for keeping both the soil and those who farm it on the land.

We are well underway, but have so very little time and we have so much to accomplish.

We simply must accelerate our efforts. The good news is that the soil solution is indeed under our feet, and that the regenerative agriculture movement is becoming all the rage all across the country.

In my work with Organic Consumers Association and Regeneration Midwest, I am so fortunate to be able to spend my work days learning about and speaking with regional regenerators, along with their governmental, non-profit, academic and business allies.

Through the 13 state Regenerative Midwest Network, we are building consumer awareness and market demand, as well as market infrastructure for regenerative organic products in the Midwest and beyond.

I'm encouraged and inspired by Midwest regenerative leaders such as Gabe Brown and his cover crop cocktails, David Brandt and Regi Haslett-Marroquin, who are doing a fantastic job in educating farmers and ranchers about the many benefits of incorporating regenerative practices

into their operations.

And I'm very grateful for the work that Minnesota Sustainable Farm Association, the Minnesota Institute for Sustainable Agriculture -- oh man, it goes so short. We can regenerate soil health. We can do it. We have to do it and we need to take a stand for soil. Thank you.

MR. CHAPMAN: Thank you, Pat. Any questions for Pat? I'm not seeing any. Thank you, Pat. Up next is Alan Lewis, and on deck is Jay Feldman. Alan, if you can start with your name and affiliation.

MR. ALAN LEWIS: Alan Lewis. I work for Natural Grocers. It's a family-run health food chain, 150 stores, all certified organic in 19 states west of the Mississippi. Organic is meaningless. I've been on the road almost every day in October and every day I hear somebody tell me that organic is meaningless and it's infuriating, and I know it's infuriating to all of you as well.

Typically, this is someone in

agriculture in their 20's, and I take a breath and I take them aside and I remind them that the traditional knowledge of health and ecology are what organic is all about, and the new science of the soil biome and the human biome have finally caught up to our traditional understanding, and that human health and global health and climate change, nutrient density and all of these are tied up in the ethic of organic, and it's anything but meaningless.

So here's the problem. If we're facing all of these complex chronic diseases especially in that generation, and we know now that all of our organic practices are the cure for complex chronic disease, we have a whole, people from all walks of life, all over the world coming back to ecologically responsible practices.

There are two million food retailers in the U.S. Fewer than a thousand are certified organic processors, handlers one-tenth of one percent. The 99.9 percent are taking beautiful

organic produce and products, transporting them in contaminated trucks, putting them in contaminated totes, storing them in contaminated coolers, washing them in contaminated water and exposing them in particular to egregious toxic chemicals under conventional pest control regimens.

So we're not really delivering on the organic promise. So maybe those 20-somethings are right. We have one tool in the tool box that is in OFPA Jenny, and it could really help the situation, and that's the logo on the screen. It is illegal for exempt or excluded operations to use the USDA organic seal, and yet 99.9 percent of retailers in the United States are able to and often use that seal and represent themselves as certified organic operation.

We need to use that tool so that consumers who are looking for certified organic, clean, helpful, healthy organic products know where they can find it.

There's many retailers in the room

this time around, including the co-op grocers, all of them spent hundreds of thousands of dollars getting certified, having an organic system plan, getting audited, correcting non-compliances and working with organic pest control. It's incredibly important to consumers, and that's ultimately what's going to make organic meaningful again and forever. Thank you.

MR. CHAPMAN: Thank you. Thank you Alan, timing was great. Questions for Alan. Emily?

MS. OAKLEY: Is it appropriate to ask you for a specific example of an inappropriate use of the USDA seal in a retailer situation?

MR. ALAN LEWIS: So I've sent a number of examples to NOP enforcement. One is Aldi in Kansas City, in fact all of their remodeled stores. It's public knowledge. They're using a teal and mauve stylized version of the seal, which is against the law as a motif in their produce department.

They have no organic system plan, no

organic controls, and yet that logo is everywhere for consumers to see. Related to that is bulk products at almost every non-certified retail. Those are transported without a system plan. They're all unaudited. They're opened and relabeled by a non-certified operation, and the green, white and brown logo is on the bulk bin.

Now I like promoting organic and I like to see the seal, but we have a disconnect and there's a tool to connect this. Make the retailers and the distributors in the supply chain comply with a verified organic system plan, because the health effects of organic I don't think are coming through, particularly because of the pest control materials that are being put outside the store, in the store and throughout the supply chain.

MR. CHAPMAN: Thank you, and Alan has submitted written comments with photos of those examples, so you can go find that one. I had Dan and Steve. Dan, then Steve.

DR. SEITZ: So Alan, just to

understand, so you're -- if I understand you correctly, you're saying that food may be kept in an organic state all the way until it gets to a retailer, and when it reaches the retailer, if they're not certified, apart from the advertising abuses that you've observed, that just the normal store practices may compromise the organic quality. Is that sort of the core of what you're saying?

MR. ALAN LEWIS: That's correct, Dan. There's only one, for instance, national pest control company that can do a proper organic pest control program. The other two or three big ones that are left are consolidation have no capability to do this, and they're the ones deployed throughout the food system and particularly in retail.

MR. CHAPMAN: Steve.

MR. ELA: So you touched on bulk displays, repackaging and such. I mean certainly we know there's a lot of stores that have both conventional and organic produce displayed,

commingled. Can you go a little further on that?

MR. ALAN LEWIS: Well it was another -- that is correct. You've seen pictures, locations. You cite song and verse of the OFPA so that the enforcement folks don't have any extra leg work to do. They can answer the questions. I sent pictures of a Whole Foods in Boulder displaying unstickered bell peppers conventional on one shelf, unstickered organic bell peppers right underneath it, and I raised the question whether this was a compliant organic system plan to prevent commingling.

Both the certifier and the NOP pretty much said don't worry your pretty little head, that's fine. Gravity and customers and moving stuff around doesn't make sense. I think there should be an organic section and conventional section, and certainly not conventional over organic.

So it's an example of something where the certifier is defending a practice that would be one phone call to say tell your guy not to do

it that way.

MR. CHAPMAN: Harriet, briefly.

MS. BEHAR: Are you aware that the Organic Trade Association, oh geez it's been at least 15 years ago, put out a book called "Good Organic Retailing Practices" to try to help retailers do a better job, especially those that are not certified, to understand the practices they need, like don't put the organic underneath dripping non-organic produce from above. Have you seen that or heard about that?

MR. ALAN LEWIS: I haven't seen that particular document. NOP has one for retailer compliance, general retail compliance. If you drop an apple on the floor, don't call the police. Wash it off, put it back on the display, things like that.

Some retailers are better, not all are bad. I think my example at Aldi's kind of an egregious use of the seal, because I once submitted a seal with the wrong color brown on it, and Sam Welsch kicked that out, non-

compliance, right? So mauve and pink I think would have thrown him into conniption.

Kroger's, pretty good, and you know I'm the organic police. That's what I do on vacations, go into grocery stores. So I think some are more committed than others. But still you see this logo, and what I want the singular message here is consumers need to see the logo and think certified supply chain.

Right now they're seeing the logo and assuming that all that bulk, and all the apples and oranges and everything are properly accounted for and protected, and it would be a really important tool for the federal government to start using to enforce.

MR. CHAPMAN: Thank you, Alan.

MR. ALAN LEWIS: Thank you.

MR. CHAPMAN: And retailer beware if Alan's coming to vacation in your town. Up next is Jay, followed by Albert Straus. Jay, give us your name --

MR. FELDMAN: Good afternoon. My

name's Jay Feldman. I'm Executive Director of Beyond Pesticides and a former NOSB member from 2010 to 2015. Thank you all for your service. Thank you NOSB members and NOP staff. So continuing in Alan's, in the spirit of Alan Lewis and continuous improvement, we'd like to raise some serious process issues with you all today.

We may not always agree on decisions that are made by the Board, but we must and should agree on the process, the decision-making process. We need a rigorous transparent process of review of national materials, on National List materials, that builds and protects the organic brand.

That process must do two things. It must show the public that critical scientific and essentiality issues are considered, and it must incentivize the market to make available non-toxic products compatible with protection of public health and the environment.

So we need to create a record, and the important elements of that record are rigorous,

robust and reported review, documentation of all positions of all stakeholders, transparency through the release of detailed notes.

The public needs to see that the Board considered all issues related to cradle to grave adverse effects, compatibility with organic practices, including biodiversity, ecosystem, protection of the ecosystem including soil management and essentiality.

The Board should reinstitute the practice of documenting minority positions. One of the many examples on the agenda of this meeting is sodium carbonate peroxyhydrate, which is noted to be highly toxic to bees. The CS voted two to delist five to relist without any explanation of the discussion and consideration of the criteria for listing.

Work plan. The public discussion of the work plan that we heard earlier today is a positive sign. Until we fix the work plan setting process, we suggest that the Board announce at every board meeting work plan

requests that have been rejected by NOP, and NOP has the opportunity to provide its reasoning.

In addition, when a proposed work plan item is rejected or removed, put the issue into the Subcommittee notes. Then the public could weigh in when the notes are docketed and according to Board policy by the way, passed by this Board.

Inerts. At this point, we are out of compliance with the law, and put listed materials in legal jeopardy. Then there are thematic concerns. We need a fermentation policy. The issue of gellan gum came up. A true example of the breakdown in the process. CBI is not disclosed as a part of the original petition or in the sunset process, and as a result the non-disclosure of sources and detailed description of manufacturing procedures cannot be evaluated.

Unless a manufacturer has sourced organic or non-GE corn for its glucose syrup used in the fermentation process, it should be considered made with excluded methods. Now this

is true for other fermentation mediums, xanthan gum, et cetera. We need a sanitation policy. The Board should not be approving chlorine materials at this meeting until such a policy is in place. Thank you.

MR. CHAPMAN: Thank you, Jay. Emily.

MS. OAKLEY: Yeah. I appreciate your comments about listing the minority view, because it is definitely something that I thought of as we made those deliberations, and then realized that that's not tracked through the documents. So then stakeholders don't necessarily understand how it is that some people came to the decision to vote the way that they did, when it isn't a unanimous vote.

So you've suggested that we put the minority view back in as I understand it, when the PPM is slightly different than what you're suggesting. So how is it that you would suggest a road map for discussing or addressing after the fact votes, representing divergent views or voting positions?

MR. FELDMAN: Well, we have to remember that this Board has the statutory responsibility to advise the Secretary. So we need a little more pushback, folks, in terms of the policy and procedures.

One critical element in representing the stakeholders, and I don't -- it doesn't matter which side you're on on a particular issue, is that that voice is heard through these documents.

And that process is -- can only be expressed through the minority view, or at least -- I mean I would consider that the views of the Subcommittee, because they're being expressed and discussed. So yeah, I mean what -- you hit the nail on the head in pointing to the PPM, because that obviously establishes the process of review in the outline.

The thing that's important to remember here is that the process that we use for approving a petition is the same process we should be using in the sunset process. If you

look at this meeting at the documents for petition review, they're much more thorough. There's much -- they're much more robust.

We need that same documentation, that same attention to new science, new information on essentiality, and I would argue, as was the case when I served on the Board, checklists for the sunset process so that the public can look at this.

Even if they don't agree with the solution, well they can say well that was well-reasoned. There's science here. I trust the Board is doing its due diligence. So it does go back to the PPM.

MR. CHAPMAN: I mean I'm looking at the PPM. We have a section for a minority view. There's also no section I'm aware of that prohibits the accurate summation of the discussions of the Subcommittee. If anything, if it's missing from individual proposals that was missed by those individual members of those subcommittees. But is there some prohibition

that I am missing that you're referring to?

MR. FELDMAN: Well, it's not a question of a prohibition. It's a question of an affirmative policy requiring that the stakeholder voices are heard through those documents, and I didn't see -- I could be wrong. I didn't see any attention to minority views throughout the proposals or documents that was provided to the public.

I'm not just saying that, you know, two people disagreed with the majority. I mean I'm talking about a documented, cited justification for positions that are voiced by both sides, including the minority side.

So the answer to your question I think Tom is that yes, we'd like to see an affirmative requirement that the documents that are presented to the public cover the waterfront, as it were, of those issues and positions.

MR. CHAPMAN: Emily.

MS. OAKLEY: I completely agree with you in theory, and I'm sitting here trying to

think about how practicality would be applied in this, because you know many times some of those decisions aren't made until the vote is made, and that discussion takes place during the course of the meeting.

But we're voting on a document as it's written. So that would lengthen the process, because we would have to then take that document back, craft a minority description for why people abstained or voted no, then bring it back again potentially to vote on that finalized version of the proposal or whatever it may be, sunset review, that we're then sending back for a final approval by the NOP.

But it is -- I just want to say it's something I will give a lot more thought to. I think we can discuss it as a group. I think practically it might be a little challenging, but we should try to explore it.

MR. FELDMAN: Thank you.

MR. CHAPMAN: Thank you.

MR. FELDMAN: Thanks.

MR. CHAPMAN: Up next, we have Albert followed by Dale Woods. Albert, can you start with your name and affiliation?

MR. STRAUS: Affiliation, okay. My name's Albert Straus. I'm founder and CEO of Straus Family Creamery and have an organic dairy farm. We were the first certified organic dairy and creamery west of the Mississippi River, and my company's built on relationships with our farmers, with our customers.

Organic integrity and creating a model that's actually showing the world that farms, livestock farms, dairy farms are a primary solution to climate change. So but what we need, and I appreciate you guys, your work, your efforts and Scott's beard.

But the tools that I'm trying to -- certifiers, when they're looking at dairies, need tools to be able to benchmark or to really come up with a baseline for farms. I presented a tool before. It was a pasture stocking rate tool. I've now found a -- it's actually an app for a

hunting app, which actually gives you parcels, the name of the parcel, the acreage of the parcel.

And then in collaboration with this pasture stocking rate, we can see that -- there's one instance I have is a 1,200 cow dairy that's on 312 acres, that my calculation says that they should only be able to milk 624 cows. So it's a baseline to have certifiers and inspectors look at, and then to kind of say if there's some difference, show us where the proof is.

The second part of what I wanted to talk to you guys about is we've been -- we were the first dairy to have a carbon farm plan to sequester 2,000 metric tons per year. Twenty percent of that is from adding compost and using animals to graze and planting hedge rows and wind breaks.

We've been working with a NASA scientist to quantify the amount of growth of biomass or pastures and crops using satellite imagery, and to -- it's to really build the case

for -- the economic case for farmers to do these practices. So this is a graph of the nine dairies that supply our creamery, and when they went organic and then proved over the last 18 years, the improvement of biomass production.

And then what we also are showing is that there's probably about 100 acres, excuse me, $100 per acre per year savings by growing more to feed on farm versus having to buy off-farm feed. So we're really trying to make something that can be expandable, really make a difference, and show that farms are really a viable entity. Thank you.

MR. CHAPMAN: Any questions for Albert? Harriet.

MS. BEHAR: Did you bring any ice cream?

MR. STRAUS: We're in the wrong part of the country.

(Laughter.)

MR. CHAPMAN: So maybe -- maybe the Seattle meeting then?

MR. STRAUS: There's one thing about the economic, the economic impact of having dairies convert or do continuous conversion. If there's a ten percent surplus of organic milk and these farms are producing more and more milk, you're depressing the price for everybody in the industry.

So the dairy farmers are suffering all over the country. The excess production is the driving force behind it. So I want to add that to kind of just the logic behind it, okay? Thank you.

MR. CHAPMAN: Lisa.

MS. DE LIMA: Hi, I have a question about something you put in your written comment about the gums on 606. You had mentioned that you were in support of delisting the gums, because there were organic versions available, and I was wondering if you use any of those gums and are able to source organic? So these are -- would be gum arabic, carob and guar?

MR. CHAPMAN: Can I add to that? If

you could also talk about the quantity that you source, and whether or not you've had any issues in the past?

MR. STRAUS: The only thing we have to use gums are for -- are soft serve, because we don't add gums to any of our products unless we absolutely have to. The only one we have to use some gums are for -- it's a very small amount, I think less -- like .2 percent of the mix, in our soft serve mix, and it's -- I'm pretty sure we have an organic source.

We don't use these other carrageenan with the concern about carcinogens. We don't use a lot of these different ones. There is a little bit of -- now that I'm thinking about it, there is a little bit of gum in I think the chocolate chips that we buy. But other than that, I still think that using organic sources is -- they're available.

We just need to kind of stop allowing the excuses of innovation is driven by necessity. You have to have organic sources. I'm sure they

can find a way to do it.

MR. CHAPMAN: Do you know how long you've been using organic sources of gums?

MR. STRAUS: It's been a few years.

MR. CHAPMAN: More than five?

MR. STRAUS: They haven't had soft serve out that long so somewhere in the three to five year.

MR. CHAPMAN: Okay. Thank you for providing that detail. It's appreciated. Thank you.

MR. STRAUS: Thank you.

MR. CHAPMAN: Up next is Dale, followed by Dave Colson.

MR. WOODS: I appreciate the post five o'clock crowd still here. It's really nice. I'm Dale Woods. I'm with the California Department of Food and Agriculture. I'm the program manager for the fertilizer program, which has both the conventional and an organic input portion to the program.

We are both -- as the organic portion

of the program, we operate both as an MRO, a material review organization, but we also have a regulatory function for both organics and all other fertilizer issues. I want to talk about a couple of things this time.

At the last meeting, I talked about -- I brought up the issue of the liquid fish and how to consider the pH 3.5 limitation, and the comparison of either using a drift method or an absolutely low floor for it, and I'm still kind of waiting for a response from NOP for how -- some suggestions about how the CDFA and OMRI can kind of come to an agreement about that.

Also on the liquid fish, for some time the NOSB has been asking a lot, the fertilizer producers who came questions about their environmental concerns about the fish they were sourcing.

I'm actually very glad that this is now being moved to more of a work agenda thing, because it was kind of clear to me that the number of people you had coming here and

providing information was an extremely limited type group of people, and I don't think you were getting a clear picture of what is actually being sourced in the world of fish.

It's a real mess between animal feeds and fertilizers. They're deeply intertwined, and it would not have been served well to have dealt with it with just some comment during this time frame.

Quick question, quick comment on kelp. There was a question about how much kelp is being used in conventional and organic. We register about 10,000 fertilizing labels, and I would tell you right now that the vast majority of the labels that have kelp in them are in the organic, in the organic system.

That does not mean that the vast majority of kelp is being used in the organic system. The conventional people who do use it use it in a much larger acreage, you know, because we're talking about big conventional grape growers or something like that.

So there's a significant amount of kelp that is used in those products, and I could not in any way give you any figures about what that is because they're not necessarily required to give us specific use numbers. Within the organic portion, those labels that we do register, there's big commercial ag people. There's home and garden, tons of home and garden people.

There's a lot of specialty products, which is where the largest number of labels that we have, they have kelp in them, are those specialty products which are used for the specialty cannabis market. So that is -- that's one of the largest number of labels we have. I have no idea about anything else, okay.

I will mention real quickly paper pots. CDFA has not dealt with paper pots because no one has asked us. But if it is continued to be talked about as a real fertilizing material, anyone in California who wants to use it will have to register those paper pots with us.

Any time it's mentioned as a benefit to soils, it becomes then under our purview and they're going to have to register that product.

MR. CHAPMAN: Thank you, Dave. I've got a question, then we'll do Steve and I think Emily's got a question. Related to the questions, the liquid fish questions that we had been asking, and the sustainability of fish, there's been questions around, and I don't know to what extent you can disclose an aggregate data or not. Do you have a sense of the market origin of the fish? Is it a byproduct? Is it a product that's wild caught specifically for the fertilizer products? Is there other origins?

MR. WOODS: U.S. and Mexican producers are basically doing stuff that's split between -- I mean their primary market is the pet food market, I mean and then human fish oil stuff. So the fertilizer is purely an afterthought. But if the fertilizer people aren't going to take it, it gets tossed. It's purely a waste product.

That is maybe a little bit less true

internationally, but it is still a part of the issue. All these guys are sourcing stuff. Most of it is as an afterthought for the other markets. But some of it is truly wild caught, and some of it is -- some of the stuff is actually cultivated.

MR. CHAPMAN: Okay. Steve, then Emily.

MR. ELA: So two questions on the fish. How would -- I mean it's now on our work agenda. How would you suggest we craft a TR request or word to get a better answer on this, exactly what you were just saying? Do you have any thoughts?

MR. WOODS: Yeah, I don't know. That's my concern, is it's a -- they're not necessarily interested in getting a lot of information to the fertilizer world because it's a blip on their economic thing. I mean sure, they'll sell it to the fertilizer people, but if the fertilizer people --

If a registrant asks them too many

questions, they say go away, we're not going to sell it to you. You're not worth my time. So it's going to be hard. It's going to be really hard.

MR. ELA: And then your last comment. So on the paper pots, if it's used as a mulch, is that -- do you call that a fertilizer?

MR. WOODS: You see the reason -- the reason we did not have to deal with it is that we viewed this as a certifier question, because as long as it's a pot, it's basically a planting issue. They're using a pot, they're planting it. That's in the certifier realm. That's not in an MRO. That's not in our MRO stuff.

However, because it's not really a fertilizing input as long as there's no claims made for it. But as soon as claims are made that this is a benefit to the soil, that is that it provides soil-amending qualities, now you're by state law drawn into our fertilizer realm, and then those products must be registered with the Department in order to be sold in California.

MR. ELA: So if they just don't say anything, they just apply a mulch.

MR. WOODS: Well here's -- here's the problem, is that this meeting has done that. You know, the manufacturer could sit there and just say hey, here's a pot, you know, and we'd never pay any attention to it at all. But now in the world of organics, everyone is saying okay, here's these paper pots.

They've been used for this purpose, and by the way they have soil-amending functionality. So now it's been drawn into our world, whether we wanted it or not.

MR. CHAPMAN: Dale, can you briefly describe the scope of authority of the CDFA material review, since it's different than OMRI or other material review organizations?

MR. WOODS: The original, the origin of our stuff is basically to deal with review for fertilizing products to be used in California. That is our original mandate. However, our list is available to anyone. Certain certifiers

throughout the U.S. and wherever use our, use our list.

We have suppliers, we have people coming from all over the world that are registering products with us. We have a little over 2,000 organic OEM products that we have listed. If you wish to distribute a product as an organic input material for growing in California, it must by law be registered in California. If it's not, it's subject to quarantine and/or civil penalties.

MR. CHAPMAN: But your program doesn't go to the extent to review pesticides per se --

MR. WOODS: We do not. There's a large number of things we don't deal with. We don't deal with anything associated with animal, livestock issue, nothing with processing and handling, nothing with pesticide. It's purely this one little piece.

MR. CHAPMAN: Yeah, thank you. Emily?

MS. OAKLEY: Thanks for your comments on liquid fish. When we requested that for the

work agenda, we actually focused on wild caught fish harvested whole exclusively for the use as fertilizer. But I'm hearing in your comments concern about byproduct fertilizers, that might be the byproduct of the pet food industry or human oil consumption; is that correct?

MR. WOODS: Sure. Almost, I'd say the larger fish people are out there -- out collecting fish knowing, you know, probably the larger ones are out there collecting fish, knowing they're bringing it in for the pet food market and the leftovers go to the fertilizer world.

So that is wild caught fish focused directly on fertilizer. Not their primary goal, but that is a piece of what they're out there for.

MS. OAKLEY: You're saying it provides part of the economic benefit of that product?

MR. WOODS: Yes, yes.

MS. OAKLEY: So we should potentially expand the scope of the review?

MR. WOODS: Well, I just think it complicates it. I don't really know where you're going to go with it.

MS. OAKLEY: Okay, thank you.

MR. WOODS: Thank you.

MR. CHAPMAN: Thank you, Dan. Up next is Dave Colson, followed by, I apologize if I butcher this name, but I think Bjarne Pedersen. Dave, if you start with your name and affiliation.

MR. COLSON: Good afternoon. My name is Dave Colson. I'm a proud certified organic farmer from Durham, Maine, and I'm also the Organic Agricultural Services Director for the Maine Organic Farmers and Gardeners Association. I'd like to focus my comments on the marine materials discussion.

My comments are in addition to those submitted by MOFGA Certification Services. Regarding the feasibility of requiring all seaweed harvested for use in organic crop production to be certified to the wild crop

standards, MOFGA believes this would be difficult to accomplish in practice.

MOFGA Certification Services currently certifies sea vegetables for human and animal food using different aspects of the national rule. The impetus for developing the standards was due to the change in the particular seaweed product kelp from the classification of a feed supplement to a feed additive.

Many farmers around Maine and around the country told us of the need for this product in the feed rations and their wanting to continue to allow the use of kelp. A certified process needed to be developed.

The sea vegetable standard was put together not with a comprehensive look at the ocean ecosystem, the intrinsic value of seaweed contributions of the marine environment, or how harvest of these crops might affect the environment, but in a somewhat convoluted process of utilizing the existing land-based standard and applying it to a seed-based crop.

While not perfect, this standard did allow for the continued use of kelp in livestock feed and for the certification of kelp for the human consumer market. Now we are facing questions of sustainability and the value of a number of seaweeds in the marine ecosystem, and not just as a product for human and animal consumption.

History has shown us they were not always good stewards of the ocean, its flora and fauna. Settlers came to Maine and the maritime provinces for the abundant resources of seafood, sturgeon, cod, haddock, herring and more. One by one we've seen these resources depleted. Shrimp has not been harvested from the Gulf of Maine for three years now.

A new market for sea urchins booming just a few years ago has dried up. Lobsters, one of the bright spots in Maine fisheries, but their abundance can be traced in part to the decline of their predators. Now we are in the process of taking the very foundation of the marine

ecosystem, seaweed, and exploiting for commercial use.

I realize that the portion of seaweed harvested and used by the organic community is small in comparison to the amount of total kelp or ascophyllum harvested in Atlantic waters. But we as an organic community have an opportunity to step back, look at the larger context of the oceans and their resources, and make a choice that can send a message to the wider community about safeguarding our natural resources. Isn't this what organic farming was all about in the beginning? That was fast.

I appreciate the chance to make comments, and thank you for your work.

MR. CHAPMAN: Thank you, Dave. Any questions for Dave? Emily.

MS. OAKLEY: Thank you for your comments. I know both in MOFGA's comments and in the comments of one of the producers that MOFGA certifies, there is concern that if this requirement for wild caught standard

certification for the ingredient, in this case rockweed for a crop input were mandated, that it would push producers into pristine areas.

But when I read that I was thinking well, wouldn't that then be excluded because it would be not adhering to the environmental impact portion, not destructive to the environment in the wild crop standard? I was wondering if you had any thoughts on that.

I would also just want to note that some of this rockweed in Maine is harvested for livestock feed, and the exact same operators and the same boats and the same materials then go out and harvest rockweed in a different area for crop input. So I think that's where that concern was coming from, that they would be moving into more pristine areas for the crop input. Thoughts on that?

MR. COLSON: Yes. So one of the interesting things about thinking about pristine areas, and in some ways these are conserved areas but Robin Hadlock Seeley talked a little bit

about this earlier, in the establishment of the sea vegetable harvesting guidelines, we had to apply a number of buffers, and this was included, I believe in the certification, MOFGA certification services comments.

So things like 20 miles from a nuclear facility, three miles from a commercial boat-building facility, three miles from an industrial waste discharge area, three miles from any city or town sewage discharge, three miles from a harbor or thoroughfare and there's, you know, more in addition to that.

So a pristine area would be one that would be considered to be not near any of those things. So harvesting from that area in a sense would be the default place for harvesters to go, since it would be easy for them to pinpoint where that area was and that they were harvesting those certified organic seaweeds from those areas.

MR. CHAPMAN: Any other questions? Thank you.

MR. COLSON: Thank you.

MR. CHAPMAN: Up next is Bjarne, followed by Doug Currier. If you could start with your name correct if I messed up and affiliation.

MR. PEDERSEN: Thank you, I think you're doing fine. My name is Bjarne Pedersen, and I'm from Denmark. I'm affiliated with and represent a Danish company, Ellepot. Ellepot manufactures a paper pot system. I'm very thankful for the opportunity to be here to present this comment on paper pots.

We support the petition for paper pots and we commend it to be part of a more general use of paper as a generic material for a crop production aid. I believe we may have a solution here. I have assisted Ellepot in developing papers for seven years now, including material for input to organics.

Today, we have a virgin paper approved by Soil Association in the United Kingdom. Without the use of these petroleum-based additives mentioned in the petition. We have

applied for the same at WSDA but were rejected, as we cannot use newspaper or recycled for Ellepot.

We spent two to three years working with the UK certifier to identify the materials that they will allow us to use, and after their approval we now have annual audits with inspection of our production.

The UK certification is under the EU and as I understand, due to the trade agreements with the U.S., a grower over here could now actually import young plants for organic crops with this paper.

I think it would be better to have the paper certified over here, to allow the grower to produce the Ellepot at his own facility. Making an Ellepot, we use a special additive. It's from a material that was actually suggested to us by the Soil Association. It was already approved as an input material as a soil conditioner.

The important feature of this material is the home composting certification by TUV

Austria, formerly Von Schott (phonetic). It is my understanding that the material for this should be either home compostable or biodegradable in soil to be accepted. This is something that I would recommend for the Board to look into as a claim for the adhesives.

Ellepot has a range of other papers using the same petroleum-based additives as mentioned in the petition, and again I would like to say that the Ellepot have these two new products now approved in the UK. One is for paper pots; the other is a weed barrier. Both are developed directly for the organic crops, and they were fully plant-based papers. They don't contain any petroleum-based components at all.

I wish to leave you with this comment, to let you know that we do, we can do these papers without the binders that are mentioned in the petition. Thank you.

MR. CHAPMAN: Harriet, and then Steve.

MS. BEHAR: So I'm looking at your website. Hello. Do you do any of your pots in a

chain type system, or are they all individual?

MR. PEDERSEN: They are all individual pots. We manufacture the machinery and sell or lease the machinery to the grower, and then afterwards we sell the paper to the grower and they can produce any number of paper pots that they wish to use. They're not in a chain. They're individual pots.

MS. BEHAR: And are they available here in the United States? Do you have distributors here?

MR. PEDERSEN: We have distributors here, yes. We have many customers in the U.S. today as it is, conventional growers. We've had questions from organic certified growers for I think six or seven years now for papers to be used, and well we've been working on developing a special paper for that segment, because we're very careful on what we have them leave in the soil afterwards, as the paper is intended to stay in the soil.

MR. CHAPMAN: Steve.

MR. ELA: So just to be clear, so no adhesives. You said there's the one material that I assume you can't say what it is exactly, but it's approved by the Soil Association. You think you could -- I mean obviously one of the benefits of like the paper pots that we've been talking about is the chain, so they can quickly transplant.

Could you develop a product like that, or is that without the adhesives? Is that difficult?

MR. PEDERSEN: I don't -- I think we might be able to develop it, but for the Ellepot system, we're looking in a different direction, as the transplanting machines for the Ellepot are taking them from trays and putting them into the soil, which our machines work quite well today.

The chain is based on materials that I think is probably the main challenge, because it's been very difficult for us also to make the paper that we have today.

But what we've been looking into is

generally bio-based materials that are home compostable, because you can get bio-based materials that are very, very long lifetime in soil, and we don't want to use that at all. So the strength of material is very difficult to obtain.

MR. CHAPMAN: Dave.

MR. MORTENSEN: I was just curious. Is your company primarily an implement manufacturer or a paper product manufacturer or both?

MR. PEDERSEN: It's a full system, because we don't sell the paper without putting the machine there first actually. So it's a full system of the machine, the paper, the tray and sometimes also the substrate. Usually the grower have their own substrate mixes and then we build this system around what the substrate they want to use, so that it's kind of a flexible system around that.

MR. MORTENSEN: Yeah. The farmers here that we've heard from have been buying. I

don't know the planter, but it's a planter that's adapted for the kind of paper product that they're using now. That's my impression anyway, but thank you.

MR. CHAPMAN: Thank you. Up last we have Doug Currier. Doug, if you could start with your name and affiliation.

MR. CURRIER: Thanks. My name is Doug Currier. Hello to the Board members. I am the Technical Director of the Organic Materials Review Institute. I'm going to comment on the marine materials discussion document and the sodium citrate proposal.

So first OMRI supports the creation of a working group which aims to address consistent review standards for products certified using the wild crop harvesting practice standard, NOP guidances and NOP Policy 12-1. While OMRI does not certify products, we recognize the need for consistency in wild crop certification, not just for marine materials but for crop, wild crop products as well. OMRI is open to providing

assistance to that working group.

Currently, OMRI lists 94 products as allowed in the category of aquatic plant products synthetically extracted in the crop fertilizer and soil amendments class. OMRI also currently lists 28 products allowed in the category of aquatic plant products not synthetic.

There are hundreds of products listed in our generic fertilizers blended category, some of which do formulate with aquatic plants. So it's unclear whether a global supply chain of certified organic aquatic plants would meet the current demands of input manufacturers, in addition to the current demand for a certified organic marine materials used in livestock feed rations, as well as materials listed at 205.606.

While the present discussion document identifies the 2015 sunset review as the genesis of concerns regarding the ecological harvesting marine materials, I'm sure the Board is aware that there are other non-waste stream materials that are not associated with the National List

materials.

Therefore, another route is likely required for those materials if the ecological impacts of their use is considered in the future.

Sodium citrate. While OMRI does delist blood meal products manufactured from blood treated with sodium citrate, there are blood meal products manufactured from blood treated with other anti-coagulants, as well as blood meal manufactured using untreated blood, which are also listed.

OMRI's view is that incidental amounts of residual anti-coagulant is allowed in blood meal, given that mechanical processing steps typical of blood meal manufacturing such as centrifugation and heating will generally result in their sufficient removal. Anti-foam is used when handling but is viewed in the same way.

The issue of ancillary substances in animal byproducts certainly does not stop with blood meal. Meat and bone meal products are also at risk of containing some amount of residual

processing aids, which are used in handling a volume of byproduct materials.

In an effort to avoid the piecemeal approval of synthetic processing aids, the NOSB could respond to individual petitions with a consistent message that NOP Guidance 5033 and 5033-1 are sufficient to assess input compliance, and in these documents there is plain language guidance on the review of materials extracted from non-organic sources. Thank you.

MR. CHAPMAN: Emily?

MS. OAKLEY: Thank you for your comments on marine materials. Some of the concern that was expressed by stakeholders was the difficulty for certifiers to verify the organic status of that particular ingredient. So I wanted to ask if you're aware at this point of materials that OMRI does list that do contain certified organic marine macroalgae?

Obviously that claim can't be stated as a USDA organic seal product. But could you discuss or address the feasibility for certifiers

to go back to a product and then verify if it were required to be certified to the wild crop standard, its certification for that ingredient?

MR. CURRIER: So we're talking about crop products here, and so OMRI looks at crop products differently than products considered for livestock consumption and human consumption. So we ask the question based on the definitions at 205-2 and 205.300, whether or not the product is intended for livestock or human consumption. If it is ingredients, agricultural ingredients listed on the label would come under the use of the term "organic."

And so crop products, specifically crop fertilizers, you know, could include certified organic on the label, and we would -- we would need to look and ensure that that's true. But other types of uses of the term "organic" are outside of our -- the scope of the use of the term "organic." Hopefully that answers that question.

MR. CHAPMAN: All right. I think

that's it. Thank you very much.

MR. CURRIER: Yeah.

MR. CHAPMAN: That concludes public comment for today. It's what, 5:52, so just before six o'clock. We start up tomorrow at 8:30 in the same location. Also starting with public comment.

If the people are here, the first public commenter tomorrow is Cori Skolaski, followed by Marisol Oviedo. And just so folks know to put it on their schedules, it looks like Organic Valley is hosting a networking reception featuring delicious organic cocktails, and that's good, because the only food I eat is delicious, and it's here in Ballrooms 2 and 3. So that's Thursday from 6:30 to 9:00.

Right now we'll go into recess and reconvene tomorrow at 8:30.

(Pause.)

MR. CHAPMAN: Just a note for folks still in the room before you rush out, if we find ourselves ahead of schedule tomorrow, we may move

into the Livestock section, which is right now on the agenda on Friday. So just to repeat, if we find ourselves ahead of the schedule tomorrow, we might move into the Livestock section on Thursday afternoon/evening.

(Whereupon, the above-entitled matter went off the record at 5:54 p.m.)

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C E R T I F I C A T E

This is to certify that the foregoing transcript

In the matter of: National Organic Standards Board
Fall 2018 Meeting

Before: USDA

Date: 10-24-18

Place: St. Paul, MN

was duly recorded and accurately transcribed under my direction; further, that said transcript is a true and accurate record of the proceedings.

Neal R. Gross

Court Reporter

UNITED STATES DEPARTMENT OF AGRICULTURE

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NATIONAL ORGANIC STANDARDS BOARD

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FALL 2018 MEETING

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THURSDAY,
OCTOBER 25, 2018

The Board met in Great River Ballrooms 1&4 of the Intercontinental Saint Paul Riverfront Hotel, 11 Kellogg Boulevard East, St. Paul, Minnesota at 8:30 a.m., Tom Chapman, Chairman, presiding.

PRESENT
TOM CHAPMAN, Chair
HARRIET BEHAR, Vice Chair
SCOTT RICE, Secretary
SUE BAIRD
ASA BRADMAN
JESSE BUIE
LISA DE LIMA
STEVE ELA
RICK GREENWOOD
DAVE MORTENSEN
EMILY OAKLEY
A-DAE ROMERO-BRIONES

ERIC SCHWARTZ

DAN SEITZ

ASHLEY SWAFFAR

STAFF PRESENT:

MICHELLE ARSENAULT, NOSB Advisory Board Specialist, National Organic Program

SONIA JIMENEZ, Deputy Administrator, Specialty Crops Program, Agricultural Marketing Service

DR. PAUL LEWIS, Ph.D., Director, Standards Division, National Organic Program

CLARISSA MATHEWS, Ph.D., National List Manager

DEVON PATTILLO, Materials Specialist, National Organic Program

DR. JENNIFER TUCKER, Ph.D., Deputy Administrator, National Organic Program; Designated Federal Official

CONTENTS

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

8:30 a.m.

CHAIRMAN CHAPMAN: Welcome back everybody. We'll get started now. Looking around the room it looks like all the Board members are present so we'll come back into order.

First up today will be public comment. Public comment will run through lunch. We'll break for lunch sometime in the noontime hour and then come back with the Materials Subcommittee; the Compliance, Accreditation, & Certification Subcommittee. If time allows, potentially the Livestock Subcommittee.

Up first on public comment is Marisol Ovieda followed by Michael Sligh.

Just as a quick reminder, it's three minutes for public comment. Only one speaking opportunity. The light will be green for the first two minutes, yellow for the last minute, and then turn red when the buzzer goes.

At that point we ask that the speakers

wrap up what they have to say. We'll open it up at that point to the Board to ask questions of the speaker. Then I will always call the speaker and the one on deck.

With that, Marisol, start with your name and affiliation for the record.

MS. OVIEDA: My name is Marisol Ovieda and I'm with the Northwest Horticultural Council out of Yakima, Washington. The Northwest Horticultural Council represents growers, packers, and shippers of apples, pears, and cherries in Idaho, Oregon, and Washington on federal and international policy and regulatory issues.

While the NHC submitted written comments on a number of materials for organic tree fruit growers and handlers, I will focusing my oral comments on the continued use of elemental sulfur and sulfurous acid in the National Organic Program.

In many ways the Pacific Northwest is the epicenter of organic palm fruit and cherry

production in the United States. Washington State is the national leader in the production of organic apples, pears, and cherries. Over seven million boxes of organic apples are now harvested from over 14,000 acres.

This amounts to over 90 percent of the entire organic apple crop in the United States. There is also a significant amount of organic pears and cherries with more than 4,000 acres planted across the Pacific Northwest.

As recognized by the Crop Subcommittee elemental sulfur is a critical tool for the tree fruit industry and the orchard setting. It is a vital insecticide used to control russet mites in organic apples and pears and has been used by our growers for over 100 years.

This product is also used to control scab and brown rot in organic apples, pears, and cherries. In particular, elemental sulfur is one of the few options available to treat powdery mildew.

It is an essential material that our

organic growers depend on. There are no alternatives to the elemental sulfur that provides the same level of control and are as compatible with the materials used during the growing season.

Elemental sulfur is also used to adjust soil pH which ensures better nutrient uptake, improve water penetration, and enhances overall plant health. This, in turn, provides a healthy soil environment for the beneficial insects and microbial activity. It is a necessary tool for organic production. It is worth noting Pacific Northwest growers use the wettable application of elemental sulfur.

Sulfur's acid is used as a plant and soil amendment. It is generated on site by burning 99 percent elemental sulfur in sulfur burners which irrigation water then passes through. This allows organic growers to take water with a high pH of 8.3 or higher and reduce it to a level of 6.5 pH.

This makes the water more conducive to

plant and soil health and improves water absorption. Irrigation water with a high pH if left untreated causing calcium carbonate on the leaf and fruit surface. By lowering it, it results in better nutrient uptake.

On behalf of the growers and packers that we represent, the Northwest Horticulture Council strongly supports the continued use of these vital tools for insect control and plant and soil health. We ask the members of the Board to support the continued listing of these products as they are critical to maintain the production of organic tree fruit. Thank you.

CHAIRMAN CHAPMAN: Thank you.

Any questions? Steve.

MR. ELA: I've got a question on natamycin for you guys. Do you see any need for that in the Northwest tree fruits?

MS. OVIEDA: It's something that's being vetted through our growers at the moment. We didn't put in support for it at the moment. We're trying to get more feedback on it but it's

something that is on the table for our growers.

CHAIRMAN CHAPMAN: Thank you.

Up next is Michael Sligh followed by Tom Warmuth.

Michael, if you would start with your name and affiliation.

MR. SLIGH: Good morning. I'm Michael Sligh, senior adviser to RAFI and founding member of this Board. I also rise in support today for North Carolina organic tobacco farmers for the repetitioning of fatty alcohol for tobacco suckering.

Organic fraud. We strongly support and applaud all actions now to close supply chain loopholes, strengthen oversight, increase real-time data access, and achieve consistent interpretations of standards across all size operations both domestically and internationally.

Legitimate organic operations and our overall organic integrity is at stake. Focusing more on high-risk locations and operations, ports, satellite offices while developing greater

rewards for those who remain in compliance is key. As well as greater coordination of such initiatives that are emerging in the interim.

New genetics techniques as part of the NOSB task force strongly urge not only adoption of these new additional recommendations but that this full work agenda be completed in time for a final vote of approval by your next spring meeting.

It is critical that this also be accompanied by guidance and instruction out to certifiers as soon as possible. This is a critical issue that we must become more proactive on to avoid harm to our supply chains.

OFPA. We urge all present to strong oppose any attempts during this extended farm bill cycle to weaken the OFPA and its delegate balance of responsibilities and authorities that have served our community so well for so long. It is vital that we remain united and strong against such attacks. Nothing less than the heart of the law is at stake.

A call for fairness. As the original Board we made strong recommendations to the USDA to create a nationwide system for farmers, certifiers, and county emergency management to try to avoid toxic sprays on organic farms during emergency crises and for USDA to develop a system of compensation for such farms that lose their crops through no fault of their own.

I think now is the time to look at such a universal compensation plan that would also address a growing number of additional such harms as fracking, testing and GMO contamination, and pesticide drift.

This is a fundamental issue of fairness, one that we must stand firm on as a principle. We have an obligation to protect organic farmers. We urge you to put this topic back on your work agenda.

Finally, North Carolina is home to over half of the 300 plus organic tobacco farmers and they are very concerned about the loss of this essential material to remove suckers from

their tobacco plants. We urge NOSB to strongly reconsider the allowance of this use while prioritizing organic research, define long-term organic solutions.

I know your sacrifice and I thank you for all your good work.

CHAIRMAN CHAPMAN: Thank you, Michael. Questions? Emily.

MS. OAKLEY: Thank you for your comments on emergency management and compensation. You said that was at one point on the original Board's work agenda?

MR. SLIGH: Well, it was our recommendations as well. We made recommendations to the agency very concerned that there are many crises that happened. In North Carolina we've already had two such events this year, South Carolina, Texas.

This is now, unfortunately, a very common occurrence. Once the disaster happened, it's too late because people don't have electricity. They can't contact emergency

management. They're in a crisis so we have to have this.

I was really excited to see your slide yesterday about being able to map on a county level. That's the kind of data that emergency management needs to have ahead of time and the farmers need to have that relationship and the certifiers need to work with them so they understand that.

We also are very aware that in a crisis like that, their ability to be able to avoid spraying organic farms is a very difficult task, especially if it's an aerial application.

That's why we think this compensation fund is an issue of fairness. I mean, if you lose your crop by no fault of your own, you know, we have to have a way to deal with that. Unfortunately, this is part of our world now.

CHAIRMAN CHAPMAN: Harriet.

MS. BEHAR: Hi Michael. Do you feel this compensation fund could be managed through the National Organic Program, or do you see it

perhaps a partnership with maybe Farm Service Agency or Risk Management? Do you have any idea just to kind of help us with a start on this because it is a big concept.

MR. SLIGH: Well, yes. I think all of those options should be explored and we should find the one that has the current already capacity to do that. There are such compensation funds in conventional agriculture around grain bins, around all kinds of systems. This is not a new concept.

I think it is something that could be managed by numerous departments. I don't want today to decide that it should be one or the other but I think that's the conversation we need to have.

We did explore this in some depth with the last administration and had lengthy conversations and even proposed a very finished kind of compensation fund idea. That is something that we could also resurface if that was interesting.

CHAIRMAN CHAPMAN: Dan.

DR. SEITZ: Michael, as someone who has a long history with the NOSB and OP, I was wondering what your thoughts are on substances that are being petitioned under Section 205.606? My impression is that at the start there were a number of substances that were useful, and then there was the thought that we should not exclude them but we want the organic supply to develop.

Our concern now, or at least the concern of some of us, is that as substances are added to that, it may actually retard the development of an organic supply because it's already on so there may be less of an incentive. From your historical perspective, how do you look at petitions under that section of the regulations?

MR. SLIGH: Well, I mean, I think our original thought and understanding was that we would be in this continuous improvement phase and that we wanted to do everything we could to stimulate the organic alternative to all inputs

over time.

I would say that were we have been handicapped is in the lack of sufficient organic research in a timely proactive manner so that we end up with all these bottlenecks. Once we establish a substitute, it is, indeed, difficult then to make that transition without having that forward looking in that preparation.

I think it is a question of us being more proactive and building that runway because we can continue to grow the organic input market and expand our capacity if we can kind of get that train running in the proper order.

MR. CHAPMAN: I have a question for you, Michael. So you mentioned the need for fatty alcohols for sucker control. We reviewed this a year ago and there was a lot of concern around using a synthetic growth regulator for primarily economic reasons. How do you --

MR. SLIGH: It turned out that the one NOSB meeting I missed was Jacksonville. I was in India and I was unaware of this whole question.

I've had tobacco farmers call me since then.

I've gone out and met with them, looked at their alternatives, and realized that we were very involved in the tobacco buy-out debate in North Carolina and that these 300 farms represent many conventional farmers who converted to organic because they saw this as a better market for them and they have a long rotation of crops.

I would not have been in favor of a petition that would have encouraged this product for wide use beyond tobacco. I also would not be supportive of this product as a long-term solution. I would only be supportive of this if we coupled it with a research priority on your behalf, as well as going to OREI and making this case. I think they have tried to find alternatives.

I went and saw some of the effects of the alternatives they tried. You may or may not know in tobacco you need fewer bigger leaves with really high quality to get a market premium. If

you don't sucker you get a lot of small leaves and you lose your premium.

You try some of these other sprays that burns the leaves or it doesn't work. Unfortunately with the loss of the tobacco quota program the size of acreage in organic has now had to expand, a crop that used to be very much a hand-held crop, if you will.

If you're talking 20, 40 acres and you have to go out and hand sucker it every week for 10 weeks, that's totally unrealistic and they would drop out if that's the only alternative they have. They cannot afford that. It's kind of a rock and a hard place in the short term.

CHAIRMAN CHAPMAN: Jesse and then Emily.

MR. BUIE: So you are wanting this to be restricted to tobacco only?

MR. SLIGH: It's my understanding that the new petition that has been -- I'm sorry.

MR. BUIE: My question was -- the question is that your petition is restricting

fatty alcohols to tobacco?

MR. SLIGH: It's not my petition but it's my understanding that the tobacco farmers are wanting it only for tobacco and that maybe part of the error in the earlier petition was a broader implication.

CHAIRMAN CHAPMAN: Emily.

MS. OAKLEY: So you said that you would be interested in seeing this material allowed exclusively for tobacco and for a short time, until alternatives can be developed. I just want to say I understand that thinking, but my concern is that when a material is added to the National List, at this point it's really difficult to get it off, so I'm not sure that alternatives would be developed.

MR. SLIGH: The original Board recommended Chilean nitrate would go off in five years. I do understand what you're talking about. I think getting at your issue of how do we couple the alternative research agenda linked to the allowance of something that is not where

we want to be long term.

Those two have to be hand in glove. I think there is still not. I think that is why in my comments I'm trying to say those two things must be linked together. The whole idea of sunset was to be that you continuously look for that improvement. I think we have to do a more consistent job with it.

CHAIRMAN CHAPMAN: Harriet.

MS. BEHAR: We perhaps might look at having a hard expiration date. We might do a hard expiration date so then it would actually sunset. That might be a way for some of the members to get over there, but on this only give it five years.

CHAIRMAN CHAPMAN: Paul, can you speak to the hard expiration date?

DR. LEWIS: Yes. Harriet, I appreciate what you're adding here but once the material is added to the list, it goes through a sunset process so it's going to be really difficult to start addressing issues of having

expiration dates.

What you can do is you can look at it in terms of the sunset process and look at that as a renewal issue. In terms of saying over a period of time once it's on the list, it's up for renewal, not for an expiration as you're characterizing it.

MR. CHAPMAN: All right. I've got one last question and then we're going to let you go, Michael. You commented here and in your written comments you talked about making it -- rewarding operations that continually have no noncompliances. What would that mean in operationally or tactically?

MR. SLIGH: I'm very honored and lucky to get to work with organic farmers around the world. The most consistent thing I heard from farmers who have been involved in certification for a very long time, and they don't have noncompliance, and they pretty much get the same kind of inspection every year and nothing really changes and it's not that exciting, or even that

innovative for them.

I think as we think about a shift toward a more risk-based model, we would put more emphasis on where the problems are and we would look at way to reward those farmers who have noncompliance over a long period of time with either a shorter, you know, easy form of your tax form or a shorter inspection or something that would reward them.

I mean, we're even talking, you know, a little bit could you even have a bi-year. I mean, these are the kinds of things I know have problems with them and it's just at the debate level. Strongly I believe that we are not rewarding those farms that remain in compliance long term sufficiently.

MR. CHAPMAN: Thank you, Michael.

MR. SLIGH: Yes. Thank you.

MR. CHAPMAN: Up next is Tom, followed by Jamie Welch.

Tom, if you can start with your name and affiliation.

MR. WARMUTH: Good morning. My name is Tom Warmuth. I reside in Kure Beach, North Carolina. I'm a biologist. I'm the lake and pond municipal representative for BioSafe Systems and pretty much work in water treatment and surface water management.

BioSafe Systems is a privately owned American company that manufactures environmentally responsible disease and pathogen control products. I would like to thank the NOSB for the opportunity to speak in additional to our written comments and supporting material.

I would also like to thank the other written comment submitters for their support for sodium carbonate peroxyhydrate, which I will refer to as SCP to try to save time. And to retain its listing of synthetic substances allowed for use in organic crop production.

SCP is currently listed as an alternative to copper sulfate. I would like to give some supporting notations, aspects, and uses of SCP in support of it.

Effective and sustainable chemistry that associates in the water producing hydrogen peroxide which is the real active which then breaks down further into oxygen and water. As a side note, SCP is widely used in safety.

It's also NSF and ANSI Standard 60 certified in potable water sources, drinking water system, as well as waste water affluent disinfection. It's used in drinking water as well as waste water. It's used in whitening toothpaste, dishwashing detergent, and laundry determine as well.

There's a bit of focus on rice in some comments, but SCP is clearly not just used in rice waters, although I can see why there's a focus there because you've got a lot of acreage, a lot of water plants grown in water. But there is a much larger use pattern in organic irrigation ponds, irrigation canals that feed organic waters, and it goes on and on from there.

In the organic markets we have two SCP labels for use in water on many listed surfaces;

ground cover, mats, greenhouse floors, on crops, animal bedding, and animal watering, and further from there. The use of SCP is increasing over time as more individuals learn of its potential uses.

There is also a positive what I call an organic influence with the continued listing of SCP. It's not only organic farmers who benefit from this chemistry, it's influential to other non-organic farmers, lake managers, public and private water body managers, potable waste water entities, government agencies and other current potential users are drawn to SCP as an option and assured of the safety and benefits because of that organic listing. A farmer may not be certified organic but may want to do what they can to be more organic or sustainable.

The benefits compared to copper sulfate is really a matter of utilizing best management practices or best product for a given application. Copper sulfate may not be a responsible option due to many factors.

Copper sulfate is one of the oldest chemistries and it's use but it's limited in water quality, poor water quality, increased hardness, alkalinity, causes and teleconference precipitate out of the water and into the soil which then has problems with metallic copper in your soil.

It doesn't have the poor efficacy issues. It does not have any discharge or runoff restrictions. It does not cause phytotoxicity or plant growth or accumulate in the plant like copper can. Using rice as an example, there are studies showing soil copper toxicity in rice, measurable copper in the chaff, and polished grain has been also observed.

It goes on from there. Anyhow, it's the position of the BioSafe Systems and so many others that users of sodium carbonate peroxyhydrate across the markets for use in agricultural, horticulture, greenhouse growers, cannabis, animal health, meat and poultry processing, drinking, and waste water treatment.

Thank you.

MR. CHAPMAN: Questions from the Board?

Emily.

MS. OAKLEY: I might as well since this is my material. I just wanted to explain that some of the references to rice was originally allowed on the national list with the hope that it would replace, or at least substitute some use for copper sulfate. We haven't seen that as a wide-spread use but that was its original intention.

MR. WARMUTH: Right.

MR. CHAPMAN: Steve.

MR. ELA: I just want to follow up on what Emily said. We did have questions originally as we were looking at this whether it was actually being used and whether it was effective. From what I've heard, I think we've had some public comments that it is being used.

Could you reiterate for sure that there is actually use of it, for example, on

rice? I mean, I think really we're saying is this an essential material and is it being used. Is that correct that --

MR. SLIGH: That is correct, yes.

MR. ELA: Do you see that use increasing?

MR. SLIGH: Yes, we do.

MR. CHAPMAN: Thank you.

MR. SLIGH: Thank you.

MR. CHAPMAN: Up next is Jamie Welch followed by Shelly Connor.

MR. WELCH: My name is Jamie Welch. I'm a scientist and also the product manager of technology at EnviroLogix, which is a global leader in GMO diagnostics, so feel free to use this as a technical resource anytime you need us.

EnviroLogix advises customers throughout the food supply chain on GMO sampling and testing. The comments I have today pertain to the proposed genetic integrity testing of corn seed.

The absence of required GMO testing in

the USDA National Organic Program relations provides the opportunity for unintended and unrealized GMO contamination and certified organic products.

The public disclosure is such elevated GMO content in organic products could undermine the consumer trust in the organic program and damage brands. I think we can all agree that the NOP does not need another damaging investigative report.

GMO contamination of organic products can occur at a number of points in the food supply chain from cultivation to processing and that would include seed contamination, GMO cross-pollution, harvesting, transportation, storage, and processing. A foundational requirement for GMO-free seed or GMO-free organic products is GMO-free seed.

The GMO concentration will only increase from this baseline value. Organic farmers deserve GMO data to make informed seed purchasing decisions that align without end-

market needs.

Transparent GMO data requires the communication of the GMO content level in each seed lot. The traditional method for measuring GMO contamination and seed is by PCR in a reference laboratory where they are looking for the GMO DNA sequences.

DCR analysis requires a highly skilled scientific staff, requires dedicate lab space, and also expensive instrumentation. The standard cost for GMO testing of corn is about $450 and takes about five days to get test results back.

Some organic seed companies have acquired in-house GMO testing capabilities to reduce analysis cost and time to result. This can be accomplished by employing immunoassay strips to detect and quantify the concentration of GMO proteins in raw grain and seed.

The EnviroLogix QuickScan system is the global industry standard for non-GMO identity preservation programs that need accurate decision point testing. The total analysis time including

sampling, grinding, extraction, and running the assay is about 10 minutes and the cost is $35 which is about 1/13th the price of sending it out for like a PCR result.

Anytime the standard can reduce the cost and complexity of compliance without sacrificing testing integrity should be considered a positive development. It is recognized that PCR analysis performed at an ISO 17025 accredited laboratory is being performed by a trained scientific staff.

Therefore, the recommendation that seed companies or farmers that perform immunoassay testing in-house be required to have annual training and successful general proficiency samples is appropriate and warranted.

The introduction of this proposed rule change is a positive development for the NOP and the organic brand. It helps ensure farmers have the information and tools they need to deliver the quality organic product they seek to supply. Thank you for your service and the opportunity to

provide some comment. I am open for questions.

MR. CHAPMAN: Harriet.

MS. BEHAR: Hi Jamie.

MR. WELCH: Hi Harriet.

MS. BEHAR: Just to be open, I did talk to Jamie extensively.

Two questions. One is the proposal as written. Do your tests meet the statistical accuracy that we are requiring in the proposal?

The second is would you tell us what percentage of your customers are organic seed producers and how many are not organic seed producers? Is it widely used in both areas?

MR. WELCH: Good questions. Yes, it does meet the statistical accuracy that you're talking about, the 20 percent relative standard deviation around those different kind of levels of GMO contamination.

Right now there are some organic seed companies that are using this. An example would be blue river hybrids which I think is one of the largest, if not the largest, organic seed, corn

seed producer in the U.S. There are other seed companies that are using it as well.

Our big markets are the non-GMO identity preservation programs in the U.S., the Cargill, ADM, Bunge run where they are testing every truck that is coming through a facility to verify what the GMO content is to know whether they accept that or not.

MR. CHAPMAN: Dave.

MR. MORTENSEN: Thanks for the presentation.

MR. WELCH: Sure.

MR. MORTENSEN: I was reading up on your testing procedures and realized that it's trait based so it could be a herbicide resident trait, a BT trait, etc., etc. Could you give us a sense for the range in cost if you did the full sweep of typical traits in, for example, maze where it's maybe seven traits.

MR. WELCH: So the price that I gave you, the $35, is actually a comb that has 10 different strips on it. Each strip detects a

different trait so that is actually looking for the complete -- the traits that have been released to the marketplace.

Something for soy where there is really only three or four traits that have been released to the marketplace is a much cheaper product which is only $12 or something like that.

The price is reflective of how many traits are out there. When new traits are added to the marketplace, then we add new strips to the comb to make sure there is complete coverage.

MR. CHAPMAN: Harriet. Harriet first and then I'll get to you.

MS. BEHAR: Is there anyone who has your system that will do the testing on a custom basis for others? You know, people send them samples and then --

MR. WELCH: Yeah. Illinois Crop Improvement has our system. I'm trying to think it there are some other state labs that might have it. Maybe Iowa State has our system. There are some options out there where if you didn't

want to invest in buying the system, or even have the volumes that would justify buying.

Typically the smallest kit that we have includes 40 tests so maybe you're not processing 40 lots in a year so you could send them off for analysis. That would probably still be a cheaper price point as opposed to sending it out for PCR analysis. The value is having it on site and getting that real-time result if that's needed. In certain markets it's incredibly valuable.

MR. CHAPMAN: Asa.

MR. BRADMAN: I just want to understand about your testing a little bit and whether you're able to evaluate DNA methylation changes, gene expression and not just alterations in the code.

MR. WELCH: That's a good question. Our test is actually testing the genetically modified proteins that are being expressed. If you're looking for some of the new gene editing traits that will eventually be making it to the

marketplace, then this is not a product that would actually satisfy that need.

I think the thought is that initially if some of those new gene-edited traits make it to the marketplace, it will probably be stacked in some of these traditional transgenic traits, the herbicide tolerances or the insecticidal traits that are on the market. In that event, this technology will be effective.

Once you start moving to new gene edited traits that can only be detected through molecular sequence identification, then you're going to have to have some sort of onsite molecular detection methodology.

CHAIRMAN CHAPMAN: Thank you.

MR. WELCH: Thanks.

CHAIRMAN CHAPMAN: Up next is Jamie Welch followed by -- sorry. Up next is Shelly Connor followed by Casey Hughes.

MS. CONNOR: Hello. My name is Shelly Connor and I'm with Wild Farm Alliance. We are a small non-profit led by a national group of

ecological farming advocates and wildlands proponents who support farming practices that promote sustainable food production and biodiversity.

First, I want to thank you for passing the recommendation to eliminate the incentive to convert native ecosystems overnight to organic crop land at your spring meeting.

We have begun work on a draft native ecosystem guidance document and we are confident in our ability to bring together a broad set of stakeholders and to create a draft that will help farmers, certifiers, and inspectors to determine if the land contains a native ecosystem.

Once we by buy-in from the stakeholders, we will hand our draft off either to the NOP or NOSB depending on your capacity and interest to move it forward. Second, we urge the NOSB to create a working group to address marine materials.

There is broad agreement that this issue is important and that potential solutions

need to be explored. The working group members should include marine biologists, conservationist, farmers, companies that harvest, and certifiers. This diverse set of voices will bring important viewpoints to the table and work together to find middle ground and a path forward.

The kelp, seaweed, and algae species being harvested are key parts of Marine ecosystems and essential for providing habitat for aquatic species and maintaining biodiversity. Unsustainable harvesting coupled with the effects of climate change will devastate these fragile ecosystems and the wildlife they support.

This issue and how it is resolved reflects the integrity of the organic label. The label cannot be complicit in destroying our ocean's health in order to grow food. We address this issue in more detail in our written comments submitted by my colleague Jo Ann Baumgartner.

Finally, the NOSB decision-making process needs to remain transparent. We are

happy to hear that the notes from the subcommittee meetings will be made public again. This transparency will ensure sound decision making.

Thank you for your service on the NOSB and your work to maintain the integrity of the label.

CHAIRMAN CHAPMAN: Questions?

Emily. Asa.

MR. BRADMAN: I just want to make a comment about you mentioned a middle ground with marine materials. Just from my perspective, there shouldn't be a middle ground when we think about the language for this. We want to come up with a system that protects newer environments and then we'll adapt any use for organic agriculture to that.

But I wouldn't think of it as a compromise. Rather, what is the best approach to protect the wild environment. Just a semantic issue but I want to make at least my point on that. Thanks.

MR. CHAPMAN: Emily.

MS. OAKLEY: So I wanted to ask the Program about the draft guidance that the Wild Farm Alliance is working on. I know this is a different regulatory situation that we're working in but as they continue to work on this draft guidance, what would be the best approach to engage with them on that effort?

DR. LEWIS: Let me try to address that, Emily. I think in this case to engage with the program is to have conversations with us. We are happy to explore what they're thinking about and to just engage with us is really the best way to handle it.

MS. OAKLEY: So does that mean they should just contact you directly with some of the work that they are thinking of doing and create a dialogue with you?

DR. LEWIS: Sure.

CHAIRMAN CHAPMAN: Thank you.

Up next we have Casey Hughes followed by Orlando Rojas Esquivel. Sorry if I said that

wrong.

Start with your name and affiliation.

MS. HUGHES: Good morning. My name is Casey Hughes and I'm speaking to you on behalf of the National Organic Coalition. Thank you for the opportunity to address the Board. I thank each of you for the important work that you do as volunteers on the NOSB.

This morning I'll be discussing three topics; use of antibiotics in day-old chicks, the need for comprehensive review of sanitizers, cleansers, and disinfectants, and the use of BPA and organic food packaging.

Antibiotics. NOC supports the need to eliminate the use of antibiotics in poultry in all stages of life. As our colleague Charlotte Vallaeys outlined in her comments, even though antibiotics are prohibited in organic production, there is an exception for the use in day-old chicks. We appreciate the Board's work on this issue and we are prepared to support the Board for their advocating to the USDA.

Sanitizers, cleansers, and disinfectants. The NOSB would benefit from a comprehensive review of these substances to inform decision making when a new material is petitioned or a material is reviewed at sunset.

The NOSB could refer to this review to judge whether materials currently on the national list meet the same need or if there's a special characteristic to the material under review that justifies its placement or renewal on the national list.

This review may help the Board identify areas where there are gaps in necessary materials to aid in the promotion of organic food safety. A reference document of this kind would create efficiencies, saving time and energy for the Board during a material review process. As we have heard from Dr. Tucker, this is a priority when approving agenda items for the Board to work on in the future.

Lastly, BPA. The NOSB must have the ability to advance issues of importance to

organic stakeholders such as packaging substances like BPA that are used in organic food handling. BPA opposes serious hazards and not support this elimination from organic food packaging.

At the same time, known alternatives might also present some problems and NOSB should approach the issue of good packaging in a comprehensive way. We strongly suggest that the NOSB inform its deliberations with a technical review on BPA and BPA alternatives.

While the NOP no longer finds this a priority, we urge the NOSB to request this be added to the work agenda as a priority for organic stakeholders. Thank you for considering my comments.

CHAIRMAN CHAPMAN: Thank you.

Questions? Harriet.

MS. BEHAR: How does BPA and your concern about it affect your food purchases? Do you try to somehow seek out food that is packaged with a label that says no BPA? I'm not sure why you care. Tell me why.

MS. HUGHES: Sure. In my person view, I feel it is a very consumer-facing issue obviously and something that has side-spread attention in the marketplace. I do avoid it and I would say my peers also have this awareness and avoid products with BPA on the packaging.

CHAIRMAN CHAPMAN: Thank you.

Up next is Orlando followed by Laura Gomez. I understand we may need a translation on this speaker.

MS. OAKLEY: Point of order.

CHAIRMAN CHAPMAN: Yes.

MS. OAKLEY: If someone needs a translation, can we give them double time?

CHAIRMAN CHAPMAN: Nope.

MS. OAKLEY: Really?

CHAIRMAN CHAPMAN: No.

MS. OAKLEY: Why not?

CHAIRMAN CHAPMAN: It's three minutes per speaker for the speaking amount.

MS. OAKLEY: I would move that we give them double time.

CHAIRMAN CHAPMAN: We have approximately, I think, five or six speakers.

MS. OAKLEY: Thank you.

(Responses for Mr. Rojas are given by a translator.)

MR. ROJAS: Good morning. My name is Orlando Rojas from Costa Rica. I used to be a dairy farmer since my childhood and for the last 10 years I've been an organic farmer that we established with my family in order to protect the health of my family.

I'm also the president of the Organic Pineapple Cooperative Coopeproagro that carries 26 families that are searching for environmental care and financial support for their families. I'm also the president of the Organic Agricultural Board of Costa Rica.

The project is run by myself, my wife, and my son and daughter, plus eight employees. We are working up to 30 -- I'm going to translate hectares to acres for the audience and you guys to understand more the area. Fourteen hectares

means 30 acres.

As you can see in the picture, I am also -- well, my project supplies the drone imagery and services for the co-op. All the inventory would be drone imagery for technical reference.

We have our own spraying system to apply all the fertilizers and make the flower induction. It's called a spray room. We use four pounds of ethylene per application which you can see in the picture. We also are a flower induction service for the co-op. With the penalty, I hope to continue our business for our family and the employees. Thank you.

CHAIRMAN CHAPMAN: Thank you.

Any questions? Harriet.

MS. BEHAR: How many years in succession will the field stay in pineapple?

MR. ROJAS: How many years in a row?

MS. BEHAR: My understanding is that there is really not a crop rotation other than fallow time where there might be a cover crop and

that pineapple is grown year and year in the same field. I'm just wondering how many years can that be sustained without possibly disease or insect problems.

MR. ROJAS: The pineapple cycle takes 30 months from planting to planting. In that division we use legumes as a rotation crop and the crop takes three months. With organic matter input we can go up to four cycles. That means 12 years.

CHAIRMAN CHAPMAN: Thank you very much.

Up next is Laura Gomez followed by Nestor Ramirez.

MS. GOMEZ: Good morning. My name is Laura Gomez and I come here to speak on behalf of a lot of families including mine that are small organic pineapple farmers from different parts of Costa Rica.

I thank you so much for giving me an opportunity to express our great concern that the NOSB might decide to ban the ethylene use in the

organic pineapple flower induction.

My husband, my two daughters, and myself run a little organic pineapple farm in La Virgen de Sarapiqui since 10 years ago. Our whole production is exported by Coopeproagro, a farmer co-op that we founded with 26 other families three years ago.

Our whole production is actually being sold to the American west coast under the co-op's brand name Eco Sweet Organic Pineapple. To fulfill our fruit needs all year around we need to program volumes every week of the year in a constant manner.

That is why letting the crop to flower naturally will never let us accomplish the agreed volume since this would leave us with no control of the quality and timing of the fruit making it impossible for us to grow this way.

The use of ethylene allows us to have security and efficiency in the fruit production and a rotation of the plantation since all the fruit will flower at the same time allowing us a

controlled fruit volume to deliver.

We have implemented the technology of ethylene flower induction in our farm with a very accessible investment in our spray room that won't reach the $700. The ethylene gas is very cheap and we use very few to make our crop flower.

All our farmers have this spray room regardless of how small they are. We all have been trained in good agricultural practices and labor safety for the proper use of the ethylene cylinder.

The PVC pipes we use in our spray room were installed since nine years ago and they are fully compliant with the global gap protocols and labor safety. It is not true that we as small farmers can't have access to this technology. It is accessible to all growers.

Please keep the ethylene in the list for use in organic pineapple. We are working hard to supply the American market with our super sweet healthy fruit and we need certainty on the

regulations to keep making our wonderful product accessible to the most population all year around. Thank you very much, and pura vida.

CHAIRMAN CHAPMAN: Sue and then Harriet.

MS. BAIRD: How often do you have to spray ethylene gas?

MS. GOMEZ: Once a year.

MS. BAIRD: Once a year application?

MS. GOMEZ: Yes.

MS. BAIRD: Do you feel -- I'm sorry. Do you feel as if applying or spraying with ethylene gas improves the quality of your fruit and, therefore, would enhance pest management?

MS. GOMEZ: It helps us regulate the flowering so we can spray for the pesticides. We have a perfect fruit. Well, the best fruit we can.

MS. BAIRD: So it's serving two purposes then?

MS. GOMEZ: Yes.

CHAIRMAN CHAPMAN: Harriet.

MS. BEHAR: Is there any ongoing research on other methods or natural materials that could replace ethylene going on in Costa Rica?

MS. GOMEZ: They have like other things but none has really -- I'm really not into very much technical but for us we don't have anything better than that. The research has been bad I guess. This is our only option.

CHAIRMAN CHAPMAN: Dave.

MR. MORTENSEN: Thank you for the presentation. I was curious do you share the spray equipment across the cooperative members?

MS. GOMEZ: No. We are kind of far away from the others. We have our own equipment.

CHAIRMAN CHAPMAN: Thank you.

MS. GOMEZ: Thank you.

CHAIRMAN CHAPMAN: Up next is Nestor Ramirez followed by Rolando Soto.

(Responses by Mr. Ramirez are given by a translator.)

MR. RAMIREZ: Hello. My name is

Nestor Ramirez. This morning I will share some pictures of my operation, my farm, with my family. The farm is located in the northern plains of Costa Rica very close to the Nicaraguan border.

We are very proud to be in the organic business. Getting to know the other person is very well kept in labor safety and environment is very encouraging for us. This story can't continue if the ethylene is going to be banned from our operations.

I attend the Stow meeting in 2015. One of the tasks that the NOSB at that time ordered was to look out for some research about options of ethylene. After doing a lot of consultation with some colleagues and some universities in Costa Rica, he is bringing four research projects about use of ethylene options.

The first one was in 2003, 2006 the second one, and we just finished in 2018 two research projects because we were to have the discussion in 2020 so we needed to rush. We have

the results here for you to have a copy. In none of them we have had a positive or good result to finding some other options.

The use of smoke was checked, cold water with ice, and ice. None of them are a feasible option. I have copies of the research. 2003 and 2006 investigations are going to be given complete to you. The final investigation results this year we just finished so it will be handed to you according to the opportunity. Thank you.

CHAIRMAN CHAPMAN: Questions from the Board? Sue.

MS. BAIRD: Yes. Thank you very much. I really appreciate that. I'm going to ask you another question. What pollinators do you use to pollinate your flowers?

MR. RAMIREZ: The bees are natural pollinators in the crops of Costa Rica.

MS. BAIRD: So you don't have to import honey bees or anything like that? You're just using natural --

MR. RAMIREZ: No import.

MS. BAIRD: Okay. Thank you very much.

CHAIRMAN CHAPMAN: Dave.

MR. MORTENSEN: This is a crop that I don't know very much about and I've learned a lot from the presentations. Could you explain to us what happens with the fruit maturation process if you don't spray ethylene?

MR. RAMIREZ: If we don't use ethylene, we can't program the harvest.

MR. MORTENSEN: You can't properly harvest?

MR. RAMIREZ: No, we can't program the harvest.

MR. MORTENSEN: Oh, you can't program the harvest. You can't schedule when the fruit will be ready to harvest. Is that correct?

MR. RAMIREZ: It's impossible to operate a farm when you don't know when the fruit is coming.

MR. MORTENSEN: Okay. Thank you.

CHAIRMAN CHAPMAN: Steve.

MR. ELA: Do you use the same rotation cover cropping that the previous speakers mentioned?

INTERPRETER: Pardon me?

MR. ELA: The rotation or the cover cropping, the fallow time, is that similar on your farm as the others?

MR. RAMIREZ: You can see in the image in the presentation -- as you can see in the picture, all the borders of the farms are covered with green covers.

In this case, he uses corn and some plantains to separate the neighbor farms and keep the integrity of the crop, and the production of these parts are distributed among the employees. Also, when he plant after one cycle, after the plastic mulch removal, it leaves the soil to rest for 30 days. In the tropics the natural vegetation will grow again and break the cycle.

MR. ELA: Are all of your crops grown organically and is there any issue with GMO

contamination of your corn?

INTERPRETER: Pardon me?

MR. ELA: Are all of the crops used in rotation grown organically and is there any problem with GMO contamination of the corn crop?

MR. RAMIREZ: All the inputs that we use on the farm are authorized by the certification agency. Specifically to that question, the corn is a local variety that we use so there is not any imported seed.

MR. SOTO: Good morning, I'm Rolando Soto from Costa Rica, and I have been a producer of organic pineapple for ten years. And I'm part of the Association of Bioecological Producers of the North of Costa Rica, Probio.

Organic station is formed by 36 more producers with no more than five hectares each and it is the support of 450 families which is the equivalent of ten percent of organic production in Costa Rica.

We have been working on this project for ten years located in one of the poorest areas

in the country, such as the county of Upala and Guatuso, both in the north part of the country. We have worked the land for many years. We are farmers who love organic agriculture, and we're looking for continuous improvement.

2.6 percent of the exports in Costa Rica is organic pineapple. And there is a tendency to increase that volume which causes environmental improvements and healthier products.

However, this does not motivate scientists and big suppliers to come up with more efficient alternatives for flower induction for organic pineapples. There isn't a great variety of supplies for organic production.

The absence of ethylene for flowering will cause a disappearance of organic production affecting the environment and American customers who want organic pineapple and families who live out of this organic production.

(Off the record comments.)

MS. BEHAR: You can give the

translation for that.

INTERPRETER: Okay.

MR. SOTO: In conclusion, we want ethylene to remain an approved product for organic production as the only supply for flowering at this moment. Thank you.

MS. BEHAR: Questions? Emily.

MS. OAKLEY: Where is the increase in organic production coming from? Are conventional fields being transitioned to organic? Or are other organic crops being transitioned to pineapple? Are needed ecosystems being converted to pineapple?

MR. SOTO: More people are consuming organic products, including pineapple, so they believe that conventional will convert to organic.

MS. BEHAR: I have a quick question myself. I don't see anyone else. Are all of the pineapples being shipped into the US market, are they going domestically and perhaps overseas, maybe European Union or other countries?

MR. SOTO: They ship also to Europe, but mostly American.

MS. BEHAR: Gracias.

MR. SOTO: Thank you.

MS. BEHAR: Next up is Luis Carlos Gonzalez Miranda and on deck is Christian Herrera Leon.

MR. GONZALEZ: Hello, my name is Luis Carlos Gonzalez. I'm an organic pineapple farmer.

I want to speak about the importance of the use of ethylene in the uniformity of the production of the pineapple crops, either in conventional as in organics.

All the agricultural practices done in the pineapple crop is to achieve a uniformity of the plantation within the same lot. This is the very beginning of the land preparation which is very important. We try to achieve the best conditions to have the uniformity in the planting.

Then we do the plastic mulch coverage.

We have three kinds of planting materials as you can see in the picture. Those three types can be mixed in the same lot. We need uniformity.

Those then must be selected by weight to have the same size. As you can see in the picture, you can mix in the plantation different size of plantlets. Then that will give different types of pineapple. In this chart, you can see the uniformity of the planting material within the lot, all over the place.

At nine months, you achieve enough weight to make the flower induction at the plantation. We need to achieve six pounds for a plant to have a good size of the fruit.

Next please, next. We do the applications of ethylene at low temperatures to reduce the volatilization of the ethylene. We mix it with -- charcoal to capture the gas and release it in the water and release it in the plantation.

I'm just going to finish relating the chart. It's not dangerous, like 30 years of

experience using, very low cost per acre, efficiency of more than 95 percent in the applications, and a plantation where the ethylene is not violent. Muchas gracias.

MS. BEHAR: Gracias, Maestro.

(Laughter.)

MS. BEHAR: Next up is Christian Herrera Leon, and on deck is Oscar Salas Porras.

MR. HERRERA: Hello, good morning. It's an honor to be here addressing to this new Board. We were in Vermont three years ago on the same issue. My name is Christian Herrera. I'm the general manager of Cooperagro, this organic club that you have been hearing of.

So far, we're located in the northern place of Costa Rica in the humid, tropical region with a precipitation of 4,000 millimeters of rain through the year with a variation of temperatures of 100 degrees Fahrenheit and the lowest, that we call it cold for us, is reaching the 65s.

So here you must understand that

Michelle always chooses the coldest weather like Vermont in here to make us freeze, okay.

(Laughter.)

MR. HERRERA: Our operation is 100 percent full organic area. It's 26 families associated that work in the field in the projects, 350 acres so far with an expansion of maybe 100 percent of the area for the next couple of years with a huge investment.

And we are direct exporters to Europe. We are accredited, and we have in Costa Rica our own law, our own decree that rules all the organic farming in Costa Rica. And we have the equivalency recognized by the European community. So the government checks and fiscalizes in the farms, has the approval to get to the European markets.

So we have to achieve three different certifications. We have to run the USDA organic, we have to run separately the European certificate plus our national decree. And stapled to that, we need to include the Good

Agricultural Practices and Operations.

Our technology package, as you have seen, we love technology, so we have a multi-disciplinary team in there as associates of the co-op. It's a technical -- unified technical practice, so we are a multi-site farming and NOAA GPO, because we use the same technical package.

It's so fascinating, myself being four years in the organic business, coming from conventional to organic, all the passion invested in the growers, checking all this new world of biological controls, which is completely, I think, newly born.

And we have to do a lot more research. In the picture, you can see trichoderma affecting our fusarium, which is the biggest plant -- disease in the crop. So we need to keep on doing more research.

That's a picture of the rotation of the crops. Normally in Costa Rica, our legumes can take up to three months to grow. And we shred everything to reincorporate the vegetation

back to the fields before fructification so we won't increment the weed growth within the crop.

But the normal resting time that we leave is no less than six months, because after that we just leave the natural vegetation to break up, and it's covered by weeds. And then everything is shredded.

By the way, pineapple crop is one of the most -- the plantation that most puts biomass back into the soil with 350 tons of fresh biomass each cycle of three years, okay. All that plantation in case of organics is shredded back to the soil, okay.

MR. CHAPMAN: Thank you, thank you. Any questions? Emily?

MS. OAKLEY: Thank you. You talked about the expansion of the organic pineapple industry in Costa Rica. Is that conversion from conventional to organic? And does any of it include conversion of native forests into organic production?

MR. HERRERA: Well, Costa Rica, we can

brag about worldwide that we have 25 percent of our area protected by law in national parks. So 25 percent of the Costa Rican area is already protected. We are a country that is smaller than the Minnesota state. So we're pretty small. We don't have more land to grow.

In transition, specifically in pineapple transition, when you don't have any in between seal, or you're organic or you're not, so you're going to -- you have to grow for three years. And the cycle takes, in three years, two crops. So you have to harvest twice in the same area being sold as conventional to achieve that transition.

And you're going to lose no less than $40,000 per hectare which could be, like, around $20,000 per acre planted in a transition time of three years. So for us, it's much cheaper just to leave the area resting for those three years, with the timeframe that the certification allows us, to achieve the transition.

So yes, there are areas now, very few,

being transitioned from conventional to organic that way, leave resting for two years. But for the grower, it's a huge investment because we have to leave our land, which is very limited in Costa Rica, resting with no more income then. So we have to make good that numbers in the financial structure to convert that.

And the last question from the other exposer, many of the cattle areas that are going into crisis because of productivity yields whatsoever, that is expensive cattle farming. There are some of the farms that might be choosing to convert into pineapple crops after logically the authorization of first the government, and then the certification agency.

MR. CHAPMAN: Dave?

MR. MORTENSEN: Yes. Your photographs were showing us the cover crop, the legume cover crop. With the cooperative, is the cover crop's something that is part of a best management practices followed by all?

MR. HERRERA: Well, we have to renew

the certification every year. And now, because of some bad histories about fraud happening, Costa Rica with organic pineapples, okay, we have pushed the certification to go with the net area.

It's not the same thing of certifying 100 hectares of apples, which is for perennials, instead of a crop that cycles very fast. You need to keep on planting pineapple every week to achieve the weekly program every week next year. So we have all the activities being done the same week all through the farm.

So that means that there is a big difference between the gross area of the farm which in the past the certification agency used to put only the total acreage of the farm and not the net area being planted for pineapples.

In the last three years, the Organic Chamber, with the community grower, has pushed the certifications in case of pineapples to make the mass balances more detailed to when the fruit is coming. So the mass balances now, now we see a certifications saying they would train in the

crop, okay, and we design how to keep the record of the mass balances strict to the area to be planted.

Now in pineapple, in organic pineapple, it takes four months than conventional, because our growth is much slower because of nutrition. So that means that we can be -- from planting to harvest we can go from 14 to 15 months, okay.

So depending on the timing, the certification shows up making the audit. Then we can tell these crops will be harvested within the next year, and that will give us in specific tons, and this is the mass balances.

The next year, they're going to match what we program, but we can't grow more than what we stated last year before. Because then we reduce the open space where you can put some other goal is, right?

MR. MORTENSEN: So I'm not sure my question was so clear. I just wanted to know -- that was very helpful -- but are cover crops

being used routinely, regularly, by you and your farmer colleagues?

MR. HERRERA: Yes. Well, in the experience of Costa Rica, being the worldwide leader in pineapple export, is that we have already crops that have 35 years constantly, conventional.

So we have been working very hard the last three years, because the European community is starting to check the nutrient -- the nutrition contents of the soil and what you get out of the harvests. And then in pineapple crop you get up to 100 tons out every harvest.

So it's really intense. And for us it's very challenging. But we have been working that organical package, and the nutrition program will input the exact amount of nutrients that we take out. So that will guarantee the sustainability.

And now, using legumes that are with a fixation of 50 to 90 kilos of nitrogen per hectare, remember we're in the tropics, we have

growth all year round. So it's been fascinating, personally in my case, to keep on just getting to learn all this technology that all the growers have been really pushing to learn about.

I don't know if that -- okay, we're here 35 years dealing already with the same yields. And we don't use no herbicides to destroy the plantation, to plant again as fast as we can, so we have to shred everything in green.

And that means a lot of machinery and a lot of biomass going into the last -- by the way, last week we were checking the biomass nitrogen input of the crop. And we were getting up to 500 kilos of nitrogen every three-year cycle. Because all the biomass goes into the shredder with decomposers, and yams, and all this.

MR. CHAPMAN: Thank you. Dan?

DR. SEITZ: Can you use the plastic mulch more than once? And how -- it appears that you're using a lot of that. How are you then disposing of the plastic mulch? And is that a

problem for you?

MR. HERRERA: Well, in the matter of fact, there is a lot of -- a big movement of the conventional farmers to go in using plastic mulch because they can avoid the use of herbicides.

In our case, in organic, we need the use of plastic mulch. And what we have done for the last three years is to use a slightly thicker plastic, because the cycle takes 32 months. So plastic, being exposed to this humidity, to the heat, during 30-something months, there's going to be -- if it's too thin, it's going to destroy. And then we're going to have a headache picking it up, you know, manually.

So we're going to a thicker plastic, so it's much easier to remove all the carpet. And then we send it to the recycling agencies. And thankfully, in Costa Rica, we have the banana business giving a lot of plastic material, so we have a big industry of recycling all these agricultural plastic products.

MR. CHAPMAN: Sue?

MS. BAIRD: Did I understand that you're certifying under an internal control system group certification?

MR. HERRERA: Pardon me?

MS. BAIRD: Your certification program, are you certifying under a group certification process?

MR. HERRERA: In GLOBALG.A.P. certification we are multi-sites. Since we are -- the farm grows itself within the growers. And in the USDA organic specific, yes, with a group of growers.

MS. BAIRD: Okay. I just wondered that. Personal, do you know Luis Brenes?

MR. HERRERA: Luis Brenes, yes. We have had some arguments in the past. Yeah, he's very knowledgeable. But, well, he's one of the leaders in organic technology in Costa Rica. But --

MR. CHAPMAN: That's enough.

MR. HERRERA: We have had some argument with him. He's very clever and very

knowledgeable about everything.

MR. CHAPMAN: I don't think Luis is on our agenda today so --

MR. HERRERA: And I would love to understand why those laughs are?

MR. CHAPMAN: Thank you.

MR. HERRERA: Because I don't know if --

MR. CHAPMAN: Thank you for that --

MR. HERRERA: -- he's a character up here.

MR. CHAPMAN: I do have a question for you as well. I'm curious to know, because we've gotten some questions about rotational practices in pineapple. Would a change in your rotational practice have an impact on your need to use ethylene?

MR. HERRERA: Well, I think in the rest of the presentation you might see that if we leave a pineapple crop naturally to flower by themselves, there's been a slight tendency it'll be seasonal because of all period temperatures

are cold weather, like go down to 65.

Below 68, the plantation will go into stress because of the cold weather. And then it will start releasing the endogenous ethylene. And then it will start popping like popcorn all over the plantation.

So then, you -- in the pineapple crop and even more in organic, you just can't go with the personal every time just to pick what is ripened. And it's something that we really argued with Mr. Bondarela (phonetic) three years ago.

It is not a matter of just going into your orchard, just picking up what you find ripe. You need to program containers. Each container -- with an organic we're making 3.5 containers per hectare of harvest. And we need to fill a 20-ton container. So it's not a matter of just going randomly picking up what is ripened all around.

Then we're going to have a big gap in August with no fruit, and the market will suffer that. And the shelves in the supermarket will be

empty, replaced by any other conventional product. And then we'll have a peak of production that will come from May to July.

And then the market will crash, because we know that organic market is really sensitive and sensible to over-production. So the way of -- and just for example, one of the reasons we spray everything -- and thankfully pineapple crop absorbs everything fully through the axiles -- is that we don't put personnel in there.

And we have a density of 60,000 plants per acre, 25,000 square acre. So it's really tight to put person in there making a mechanical damage to let disease getting in.

(Foreign language spoken.)

No mechanical damage. So as soon as it is planted, just maybe the blood meal that we go and put with a little spoon, ten grams per plant, and then no more personnel until harvest.

We have to keep that plantation steady, not being mixed. So it's impossible to

think of going every time just picking pineapple. Then sizing is a thing. We have a three-kilo fruit, which is a jumbo four, size four, and then for Northern Europe we're sending 12 which is like a pound and a half fruit.

MR. CHAPMAN: Chris, I'm going to wrap it up here. Because we do need to move on. I'm understanding, correct me if I'm wrong, that regardless of the rotational crop, you would still need ethylene.

MR. HERRERA: Definitely.

MR. CHAPMAN: Thank you.

MR. HERRERA: Definitely. There is no option, and there's the research. Now we comply with you guys that there's the research done by universities. There's still warm, you know, the old one just closed last week.

MR. CHAPMAN: Thank you.

MR. HERRERA: So thank you very much for your comments.

MR. CHAPMAN: Thank you very much. Up next we have Oscar Salas Porras and then on deck

is Olman Briceno Fallas. Sorry, I am butchering names. I should give this back to Harriet.

Oscar, if you could start with your name and affiliation.

MR. PORRAS: Good morning to all, thank you for your attention. I am the Executive Director of the Organic Agricultural Chamber in Costa Rica.

Don't worry, I am not in technology, so I'm going to be brief. In Costa Rica, the engineers are the ones that speaks and takes the show.

After the Board meeting in 2015, all the organic production growers understood that they needed to gather efforts. And they established the Organic Agriculture Chamber in early 2016 to help the government implement all the legislation and the rules to guarantee the integrity of our industry.

The Chamber wasn't born to make locally in the government of Costa Rica, or with our commercial partners outside of Costa Rica, to

release or ease the rules to make it easier. The reason the Chamber was born was to implement the strictest and latest legislation rules for the industry.

Now the Chamber represents 95 percent of all the area of organic pineapple in Costa Rica. One of the most important achievements the Chamber has done is for us to put up to the Costa Rican Congress an investigation about the organic fraud that happened in the latest years with a conclusion from the Congress of Costa Rica about that.

Our Chamber is here to support all the ruling that the NOSB and the NOP in general will issue about our industry and puts into your access all the technology and information that we have gathered among our associates.

In this case specifically, we wanted to ask to keep the ethylene in their list, because otherwise we cannot grow. Thank you.

MR. CHAPMAN: Questions?

(No audible response.)

MR. PORRAS: Thank you.

MR. CHAPMAN: Thank you very much. I think we used a lot of questions on the last speaker.

(Laughter.)

MR. CHAPMAN: Olman is up next followed by Wendy Jimenez. You can start with your name and affiliation.

MR. FALLAS: Hello, good morning. Well, I remember a boss of mine used to ask me a question quite often. He said, what keeps you up at night every day? And when looking at the organic production in Costa Rica, and basically with all these questions that you have had, the big issues for me are ethylene and the fraud.

But I'm going to concentrate on the ethylene issue. If this multi-sectoral consultation team decides to get ethylene out of the official products that can be used in organics, there are four things that are going to happen.

The first is that the sustainable

livelihoods of many people that I know are going to be over. They cannot reinvent themselves.

The second is that there's no possibility of them substituting their work in their farms for other products that are going to provide them with enough money to buy their food and to sustain their families.

The third is that there are going to be many workers that are going to be laid off.

And the fourth is that the consumer in the United States, without the use of ethylene, is not going to be only affected with pineapple but eventually it will be affecting also bananas, avocados, and other products and vegetables.

Well, when assessing the proposal, you know, we have looked at the very fine details and the concepts, and every word that has been put forward. And I have not seen any proposal yet that takes in consideration the people, you know.

And from a modern, deliberate, republic policy making, one of the things that we have to begin is to think about the people. And

I have not seen that yet. So I think that that is missing for me.

I represent right now CANAPEP, that is the most important chamber of exporters of products of Costa Rica. And we are very concerned to see this. In this chart you will see how many growers do we have, but only three percent of all the area is organic. And that will be gone without ethylene.

From our perspective, what we need to do is work together as a team and try to collaborate and look for -- to address both of the issues, the ethylene in this particular case, but also work together to avoid the fraud so we don't see any in Costa Rica.

As my friend Oscar said, there's a Congressional report from an investigative report that took many months of work to address this issue of the fraud. And we have names and people involved in this issue. And we want consequences with this. Thank you very much. Any questions?

MR. CHAPMAN: Dave?

MR. MORTENSEN: Olman, I can assure you we are thinking of the people also. But thank you --

MR. FALLAS: Thank you.

MR. MORTENSEN: -- for highlighting that.

MR. FALLAS: Thank you, Mr. Mortensen. That gives it a lot of focus.

MR. MORTENSEN: I'm curious that you prefaced your statement by saying there are things that keep you up awake at night about organic production of pineapple, and it's not ethylene. Could you tell us what those things are?

MR. FALLAS: The two things that I mentioned, probably I didn't express myself as clear as I wanted, but the two things that keep me up at night is the elimination of ethylene, because of the impact it has, you know, and the other is the fraud.

MR. MORTENSEN: Okay, thank you.

MR. FALLAS: All right, sir.

MR. MORTENSEN: Thank you for that clarification.

MR. CHAPMAN: Dan?

DR. SEITZ: Can you give us a little information on the ways in which fraud is carried out in the pineapple industry?

MR. FALLAS: Well, fraud -- there's always -- when you have the stimulus of earning good money without working, there's always going to be people that are going to try to play -- to outsmart and outfox the system.

And the system cannot work without three things, basically. We have analyzed this very, very thoroughly. And the Congress of Costa Rica has identified how it works. You have corrupt public servants, you have corrupt certifiers, and you have corrupt growers. You cannot do a fraud without these three components getting aligned together and working under the same, you know, type of tune, basically to simplify it.

MR. CHAPMAN: Emily?

MS. OAKLEY: I wanted to address your concern that people are not a part of the decision making, because I think they absolutely are.

When we discussed this in the spring, a lot of public comments came in about this material saying that, you know, if it were applied for now there really isn't a criteria under OFFA that allows for just commercial viability of a crop, for fruiting so that it's easy to harvest.

I think it's the people that have spoken widely to the members on the Board and that give us consideration in our deliberations. So definitely we are thinking of the farmers.

MR. FALLAS: Thank you, Emily. I appreciate your comment.

MR. CHAPMAN: Asa?

MR. BRADMAN: I just have a comment here. I work with a group looking at pesticide exposures to agricultural workers in Costa Rica. And we have seen higher exposures compared to US

populations for many conventional pesticides. So I also see a benefit to people in Costa Rica with expansion of organic production of any number of crops.

MR. FALLAS: Yeah. I think that there is a trend. I mean, I believe that when you look at what's going on in the world with a more informed consumer, we will continue to see people more -- looking at the labels and looking at what we are doing about it. So we really need to get our act together.

Here the regulator is always in the markets. Because look, Costa Rica is a small country. We know each other very well, you know. So we know who is who. So when somebody pops up like a miracle pineapple grower, that Ms. Emily Oakley already mentioned, where does it come from? We know where it comes from. And the Congress knows, and the police as well. So we need to really address these issues thoroughly and decisively, you know.

But again, for example, my friend

Christian Herrera worked for many years in the conventional. So we have to take all the agrochemicals and everything out of his truck. And now he's an organic guy, you know.

So he can answer to you, Mr. Bradman, exactly what it meant for him to come from a conventional grower for many years -- that was the one who started pineapple in Costa Rica -- to becoming an organic advocate right now, okay. So the tide is turning, I think, in one way or another.

MR. CHAPMAN: Thank you.

MR. FALLAS: All right.

MR. CHAPMAN: Thank you for your comments.

MR. FALLAS: Thank you very much, Mr. Chapman. Enjoy having you.

MR. CHAPMAN: Up next is Wendy Jimenez followed by Emily Musgrave. Wendy, you can start with your name and affiliation.

MS. JIMENEZ: Thank you, good morning. My name is Wendy Jimenez, and I work for CAPA

Costa Rica which is a branch of Central American Produce Association here in Portland, Oregon. And yes, it is very cold.

CAPA Costa Rica has been exporting organic pineapples for 12 years. Since 2006, we started our organic pineapple exports for the American market by organizing a group of small farmers who make a tremendous effort to grow organic pineapples compliant with costly organic certifications, including the USDA NOP, a tremendous effort considering the drastic climatic conditions in the humid tropics of Costa Rica.

Currently, this organic program represents 20 percent of our sales to the United States. Costa Rica exports approximately $900 million per year. Of this amount, $21 million responds to sales of organic pineapple. This can only mean that these sales respond to smaller producers.

The demand for organic pineapple requires programming throughout the whole year.

Every client must request the fruit that they are interested in buying at least five months before the harvest period.

An organic pineapple farmer does not plant and grow just to look for markets later on. They grow organic fruit with a previously established commitment to provide that pineapple to a customer or a processor within a defined period and with a settled volume.

Farmers must use ethylene. It is naturally generated and used in a process that is only to activate a floral induction. And that same product will never be used recurrently in the development or commercialization of this fruit. Without the use of ethylene, organic pineapple cannot be produced, considering there will be no controlled method of production.

Eventually, without organic pineapple exports, a global supply chain could end. This would obviously affect the United States, which is the main consumer of organic pineapple in the world. The use of ethylene is imperative for

organic products. Thank you very much.

MR. CHAPMAN: Thank you. Any questions? Steve?

MR. ELA: I'm curious. We've heard about the rotations with organic production. What would a conventional grower do? Would they come out of -- and pineapples -- would they come out of pineapples? And then what would be their practices before they replant?

MS. JIMENEZ: Before they go out conventional?

MR. ELA: So in the conventional pineapple system, is there that cover crop rotation as well? Or do they finish one crop, go immediately back into another crop? And I guess, what are the differences between the organic rotation and the conventional rotation?

MS. JIMENEZ: Well, that is actually a very technical question. And that should be addressed to my teammates over there. But obviously, I think we should explain very well that, if you go from conventional to organic, you

have to wait a lot of time. But like I said, this is a very technical issue, and I'm not really the person to discuss it.

MR. CHAPMAN: Thank you.

MS. JIMENEZ: Thank you.

MR. CHAPMAN: Up next is Emily Musgrave, followed by Arturo Solorzano Arroyo. Emily, you can start with your name and affiliation.

MS. MUSGRAVE: Good morning. My name is Emily Musgrave. I'm the organic program manager at Driscoll's. I'd like to thank the NOSB for their commitment to protect the integrity the organic program and uphold the vital regulatory processes of the NOP. Your work is tremendous, and it does not go unnoticed.

Today, my comments focus on the continued allowance of elemental sulfur, sulfurous acid, and liquid fish products on the national list.

Driscoll's supports the continued listing of elemental sulfur for use in organic

production on the national list. Dusting sulfur is a critical tool for organic strawberry growers as a fungicide and miticide specifically used to target powdery mildew, a fungal disease that plagues organic strawberry growers.

Organic strawberry growers commonly use both dusting sulfur and wettable sulfur in rotation with each other. Growers have found the two formulations show different efficacies, and rotating the products limits plant stress and reduces the risk of phytotoxicity.

Our growers do not believe the sole use of wettable sulfur is a viable alternative to dusting sulfur. Dusting sulfur gets more thorough coverage than wettable sulfur and penetrates deeper into the strawberry crown.

We would like to reiterate that removing elemental sulfur from the national list would cause significant challenges to organic growers and damages to crops from powdery mildew.

That being said, Driscoll's is continuously researching other viable methods

other than dusting sulfur for the control of powdery mildew, including efficacy tests of specific strains and application methods of bio control agents.

Driscoll's supports the continued listing of sulfurous acid on the national list. It is an important practice for controlling and adjusting the pH in irrigation water across all berry types. Sulfurous acid has proved to be the most effective method of soil acidification after soil preparation is completed. Balanced soil pH is essential for ensuring proper nutrient uptake, microbe activity, and plant health.

Driscoll's supports the continued use of liquid fish products for use in organic production, as it is a critical source of fertility across all berry types. The vast majority of our growers use liquid fish products as it is a key nitrogen supplement for long-term perennial crops. We do encourage the Board's continued research regarding the sustainable sourcing of fish for these fertilizers.

I thank the National Organic Standards Board for you service and for consideration of my comments.

MR. CHAPMAN: Thank you. Emily?

MS. OAKLEY: This is a little off-topic, but do you guys use aquatic plant extracts or seaweed, kelp products? And do you support or have an opinion on addressing the environmental impact of those harvests as well?

MS. MUSGRAVE: Yeah, that's a great question. A lot of our growers do use quite a few different algae and those types of marine products. And I think I agree with some of the other certifiers that have commented that it would just be getting the regulation right, there. So I think if certifiers came out and found a way to do it, I think our growers would support it, and Driscoll's would support it. Thank you.

MR. CHAPMAN: Asa?

MR. BRADMAN: Hello. Would you explain the dust, sulfur dust application

methods, and the kind of equipment that's used?

MS. MUSGRAVE: Yeah. That's a good question. So it's really specialized equipment for dusting sulfur, rather than wettable sulfur, which is actually one of the reasons why we're doing research on other, you know, biopesticides, because it's very expensive.

The machines range, I think, from anywhere to, like, $12,000 to $15,000. And they're specifically only used for dusting sulfur. So that could be prohibitive to some growers if they're not able to get that cost. So it's a very specific machinery used.

And that's why we're looking at things such as BT and other biopesticides. But we're still in the very early stages. It's not ready for commercial development yet. But yes, the -- what's used for dusting sulfur is really specific for that crop for strawberry growers.

MR. BRADMAN: Could you explain the equipment a little bit? Like, how is the material applied, and is there any attempt to

direct the application, what level, that kind of thing?

MS. MUSGRAVE: Yeah. That's a little bit beyond, kind of beyond my scope. I do know a little bit about it. I mean, right, there's a few different -- so you've got your dusting sulfur which, you know, is used as a powder and gets better coverage. And then you've got your wettable sulfur, and then the micronized sulfur that goes into the sulfur burner.

I don't know the specifics exactly regarding how, you know, growers are using it in the machines. But I do know that they follow lots of, you know, they're looking at wind patterns, and weather, and there's protective gear. So they do follow that.

I do know that dusting sulfur can be a little bit hard on the plants also, you know. It's a little bit harsh on the plant which is another reason, you know, why it's an important tool. And without it, powdery mildew would be a big issue. But that's another reason why we're

looking into alternatives.

But that's a good question, Asa. I could get back to you on the specifics with my colleagues. Thank you.

MR. CHAPMAN: Dave?

MR. MORTENSEN: Yeah. And I think that the subcommittee was focusing more on it, or at least there was a lot of discussion about human exposure by former field workers. So maybe less on the plant reaction and more on human exposure.

MS. MUSGRAVE: Human exposure, exactly. Thank you.

MR. CHAPMAN: I have a question about -- we have a petition before us on silver dihydrogen citrate that could be used as an anti-microbial wash on fruits and vegetables. Does Driscoll's have a thought or a position on this material?

MS. MUSGRAVE: That's a good question. I don't think we have currently looked into it. But if that could be something that we could look

into on the open docket, we'd be happy to comment on that.

MR. CHAPMAN: Yeah. I mean, we received maybe three comments from the organic industry or so. And so I was just looking to see if there was further feedback from other handlers that would potentially be using this product if it was a need or a necessity for them.

MS. MUSGRAVE: Yeah. I can definitely look into that and get back to you. Thank you.

MR. CHAPMAN: Thank you.

Up next is Arturo, and then we'll break after that. After break will be Melody Morrell.

MR. SOLORZANO: Good morning. My name is Arturo Solorzano. My thanks to the Board for giving us this opportunity to interact with the US and NOSB. I'm the national director of the Agricultural National Research Institute. I'm also a representative of the Ministry of Agriculture of Costa Rica.

On behalf of the government of Costa

Rica, we ask for the NOP to authorize the use of ethylene as an input for organic production of pineapple for over five years due to the lack of other inputs, commercial available for the organic production.

Change or modifications in inputs will impact directly on farmers due to the more than 90 percent of commercial organic pineapple is exported to the US directly from Costa Rica.

Ethylene is a viable gas -- is a viable material that can meet the needs of all sizes of organic farms, not only in Costa Rica but also in a lot of Central American countries.

So without ethylene, it would be impossible to achieve the uniform ripening necessary for timely harvest of the fruit treatment.

Also, I want to mention that climate change in the last year has increased a lot with the effect to development of natural flowering that happens a lot. This way, development of climate change is making a lot of -- a huge

amount of undesirable fruits with not uniformity at all.

Because we have fruits from ripened fruits and ripening fruit at the same time. Then these temperatures, cold temperatures will allow the production of natural flowering and natural fruits. With these natural fruits, then we will have pests all over at different times.

And as you can see, we can have, in the picture over there, the small fruits, green fruit, unripened then, and then we will have pests all over them. And because of the management from all these kind of pests will be for different strategical management for the farmers.

Because the small fruits will bring another pest. So the farmers cannot really match the technical process that they use to control one mold or one larvae at the different size of fruits. It's not only a matter of making easy to crop the final process but also to manage the pest development in the production. So with

ethylene really, the farmers will not really have a method of developing of the pests.

There's a different pest now can also be evolving there. Also thank you. We are really in the tropical part of the country. So we are really in process of how to manage with the environmental condition. We will really put all our efforts and means in agriculture to help the farmers to develop.

MR. CHAPMAN: Thank you, thank you. Questions, Harriet?

MS. BEHAR: So just to summarize what you -- just to summarize what you've said, that when a field has different flowering times within a pineapple field, so if ethylene is not being used, that you'll have higher pest pressure because the moths are attracted to the flowers. And then the larvae from those moths will then attack the less mature pineapple. And you'll have significant losses. Is that what I'm understanding?

MR. SOLORZANO: You just summarized it

just perfectly, certainly. We would have fruits of different sizes, of different amounts. Then it keeps attracting a different pest. So you can imagine the different strategical management. So it's a food safety issue as well, because the farmer has to get into the fields many times, as other speakers already mentioned.

MS. BEHAR: So then the reason for the use of ethylene is not just for getting the pineapple to market but also as an important pest control material by having uniform flowering.

MR. SOLORZANO: Uniform fruit development. Yes.

MR. CHAPMAN: Emily then Ashley.

MS. OAKLEY: I just wanted to let people know that there are more comments to that effect for the pest and disease control and the Organic Produce Wholesaler Coalition's comments. So if people want to see more about that, it's there.

MR. CHAPMAN: Ashley?

MS. SWAFFAR: I just want to say thank

you to all the growers from Costa Rica that came. Because that's a huge effort that you guys made to come here and give us your comments. And we really appreciate that you guys came. Thank you.

(Applause.)

MR. SOLORZANO: Thanks to all of you. I appreciate all your help on this issue.

MR. CHAPMAN: Thank you very much. Okay, by my clock, which is on Pacific time, so by my other clock, it's 10:23. Let's take a 22 minute break and come back promptly at 10:45. We're in recess.

First up when we come back is Melody Morrell and on deck is Stephen Walker.

(Whereupon, the above-entitled matter went off the record at 10:23 a.m. and resumed at 10:50 a.m.)

MR. CHAPMAN: Okay. So I see all Board members present, so we'll get started. And I just need to find my spot. Melody, so we'll start with Melody Morrell followed by Stephen Walker. Melody, if you can start with your name

and affiliation for the record.

MS. MORRELL: Sure. My name is Melody Morrell. I work at the Cornucopia Institute. I have studied shipping logs as I followed the importation of organic corn and soy from suspect countries. I've seen who's consignee, shipper, and notified party are all listed as FedEx. No transparency.

Cheap, often fake organic feed is propping up organic factory farm operations and is spread over the marketplace. Cheap feed means cheaper meat, milk, and eggs. These are now conventional products sold at depressed organic prices.

Your continued attention to tracking organic products through the entire supply chain is critical to the integrity of the program and consumer trust. I'm so glad to hear about your current efforts and hope the NOP can move very quickly.

The natural evolution of organic farming is subverted when regulations are bent to

fit the conventional model. Rather than leaving room for the improvement of organic practices, we are ushering in a kinder, gentler, conventional agriculture.

Real organic farmers are being forced out of business. Organic farmers who grow produce in soil now compete with hydroponic factories using organic inputs. Even during tomato season, organic hydroponic tomatoes dominate my rural Minnesota grocery store and our local organic buying club. They are cheap, sometimes even matching conventional prices.

Hydroponic operations require an enormous amount of energy-expensive infrastructure and do nothing to improve or maintain the soil as OFFA directs.

In 2010, the Board determined that they cannot be certified organic, but here we are. This spring, the European Union revised its organic standards to prohibit hydroponic production under their organic label. The EU will no longer import produce labeled organic if

it was grown hydroponically beginning in 2021.

I emailed the pertinent parts of that new regulation, if you haven't seen it yet. It includes a clear definition of organic soil-bound production. It is unclear what it will mean for the US/EU organic equivalency arrangement when our labels do not mean the same thing. Factory farm and hydroponic products dominate the market in part because they have been allowed to bear a seal that they have not earned.

Thank you for you continuing and very complicated efforts to protect a true marketplace alternative. And thanks especially to Jennifer Tucker for her efforts on improved transparency at the NOP. It's much appreciated.

MR. CHAPMAN: Questions?

(No audible response.)

MR. CHAPMAN: Thank you very much. Up next is Stephen Walker followed by Michael Menes. And if you could start with your name and affiliation.

MR. WALKER: Good morning, I'm Steve

Walker, Operations Manager at MOSA. We certify 2,100 organic operations, and most of those are here in the upper Midwest, a veritable GMO hot zone.

Most of the certified operations include 1,400 corn growers plus lots of beans, alfalfa, and other at risk crops. We review many GMO contamination prevention plans, and we investigate GMO contamination cases.

At previous meetings, we expressed our frustration when reasonable prevention plans proved ineffective, and I said something about probably having GMO dust on my eyelashes. And we talked about some math, including the ridiculous amounts of buffer required to truly protect genetic integrity on an average seed corn field. And yet we still strive to promote that organic means non-GMO. So we're thankful to see further progress toward a fair regulatory approach.

We support the general direction and the sound concepts in the proposal, but even with the urgency of this growing issue, we think the

proposal still needs some refinement and clarity. We have some concerns around sensibly sharing burdens within the organic community, practicality of enforcement, and unfair impacts on geographic regions with more GMO production.

We also think the proposal should emphatically call for USDA support in order for coexistence to be successful. We organic folks are doing our fair share. Maybe there's a bit more we can do, and that's why the concepts in this proposal are important.

But there's only so much each of us can do in the face of increasing contamination threats. And yet, the public expects our organic economic engine to be GMO-free.

There are remaining moral questions of fairness and responsibility. We won't meet consumers' organic purity expectations unless we have more support and leadership from the USDA and not just the National Organic Program. Lack thereof makes for failed coexistence, and that harms our organic label.

The proposal does a good job of explaining the necessity for genetic integrity transparency and sets a reasonable forward course. But this path also continues our defensive position with disappointing acquiescence towards contamination. We'd like to see a little more call to arms.

We appreciate the proposal's perspective on financial losses from genetic contamination, a problem that conventional US agriculture created for itself.

We find the 17 points to be thorough, but hard to follow. We'd like more clarity on responsibilities, perhaps organized by stakeholder, including certifiers, labs, inspectors, NOP, organic and conventional seed suppliers and growers.

And looking down the path a bit, we wonder if transparency of test results will create a geographic disadvantage for growers and seed suppliers in places that have more contamination from GMO production like here in

Minnesota. And then our written comments get into a lot more details about various points in the proposal.

MR. CHAPMAN: Thank you.

MR. WALKER: Okay.

MR. CHAPMAN: Harriet?

MS. BEHAR: Can you speak a little bit more about the practicality issue, which specific parts of the proposal you felt were impractical for implementation?

MR. WALKER: I guess for that I'd refer to our written comments. It's fairly well outlined in here, and I didn't memorize point by point of the 17, but we did comment on, you know, not every single point, but some are little practicality things, who's responsible. There's a couple language things in there that maybe needed more clarification.

MR. CHAPMAN: Dan, then Harriet.

DR. SEITZ: If this were posted on the open docket, would your organization be willing to actually put in suggested wordings, and

changes, and so forth? From our standpoint, if people actually give us wording that they think works better, it makes our task easier.

MR. WALKER: Yeah, I think we could take a stab at that. We didn't do that for this written comment, but on the other 5029 seed one, we did quite a bit of that sort of suggested wordsmithing.

MR. CHAPMAN: Harriet?

MS. BEHAR: Would you rather that it had been a tolerance level rather than the transparency allowance? You kind of alluded to that we needed a stronger stance on this.

MR. WALKER: No. I think transparency is a good way to go. And if you get into set levels, then you're -- that's contrary to, I think, what NOSB said your intentions were. And that comes across more in our comments on the other seed issue at hand.

MR. CHAPMAN: Thank you.

MR. WALKER: Okay, yeah. Thanks for all your work very much.

MR. CHAPMAN: Up next is Michael followed by Sandra Mays. Michael, start with your name and affiliation.

MR. MENES: Good morning, Mike Menes, True Organic Products. Thank you for the opportunity to comment. Thank you to the NOSB and the NOP for all the stuff that you do for the organic industry. We appreciate your attention to detail as we wade through the many -- as you wade through the many comments on the issues.

I can tell you a little bit about our company. True Organic Products is the nation's largest organic fertilizer manufacturer. We're family-owned, and we've been doing this since 2005. We manufacture our liquid and pelleted fertilizer in two locations, in Helm, California, and out in Boardman, Oregon, on the eastern side of the state. And this slide will show a few of our growers that use our products.

I'm here again today to comment on the tools for organic fertility. Accepted practices of crop rotation, composting by diversity, are

well proven and have been successful. Organic fertilizer manufacturers like ourselves fill the need for situations where additional soil fertility is needed to keep up with the growing demand of organic produce.

It is important for international and domestic growers to understand that these inputs used in their farming practices contribute to the overall organic integrity.

Today, I'll be updating you on positions that I commented on at the spring NOSB meeting earlier this year. Specifically this is in regards to the support of liquid fish. Thank you again for putting it on the work program.

True Organic Products is in support of the work that's done for this and continues to have interest in having that remain on the NOP's approved materials list for use in organic production.

There are a limited number of liquid fertilizers that are available in organic production. Sunsetting liquid fish would limit

the tools available for growing crop organically and thus limiting the availability of things like what you've heard today, organic berries, certainly salads, almonds, apples, celery, and so much more.

We support the work and the agenda to answer the questions about the environmental impact of fishing solely for fertilizer versus byproducts of fishing for oil and fish meal.

Previously, we commented on the status of sodium nitrate and its availability. Anecdotally, we had understood widespread use, particularly in crops in regions that require nitrogen to be delivered to the plant very quickly in a wide range of growing conditions.

Another time we shared results of detectable levels of sodium perchlorate that was limited to the retail market. Recently, we obtained a sample that is available to farmers. It was a 2,000-pound bulk bag. And we detected 33 parts per million of perchlorate in that which is higher than the limit stated which is, I

think, six parts per billion or micrograms per liter.

In closing, True Organics, again, is in support of maintaining the NOP approved list and re-listing of liquid fish. Please continue to make progress on the prohibition of sodium nitrate.

Additionally, we're in support of systematically vetting the inputs for the -- make sure that the intents and purposes of the OFPA are met. Thank you.

MR. CHAPMAN: Thank you. Harriet?

MS. BEHAR: Would you be willing to put in a petition for the prohibition of sodium nitrate, placing it on 602?

MR. MENES: I had considered that as a suggestion yesterday. I thought it was a good suggestion and certainly will look into that. And, yeah, I think that's certainly a possibility for us to do.

MR. CHAPMAN: Rick?

DR. GREENWOOD: Question. So you had

one sample that had perchlorate. Have you tested more than one sample? I mean, how pervasive is it?

MR. MENES: Well, turns out that a 2,000-bulk bag is pretty expensive. And we can't go around the nation to be able to find that. So we looked for one locally and were able to purchase one and then test that.

We have that in a chain of custody. So it's certainly an issue on sampling. But we're interested in finding out. Most of the samples really were from retail, or online retailer. But the one we wanted to make sure and follow up at this meeting to find out if there is something in there.

The retail ones where it's Chilean nitrate at 1600, and it was part of my written comment, we've got results there as high as 2,500 parts per million. And this one as low as 33 for that big bulk sample but still very much higher than the drinking water standard.

DR. GREENWOOD: All right, thank you.

MR. MENES: Thank you.

MR. CHAPMAN: Eric?

MR. SCHWARTZ: Did that sample trigger any regulatory action?

MR. MENES: No. No, we took it for ourselves to be able to present here. And we didn't do anything with it. I'm sure there's some mechanism in order to be able to do that, but we haven't explored that.

MR. CHAPMAN: Thank you.

MR. MENES: Okay, thank you.

MR. CHAPMAN: Up next is Sandra Mays followed by Kelly Monaghan.

MS. MAYS: Good morning. I'm Sandy Mays. I represent Wolf, DiMatteo & Associates. I'm a senior associate. And in this comment, I'll cover the pullulan petition, seaweeds, and inspector requirements, as well as unfinished business that is holding organic back.

Wolf, DiMatteo & Associates has clients in the dietary supplements sector that we have assisted with organic compliance. Adding

pullulan to the national list as a non-agricultural substance allowed for use in products labeled made with organic, allows the existing market established before the reclassification of pullulan to continue, and brings the substance under the review by the NOSB and the national list sunset process.

We are aware that there is research and development underway to produce certified organic pullulan, but there is not a commercially available supply at this time. We anticipate that when an organic pullulan capsule is available that supplement companies will eagerly respond.

We have international clients that harvest certified organic seaweeds and kelps. I've observed their work many times and found that extreme care is taken in order to ensure a sustainable harvest.

If or when a working group does come into play, we strongly encourage that it include international operators so that the NOSB can

obtain a more worldly look at the differing rates of seaweed growth, harvesting styles, and sustainability measures put into place to protect their natural resources.

As for inspector requirements, IOIA and ACA organizations are the experts regarding what is happening on the ground with inspectors as well as what is needed to strengthen their performance and ensure that the NOP standards are being upheld. We ask that you give priority consideration to the comments of the IOIA and the ACA.

We've submitted comments on some of these topics for years, all unfinished important business, a few listed here on this slide, inert sodium nitrate, mulch film, and requiring organic when available. Our comments are rooted in a philosophy of continuous improvement that organic is seeking the gentlest ways to produce better food and fiber.

So we ask, don't shrink the national list tool box as a goal in and of itself. We

need choices, not just one solution for every problem. Be open to innovation and creativity that fits the organic philosophy. The precautionary principle cuts both ways. Thank you so much.

MR. CHAPMAN: Thank you. Emily?

MS. OAKLEY: I'm not asking any questions, just a comment that I want to echo that I couldn't agree more with you that a working group should include international operators as well. Because that's a missing link right now in the comments. So thank you.

MS. MAYS: Absolutely.

MR. CHAPMAN: Thank you.

MS. MAYS: Thank you.

MR. CHAPMAN: Up next is Kelly followed by Rebekah Ritson.

MS. MONAGHAN: My name is Kelly Monaghan. I'm an IOIA accredited organic process inspector, trainer, and consultant. I'm commenting on behalf of IOIA, the International Organic Inspectors Association.

IOIA is a non-profit educational organization with a global membership of organic inspectors and certifiers. IOIA provides quality inspector and reviewer training and promotes consistency and integrity in the organic certification process.

Thank you for the opportunity to provide comments today and for incorporating comments received at the last NOSB meeting on this topic.

Inspectors play a critical role in ensuring organic integrity. IOIA is especially pleased to see that your proposal focuses equally on inspectors and on reviewers who handle organic files.

The global organic movement recently created Organic 3.0 to guide the industry into the future. IFOAM's description of one key element of this strategy focuses on progressive improvement toward best practice. This captures well IOIA's opinion on this topic.

What is needed is not a one-time

improvement but a structure that allows and supports all players to continually improve their skills and abilities.

IOIA applauds the list of topics for skill development outlined in your proposal, particularly the requirement for operators to provide a sample audit in their organic system plan, continuing education, especially if it were level appropriate education, categorization of inspection by scope and skills -- the NOP could incentivize certifiers to this end -- team inspections, an underutilized tool, and import protocols, a great topic for the USDA's learning management system.

IOIA recommends adding fraud detection, forensic investigation, and risk-based criteria for audit selection.

IOIA supports all forms of mentoring. However, facilitation of an apprenticeship/mentor, peer mentor program is not an appropriate role for the USDA. The third party system of training already in place, using

IOIA certifiers and the ACA, can serve as the foundation for such a program.

IOIA is an expert voice in the development of curriculum and testing protocols and looks forward to working collaboratively with certifiers, the ACA, and the NOP to design and continue to improve an effective standardized system.

In closing, IOIA knows that qualifications, training, and continuing education are all important for inspectors and reviewers. But those factors alone do not guarantee a good inspection. Well trained and qualified inspectors can do a poor job without good forms, adequate time, or appropriate compensation.

Competence should be outcome-based and not simply measured by having the appropriate qualifications and training. Any proposal should incorporate these elements so that a professional inspector is well-prepared and supported to conduct efficient, rigorous inspections and find

fraud if it exists.

IOIA remains ready, willing and able to assist in continuing to build on the strengths of the existing organic inspection system.

Thank you again for the opportunity to comment and for your hard work on behalf of the sector.

MR. CHAPMAN: Thank you. Questions? Harriet?

MS. BEHAR: Hi, Kelly. I'm just kind of wondering, part of this document was to encourage more consistency. I know there's many trainings of various certifiers in-house, and IOIA does trainings.

But not everyone is trained to the same level, to the same quality, and we all know one inspector, it's a very unique position, has different -- So I'm just wondering, when you were saying it doesn't belong with the NOP, can the NOSB and the NOP play a role in encouraging consistency?

MS. MONAGHAN: Thank you, Harriet. I

absolutely think that they can. I think what IOIA wanted to say there is just the way that the USDA in 2002 didn't sort of reinvent the wheel by taking over the existing third party system.

We just want to re-emphasize, I think, that there are structures in place within the ACA, within certain certifiers, and certainly the IOIA, that can provide a good foundational building block for a type of standardized system.

I think Jenny's comments yesterday regarding the ACA survey that happened this week or this summer, and I believe you have the summaries, will provide all of you with a really good indication of some of the disparity and the importance for standardization. And IOIA absolutely supports that.

MR. CHAPMAN: Scott?

MR. RICE: Just a quick comment reiterating that I think the goal is to reduce that or not have that redundancy of reinventing the wheel. And I understand that the NOP and IOIA have had some good discussions to see where

the program can fill in those gaps, and have a role, and not supplant the good work that you guys have already done.

MS. MONAGHAN: Thank you.

MR. CHAPMAN: Dave?

MR. MORTENSEN: This is an area that I'm less familiar with, how this works on the ground. But I was interested, from the farmers from Costa Rica that we're discussing, how in a bad case, music is made when you have a farmer, an inspector, and an exporter that are working together to work around organic regulations.

I don't know if you were hearing that earlier. But his point was, which I thought was very interesting, that having a community of farmers police the farmer to inspector interaction in a local region was a very effective way of keeping things on the up and up with regard to fraud in a local area.

Do you know, is that a common occurrence, that farmers in a community, whether it be in Croatia or in Costa Rica, are working

together to ensure that the local process on the ground in the country is actually working effectively?

MS. MONAGHAN: I'm afraid I don't personally know that, Dave. But notwithstanding the fact that I'm standing here, I will ensure that IOIA can provide a written response to that question.

I know that IOIA absolutely supports peer mentoring, field inspections, group inspections, and increasingly does that in order to, you know, raise the bar for the qualifications of the inspectors and help each other grow in groups and region.

MR. CHAPMAN: Thank you.

MS. MONAGHAN: Thank you again.

MR. CHAPMAN: Up next is Rebekah Ritson followed by David Hiltz. Rebekah, if you can start with your name and affiliation.

MS. RITSON: Good morning. I'm Rebekah Ritson, Organic Regulatory specialist for Grain Millers. Thank you for the opportunity to

provide oral comment today.

Grain Millers is a whole food ingredient manufacturer and merchandiser headquartered in Eden Prairie, Minnesota. We have been involved in organic food production for more than 30 years.

We appreciate the hard work and dedication of the NOSB and would like to offer comment on two of the proposals from the Compliance Accreditation and Certification Subcommittee that we feel will lead to positive change and improved organic integrity industry wide.

Regarding the proposal for developing criteria for risk-based accreditation oversight, we are eager to see this proposal move forward. Ensuring all certifiers are held to a high standard and provide consistent oversight of their certified operations is critical to the organic industry's reputation and personally to our business.

Right now, the proposal is somewhat

unclear on how the identification of inspectors would impact the frequency and/or length of accreditation audits for certifiers.

We do want to voice our support of more frequent audits for certifiers identified as high risk and echo the Organic Trade Association's call for additional development of the identified risk factors via matrix or other risk assessment tool.

In addition to the excellent list of risk factors that you've already identified in the proposal, we would suggest that significant changes in the number of certified operations overseen should be included as an indicator of risk.

And what I mean by that is substantial increases in a certified operation just in a given year or a couple of years without appropriate staffing adjustments, restructuring, or other changes to operational management, can result in overextended staff with detrimental impacts on quality inspection reviews and, just

frankly, possible noncompliances being missed.

Substantial decreases in certified operations is also an indicator, because it could be due to service, timeliness, or other issues that are pervasive throughout the certification agency.

We also strongly support the inclusion of Factor Number 8 on incomplete or minimum data reporting as a risk factor. We would ask that you expand upon that factor to encompass other data quality measures such as frequency of updates, duplicative entries, and other data quality measures that I'm sure are available when determining risk associated with Organic Integrity Database reporting.

Regarding the training and oversight of inspector and certification review personnel, we wholeheartedly support the standardized curriculum for all organic inspectors, including scored online trainings to establish a minimum baseline of inspector knowledge and skills.

In particular, we would ask that this

training include more comprehensive audit trail exercise training. Mass balance audits, and really all audits, are an area where great improvements need to be made.

We would also encourage advanced trainings in forensic accounting, evidence development, sample collection, and traceback investigations as a requirement for all inspectors that conduct unannounced inspections, as these are often a major component of investigation into fraud or persistent regulatory compliance problems.

Finally, we recognize the value of inspector pairs or teams for highly complex or very large operations and would like to voice our support for the implementation of this practice as soon as possible, as it would likely increase the efficacy and quality of inspections for these types of operations. Thank you.

MR. CHAPMAN: Thank you. Harriet?

MS. BEHAR: As a buyer of grain, do you ever require a certain type of seed of your

growers? And is that seed always organic?

MS. RITSON: I think that may tie back to the written comments that we submitted. I am not the best person to answer that question, but I will do my best.

Particularly for our organic soybeans, we do have buyers in Japan that are looking for really specific characteristics and traits. And so we do contract with our growers to produce the seed that has those traits. We do our best to source organically, but some years that's well below 50 percent. And in talking it over with our crop specialists, the best they've ever been able to do is about 60 percent.

MR. CHAPMAN: Thank you very much. Up next is David Hiltz followed by Trudy Bialic.

MR. HILTZ: Good morning, and thank you very much. I'm David Hiltz. I'm a regulatory scientist with Acadian Seaplants. We're a marine plant company from Nova Scotia, Canada.

I want to offer thanks to the NOP and

the NOSB staff for all of their past and ongoing work. We appreciate the opportunity to provide input on marine materials which is a subject that we have commented on many times, beginning at the 2003 meeting in Austin.

Acadian appreciates the ongoing efforts of the Board to ensure sustainable harvest of marine plants. However, we continue to be concerned about the language and various discussion documents that present the over-harvesting of ascophyllum nodosum as an accepted fact.

For example, in the most recent discussion document, it would suggest that scientific community has concluded that widespread over-harvesting is occurring, in contrast to the industry position that current activities are sustainable.

This conclusion is not consistent with many of the comments on record from renowned phycologists and marine scientists such as Doctors Brawley, Beal, Fegley, and Ugarte whose

research has led to the conclusion that ascophyllum is currently being sustainably harvested.

For those who are unfamiliar with the harvest of ascophyllum, manual or mechanical cutters move across the inner tidal zone and remove the top portion of the algae while leaving the holdfast and the thallus of the plant intact.

This allows for a rapid regrowth in subsequent years with average growth rates being 15 to 20, or sorry, 12 centimeters which is approximately five inches in our areas.

Harvesting is mostly regulated by local governments and laws that limit the amount of ascophyllum that can be removed in a given year. Current allowed exploitation rates range from 17 to 23 percent of the amount of ascophyllum in a given shore sector.

And it should be noted that this allowed harvest rate removes less material than estimates of biomass that is naturally shed from the beds annually due to storm and wave action.

The suggestion that there are no old growth areas of ascophyllum in Nova Scotia or Maine is not consistent with facts. In Nova Scotia, for example, the total annual harvest is less than ten percent of the estimated standing stock. In Maine, it is less than two percent of the estimated standing stock.

There are many beds of ascophyllum in both areas that have never been harvested due to their geographical locations or their conservation efforts in the areas.

It is not in the interest of Acadian or any other marine plant company to harvest ascophyllum in an unsustainable manner. The end result of that would be the creation of a market that we could not then fulfill.

It is for this reason that our company has employed a team of marine scientists and has used their findings to create a science-based regulated seaweed harvest that has been recognized as a model of integrated ecosystem-based managements that is being adopted in other

jurisdictions around the world.

Thank you for your time.

MR. CHAPMAN: Thank you. Emily?

MS. OAKLEY: I'm so glad that you're here, because you didn't provide written comments. So I'm glad to be able to ask you questions.

You made two points, one that it's not in your interest to over-harvest, and that you have a team of scientists on your staff which seems like it would lend itself ideally to being able to support certification to the wild-crop standard.

What are your thoughts on that, firstly? And then I have a follow-up after that.

MR. HILTZ: Thanks, Emily. So certification of the wild-crop standard, the material that Acadian Seaplants currently harvests for our crop inputs is not currently certified for wild harvest.

But we do have a division of our company that manufactures the dried seaweed meal

for use in animal feeds and human supplements. That material is currently certified. We have a certifier in Canada that does certify that material to their interpretation of the NOP wild harvest rule.

Yes, I mean, certainly we could probably expand all of our harvest to cover that. We feel that the rules, as they're currently written, are open to that. But they are ambiguous in the fact that it is up to the interpretation of the certifier as to how they would do that.

So if that is going to be -- moving forward with the Board we hope there would be more concrete rules put in place for that.

MS. OAKLEY: Thank you. And then you said that government regulations already limit harvest rates. And so I was wondering if there's a percentage of your boats or operations that are annually reviewed by those government entities.

MR. HILTZ: So in Canada, for example, there's an annual report made to the Department

of Fisheries there that details all of the sectors that we have been licensed to harvest. It looks at the assessments that our scientists have done in cooperation with scientists from the government to agree on an amount of biomass in that sector.

It then reviews the landings that we bring in from that harvested sector in that year and matches the two up to make sure that we're not in any way over-harvesting. We have a resource team in place as the harvest is going on to make sure that we're not doing that. Because again, we don't want to damage that resource. We're depending on it for the subsequent years.

MS. OAKLEY: So just to follow-up, no one actually, from the government, does onsite inspections right now that's, like, on the boats themselves? It's more of a dialogue with the scientists in an office, just to clarify?

MR. HILTZ: That absolutely is true. I can check with my resource team, but I do not believe the government places inspectors in the

field to look at that.

MR. CHAPMAN: Asa?

MR. BRADMAN: Yeah, I just have a question about impacts on fauna or other aspects of the ecosystem. I can imagine a situation where, you know, your nutrient extraction is replicable and sustainable over time. It's sustainable and it says that it's replicable over time.

But are there other impacts on fish, or shellfish, or other marine life that are considered in -- you mentioned licensing or other evaluations of impacts on the environment. If you could comment on that, I'd appreciate it.

MR. HILTZ: Yes. Thanks for the question. And in more recent years, we are seeing inquiries from the public and other agencies who are looking for information on that.

A lot of the early research that Acadian had done was focused more on the sustainability of the ascophyllum itself. But as those questions have come up, we've started to

interface with more groups, especially in Maine, working with the Maine Seaweed Council and other scientists there to try to understand what impacts that our harvesting could be having.

We've been harvesting for 30 years in Nova Scotia. And we've seen no negative impacts of the harvest there on any local fish, fauna, or anything else.

MR. BRADMAN: When you say you've seen no impacts, how do you come to that conclusion? What information are you using?

MR. HILTZ: Just the conclusion that, you know, that has been observed in the environment. You would think that if years and years of this harvest, which has been going on by us and even before us, was having some negative impact, it would have been observed by the Department of Fisheries and Oceans there who are studying the rockweed harvest that they regulate up there.

MR. CHAPMAN: Dan?

DR. SEITZ: So we heard diametrically

opposite testimony about Nova Scotia. Why would you think there would be such a difference in terms of your perception versus other testimony we've heard?

MR. HILTZ: Sorry, you heard testimony --

DR. SEITZ: We've had diametrically opposite testimony about the adverse environmental impact in Nova Scotia from the harvesting of rockweed. So why do you think your perception and that perception are so far apart?

MR. HILTZ: I'm not sure what that researcher who provided the information in Nova Scotia is drawing their conclusion on.

Our head resource scientist has worked with Acadian for 25 years to study the ascophyllum resource. We've worked extensively with the Department of Fisheries and Oceans up there who regulates this resource to do studies that show that what we're doing is sustainable and any effects that we're seeing on the ecosystem are short-term.

I don't know what else to say. To suggest in Nova Scotia that there are no areas of ascophyllum that have never been cut is just not consistent with the facts. We've mapped the entire coastline up there. There are areas that we don't harvest from, there are areas that other companies don't harvest from just because of their location.

MR. CHAPMAN: Thank you very much.

MR. HILTZ: Thanks for your time.

MR. CHAPMAN: Up next is Trudy followed by Nathan Hecht. Trudy, you can start with your name and affiliation.

MS. BIALIC: My name is Trudy Bialic. I represent PCC Community Markets. We are a community-owned and operated grocery retailer in the Seattle metropolitan area. We have nearly 60,000 members. So I'm speaking as both a retailer and a consumer -- as a consumer voice as well.

First, I want to thank Michelle Arsenault for her support over the many years and

Dr. Tucker for her service in stepping up for the program as well. Thank you.

In many cases, the consumers connection and relationship with organics is on the ingredient panel. That's what they see. So we want to comment on flavors and gums, if I can get the time to get to gums.

On flavors, we oppose relisting flavors as a category. We are asking that NOSB can push the industry to show progress in developing and adopting organic flavors according to the original 1995 plan set by NOSB and also to set a deadline to sunset non-organic flavors.

FDA we know allows manufacturers to conceal production of flavors as confidential business information. FDA does not require flavor companies to disclose ingredients of all the chemicals or grass. And companies can maintain secrecy of their formulas and hide that flavors are produced in ways or with substances that they may not wish to disclose.

In fact, under US law, biotech

generated compounds are legally classified as natural flavors. Natural cheese flavor, for example, can be a production, a product of biotechnology as well as a biotech substitute for MSG called S336 which is called natural flavor on the label.

Organic consumers do not want mysterious flavors in their food. And with the lack of transparency between CBI and also this loophole under the US law, it makes it really difficult to know the origins or the process that these flavors are developed.

We believe, actually, that consumers want organically produced flavors in organic foods. So it would be very important for the NOP and certifiers to explain to consumers how they can determine that flavors in organic products actually meet the requirements of the annotation.

When flavors were approved for addition to the national list, NOSB laid out a plan that included a provision that manufacturers should document in their handling plans progress

towards wholly organic natural flavors. So given the concerns voiced, actually, also by the Handling Committee, we feel that the proposal doesn't go quite far enough.

And to make sure that we progress towards the original 1995 plan, it's been almost 20 years after all, we would ask that the NOSB propose setting a deadline for realizing the 1995 plan by adding an expiration date to the proposed listing.

On xanthan gum, we urge NOSB to sunset xanthan gum. Any plain reading of 205.600 would show that it prohibits synthetic additives used primarily to recreate or improve texture such as xanthan gum. We believe it's illegally and improperly listed on the list, since its primary purpose and use is to create or improve texture. Thank you.

MR. CHAPMAN: Thank you. And, Judy, I have a question and then, Emily, did you -- Emily, Dan and then Steve. Hold on, and then Harriet.

So, on that last point you raised about plain reading 205.600(b), I have it here in front of me and it reads, in addition to the criteria as set forth in the Act, any synthetic substance used as a processing aid or adjuvant will be evaluated against the following criteria.

And then, the criteria you cited is then listed.

So, I guess, can you explain to me how xanthan gum is used as a processing aid or adjuvant?

MS. BIALIC: It's usually as a stabilizer or texturizer, but it's used to improve texture primarily.

MR. CHAPMAN: As an ingredient?

MS. BIALIC: As an ingredient.

MR. CHAPMAN: But not as a processing aid or adjuvant?

MS. BIALIC: No, not --

MR. CHAPMAN: So then --

MS. BIALIC: -- to my understanding because it's listed on the ingredient panel. If

it was a processing aid, it would not be on the ingredient panel.

MR. CHAPMAN: So, given that that further requirement is restricted to only processing aids and adjuvants, how is that applicable to xanthan gum?

MS. BIALIC: Because it's a synthetic and it's on -- it's a synthetic and a synthetic should not be used primary -- it's primary use should not be used to create -- recreate flavor or texture.

MR. CHAPMAN: So, we should require that, even though it's not a requirement in OFPA or in the standards? Is that what you're saying?

MS. BIALIC: I'm not -- maybe I'm not clear on the question.

MR. CHAPMAN: 205.600(b) limits the further requirement about texture to processing aids and adjuvants.

MS. BIALIC: My question would have to do with what -- how adjuvants, it's not defined under OFPA. And so, I believe that the adjuvants

are then -- it would be kicked over to a pre-existing USDA definition of adjuvants and it would be used as an adjuvant in that -- under that definition.

MR. CHAPMAN: And --

MS. BIALIC: And I believe it would fit under the adjuvant definition of USDA, although it's not an OFPA proper. It's not defined under OFPA.

MR. CHAPMAN: Can you share that adjuvant definition?

MS. BIALIC: I don't have that on me, no.

MR. CHAPMAN: Okay.

Next up is Emily.

MS. OAKLEY: You can skip me.

MR. CHAPMAN: Dan?

DR. SEITZ: You ran out of time. I was wondering if there were any other substances that you wanted to mention?

MS. BIALIC: I would like to mention that gellan gum is also a product of bacterial

fermentation and we have had anecdotal reports from consumers over the years that they've had reactions to products of bacterial fermentation causing digestive upset.

Gellan gum is not listed as grass, so that's another concern. It's not listed as grass and it also, let's see, there is one study only, there's really insufficient evidence overall on fermented gums to refute or confirm that there are reactions to fermented gums.

So, one of the asks that we have on the fermented gums is that NOSB could add to its work agenda consideration of a policy to address concerns about these gums produced through bacterial fermentation.

MR. CHAPMAN: Steve?

DR. SEITZ: We have a petition for tamarind seed gum on the docket. Given your comments, I could kind of guess what your answer might be of whether we should add that or not, but could you chime in on that?

MS. BIALIC: I haven't -- to be

honest, I haven't studied tamarind gum. Is it -- if it's a product of bacterial fermentation, it would fall under that request to add to the work agenda.

DR. SEITZ: It's not --

MS. BIALIC: Okay. The other gums --

DR. SEITZ: It's a fermented agent.

MS. BIALIC: -- the locust bean gum, the carob bean gum, the tamarind gums, those gums we have no objection to.

MR. CHAPMAN: Harriet?

MS. BEHAR: This is more a question for Lisa, our Handling Committee Chair.

Are you -- just, there were some questions about adding things to the work agenda, especially the flavors, perhaps.

So, I'm just wondering if your Committee will take that under advisement?

MS. DE LIMA: Sure, I mean, I keep a list of everything that comes up in public comment and we'll discuss it when we get back to Subcommittee.

MR. CHAPMAN: Ashley?

MS. SWAFFAR: So, where were you last year on carrageenan? I believe you said that you wanted it de-listed also.

MS. BIALIC: Correct.

MS. SWAFFAR: And now, you're saying gellan gum should be de-listed which many, many manufacturers used as an alternative to carrageenan.

They listened to consumers and retailers and replaced it with gellan gum. And, we've heard from them that gellan gum is the only alternative.

So, are you suggesting we should just eliminate an entire class of products?

MS. BIALIC: There are -- I don't know about all the gums, but the locust bean gum, the guar gum, the carob bean gum, we don't have objections to.

We are concerned about the fermented bacterial gums because of the anecdotal reports that we've heard.

And, there was something else I wanted to say about that and I can't remember what it is.

MS. OAKLEY: I mean you quoted a --

MS. BIALIC: Oh, yes, it actually narrows the market choices because a lot of times, they're in inorganic foods, they're commonly derived from wheat, corn, soy.

So, if you're gluten free or if you're allergenic, it's really narrowing the choices that you can purchase as an organic consumer. They have to avoid those because there's no transparency on how these gums -- what these gums are derived from.

Xanthan gum or gellan gum, they can be corn, soy or wheat.

So, if they don't know how they're derived, it means that all those consumers who may be sensitive to corn, wheat or soy don't buy those products.

So, while they may be functional, there's no transparency in those particular two

gums. And, it can be a detriment to enlarging the market. It's narrowing the market, in our view.

We're seeing customers not buy these products because they can't tell what they're made from and they're having -- some of them are having reactions.

MS. OAKLEY: So, carrageenan would be the alternative for them?

MS. BIALIC: Carrageenan, they had -- they were avoiding as well. They were avoiding as well.

MS. OAKLEY: Right, and I understand they avoid that. But, for those people who have sensitivities and allergies for the gellan gum, carrageenan is an alternative.

MS. BIALIC: I would --

MS. OAKLEY: Or a product that has to have some type of something to suspend it or something like that.

MS. BIALIC: Well, you know, I think it gets down to the question of essentiality. Do

you really need gums for these products to exist? Why not shake them up?

And, that's what we hear from consumers. They say, we don't want these gums in there. So, they don't buy them.

And we saw the market react to carrageenan and we're seeing the market react to some of these other gums, too.

MR. CHAPMAN: Emily?

MS. OAKLEY: You had -- sorry -- I'm over here.

You touched on what I was going to ask originally which was consumer confidence or concern about these products.

So, you're saying like how many consumers are you hearing from or how widespread of an issue do you feel this is in terms of the ingredient lists of these products and consumer concern over their inclusion?

MS. BIALIC: It's a really good question. I can't quantify it and that's why I bring it up. And, I acknowledge openly, its

anecdotal and there just simply isn't enough research on gellan gum, for example, to refute or confirm the reports that we've heard.

I've looked and I've only found one -- and one study I included in my comments and it referred to they fed rats for four weeks on gellan gum and they found that the intestinal microvilli adhered to one another and decreased digestion of nutrients in the gut.

We cannot confirm or deny that because there's no other evidence to concur it to. But, it does seem like a bad idea to us to eat something that's sticky, that can't be digested, has no nutritional value, may impair the ability of the microvilli and may decrease digestion of nutrients.

That just doesn't seem like a good idea. And, on top of hearing from consumers that they are having reactions or it's restricting their purchases because they're allergic to corn, soy or wheat, combined, there is some reaction.

I can't quantify it and we aren't

surveying our members, but we are hearing from them and we do a customer service database with comments from customers. I included a couple of comments in my written remarks.

MR. CHAPMAN: A follow up to the allergen questions. Can you help me understand why the Food Allergen Labeling Consumer Protection Act is insufficient to protect organic consumers from corn, soy and wheat allergens?

MS. BIALIC: I'm not -- I certainly don't mean to suggest that it's inadequate, but without really knowing, they can't determine. It may contain corn, soy or wheat would be a label. It wouldn't necessary say it does.

So, they can't tell whether it's something that they're allergic to or not.

MR. CHAPMAN: Okay.

And, then, following up in the series of questions that I started with, I spent the five-ish minutes that you were getting peppered with other questions to try and search the inter-webs for a USDA definition of adjuvant. I was

unable to find one that was relevant to food.

And, frankly, I'd be surprised if there is one from the USDA related to food since most of the food regulation for the USDA, at least for a consumer packed product, would be limited to, like meat products through FSIS.

So, and then I tried the FDA and I couldn't find anything briefly.

So, if you have additional information in that regard, it would be much appreciated.

MS. BIALIC: You know, I tried to scout that down myself. I found one with EPA which wasn't very gratifying, to tell you the truth.

But, I don't -- it's being used as a term referring to adjuvants in OFPA, so it's a little bit of a concern that I don't really know what that -- how that's being referred to.

But, in general, an adjuvant would be defined as something to help facilitate an action or a result or it's a facilitator. So --

MR. CHAPMAN: Yeah.

MS. BIALIC: -- in that respect, a gum is a facilitator of texture, in the general sense.

But, yes, there is no firm definition. I can't pin it to.

MR. CHAPMAN: Thank you.

A-dae? Sorry.

MS. ROMERO-BRIONES: Hi, so my comments are related to your comments on lecithin. Would you be the person that I would ask about these comments that you submitted? The written comments about lecithin?

MS. BIALIC: Oh, on de-oiled lecithin? I don't even remember what I said, to tell you the truth.

MS. ROMERO-BRIONES: So, basically, you said that there is organic de-oiled lecithin available. And by de-listing it, it would increase the organic supply.

And, you went into great detail about the market around soy lecithin. But, there, and again, going back to the conversation about

allergens, so there's a lot of people who are allergic to soy, so I was wondering if you had any information about de-oiled lecithin other than soy?

MS. BIALIC: I don't. I know there's safflower lecithin, but I don't know about the availability.

My reference to the soy lecithin came out of an OTA report comment from a supplier.

MR. CHAPMAN: That safflower lecithin, is it organic?

MS. BIALIC: Pardon?

MR. CHAPMAN:Is that safflower lecithin organic?

MS. BIALIC: I am not hearing you, I'm so sorry.

MR. CHAPMAN: Is the safflower lecithin you referenced organic?

MS. BIALIC: I can't recall, to tell you the truth. I believe it is. I believe there is organic safflower lecithin on the market, yes.

MR. CHAPMAN: Thank you.

Dan?

DR. SEITZ: Having been involved with a food co-op for many years, the one ingredient that I get the most comments on are flavors because that seems like such a strange category, natural flavors and people say, gee, what could that mean?

And, I was surprised to hear that that could even encompass GMO flavors that are developed with GMO technology.

Can you just elaborate a little bit more on just what is the nature of these flavors and are there organic flavors across a wide spectrum of different needs?

And, what would happen if tomorrow these so-called natural flavors were not allowed in organic products?

MS. BIALIC: I think consumers by and large would hope that the flavors in a food come primarily from the major ingredients themselves and not from a minute compound, that they expect that foods are inherently flavorful or should be

inherently flavorful in and of themselves and not needing flavors, not needing an additive to give -- to make it palatable or appealing.

DR. SEITZ: Thank you. And, just can you elaborate a little bit more on the range of actual substances or technologies used to make the so-called natural flavors?

Because you intimated that you can have GE manufacturer and some would actually be probably more, quote, natural in some sense.

So, if you could just give us a little sense of sort of this spectrum of that term encompasses, if you have that knowledge.

MS. BIALIC: The definition of natural flavors, I don't have it before me, but the definition, as I recall, refers to -- it includes -- or products of fermentation.

And so, it's the clause, products of fermentation that allow genetically engineered products to be included.

It's actually a definition. And, I've talked to Consumers Union, example, for about

this definition and they felt that it was -- Michael Hansen felt that it was a good definition, if I may quote him, I hope I'm not out of line on that.

He felt it was a good definition and -- but it does -- it was created before genetic engineering, so the loophole comes because of that emerging technology in the '90s.

That's the reason that genetically engineered flavors may be included.

The definition, though, essentially is sound.

As far as availability of organic flavors, I don't believe that we have done a good enough job in pushing the industry to comply with that 20-year proposal from 1995. It's been 20 years, that's a long time.

I think our ask is that it be added to work plan to make the manufacturers show progress.

But, we are concerned about how -- what kind of transparency there can be or how can

a certifier verify that a flavor is not produced in prohibited -- with prohibited methods?

It's not a transparent process and without having transparency, and coupled with the loophole, it makes it very difficult.

MR. CHAPMAN: Thank you.

MS. BIALIC: Thank you.

MR. CHAPMAN: Thank you for withstanding our several questions.

Up next is Nathan followed by Jose Hernandez.

If you could start with your name and affiliation?

MR. HECHT: Yes, good morning, NOSB members.

My name is Nathan Hecht. I am a graduate student of research here at the University of Minnesota in the Organic and Sustainable Food Systems Research Program.

We would like to comment on the 2018 research priorities for organic crops.

By way of introduction, I'd like to

just briefly highlight our recent research efforts in organic food systems which has included, among other projects, nitrogen contributions from legume cover crops, nutrient cycling and soil health in organic cash crops, inter-cropped or in rotation with cover crops, season extension options for northern climates, organic management on spotted wing drosophila, organic production of day-neutral strawberries and yield benefits of pollinator farmscaping flower strips.

As research scientists at Minnesota's Land Grant Institution, we are passionate about helping to guide the regional organic sector with research-based solutions to complex agri-food challenges.

We, as a research community, are uniquely aware of both grower priorities and interests as well as the current gaps in academic knowledge where more research funding and support is critical.

After review of the 2018 research

priorities, we would like to highlight and comment on the following areas of organic crop research that we believe are important for -- specifically for the future of Minnesota organic agriculture and are worthy for consideration by the NOSB.

So, to begin, we request the Board for research on what I'm calling agroecological farmscaping practices. These are landscape design and planting strategies organic growers can use to integrate a diversity of plant forms into their farms and better manage biodiversity based ecosystem services.

One example of this is managing for natural enemies and wild pollinators by establishing or conserving natural habitat areas.

So, in this slide, this is a figure from the Xerces Society that sort of highlights some examples of farming for pollinators and this next one highlights some examples of farming for natural enemies.

And the point is sort of the holistic

and diverse -- biodiverse landscape that you can see there.

So, we need more research on, (a) crop yield cost benefits -- costs and benefits of establishing beneficial insect habitat for pest natural enemies and pollinators and, (b) the influence of landscape context on farmscaping practices.

We also request support for further research on covered agriculture including high and low tunnels, greenhouses and gold frames.

You can see on the left some examples of low tunnels for strawberries and, there on the right, a prototype of a deep winger greenhouse.

Given the unique climatic challenges of growing at more northern latitudes in Minnesota, research is crucial in helping farmers figure out how to extend the growing season, increase profits and mitigate risks.

More research is needed on all aspects of growing in these systems including quality of plastic used for tunnels, sustainable soil as

potting mixes, appropriate cultivar development, disease and pest management and a nutrient water and waste cycling.

Finally, in all areas of organic research, we request support for research that is both interdisciplinary, that is that it aims to collaborate between traditional and academic departments and participatory involving stakeholders, especially farmers in all steps of the research progress.

Thank you for attention and consideration. We are grateful for this opportunity to share our perspective with the hope that it may help to guide USDA's efforts and we honor your service and your dedication to the improvement of the U.S. organic agriculture.

Thank you.

MR. CHAPMAN: Emily?

MS. OAKLEY: I just wanted to thank you for commenting on research topics, because I've been doing this lead for three years now and it's nice to have someone come up and speak

exclusively to that. So, thank you.

MR. HECHT: Thank you.

MR. CHAPMAN: Harriet?

MS. BEHAR: I second that and I encourage you to continually send us ideas.

MR. CHAPMAN: Thank you very much.

Up next is Jose Hernandez, followed by Terry Shistar.

MR. HERNANDEZ: Yes, good morning. My name is Jose Hernandez, I'm from St. Paul, Minnesota. I am an agronomist. I was trained in agronomy in Costa Rica at the Earth University and now I hold a PhD in soil science from the University of Minnesota.

I worked for about eight years in research and outreach in the areas of nutrient management and soil quality at the University of Minnesota.

And now, I work as an R&D manager for a Canadian company, Precision Farming.

I come here today to represent organic consumers. My family and I are of the organic

consumers and we are members of an organic community support to agriculture farm and we also buy organic at our co-op in the Mississippi Market every week for about 18 years now since we live here.

We value the organic certification and the standards. I understand the Board today is reviewing their position on the use of ethylene as an allowed synthetic for organic pineapple.

As a consumer, I am here to ask the Board to support the use of ethylene in organic pineapple for flower induction.

As a consumer, I am primarily concerned about pesticide usage and abuse, effects in the environment and residues of these chemicals in the food we ingest as well as best economic practices.

I think the ethylene use for flower induction is safe and, moreover, there is not a viable alternative for organic producers.

Prohibiting the use of ethylene will be devastating for small pineapple producers as

some of these growers -- some of these many cause undesirable consequences like some of these guys may go back to conventional pineapple, for example, and maybe force or maybe causing -- maybe exposing people to pesticides, you know, workers, families, towns, water waste soils.

And other consequences may be they're lowering their supply of these pineapples and, therefore, increasing prices and making the availability of these products for, you know, medium and low income families.

I urge the Board to support the use of ethylene for flower induction in organic pineapple. Organic farm is critical in our food systems and we are facing the same challenges to feed a growing population in this world.

So, we should be using science-based, common sense standards and regulation to allow our organic producers be competitive in a thriving organic farming business.

Thank you very much for the opportunity to comment.

MR. CHAPMAN: Thank you.

Questions? Thank you very much.

MR. HERNANDEZ: Thank you.

MR. CHAPMAN: Up next is Terry Shistar followed by Jose Quirce.

Terry, you can start with your name and affiliation.

MS. SHISTAR: Okay, my name is Terry Shistar and I'm on the Board of Directors of Beyond Pesticides.

Board members, with your expertise in many areas guide us in our efforts to promote organic practices. Looks like I have to advance.

We've submitted comments on all of the issues before the Board at this meeting but I'll just address a few.

First, it's time to stop adding listings to 606. It once made sense to allow a small proportion of non-organic ingredients and processed organic foods if they were not available in organic form.

However, now that the -- any

agricultural commodity can be produced organically, listing on 606 only stifles organic production of new organic crops and promotes chemical intensive production.

Finally, in the time that it takes to add new regulations, petitioners could overcome obstacles to supplying the organic products. Do not approve the petitions for tamarind seed gum, Ethiopian peppers, Japones peppers or collagen gel casing.

Antimicrobials used in medicine should not be used in agriculture. The spread of antimicrobial resistance is a healthcare crisis of major proportions. Many infectious diseases are resistant to the most commonly prescribed antimicrobials, resulting in longer lasting infections, higher medical expenses, and the need for more expensive or hazardous medications.

Microbes of all sorts, fungi and well as bacteria, evolve quickly and antimicrobials provide strong selection pressure for those strains with genes for resistance.

Do not allow the use silver dihydrogen citrate of natamycin, which are antimicrobials used in human medicine. Natamycin treats infections of candida and other pathogens and resistance to natamycin is found in candida albicans. Ionic silver is used in surgical dressings and is associated with bacterial resistance to silver and antibiotics.

Fumigants are not compatible with organic production. Organic production uses practices that feed soil organisms who feed crop plants. It creates healthy soil food webs. Using a toxic chemical to wipe our soil biology is the antithesis of organic practices.

Do not approve the petition of ally isothiocyanate. It would be difficult to find a practice less compatible with organic production than soil fumigation with what the technical review calls a broad spectrum antimicrobial compound that effectively kills both plant pathogens and beneficial soil microorganisms.

Finally, organic production must

protect marine ecosystems. Promotion and protection of biodiversity and ecosystem health is central to organic production. Marine ecosystems are at risk and the organic community should protect them from further damage.

Thank you.

MR. CHAPMAN: Ashley?

MS. SWAFFAR: I have multiple questions, but I'll just ask the one first about SOEs and oxalic acid.

So, oxalic acid, I share your same viewpoint on we don't have apiary standards, so why are we reviewing those materials?

So, I thank you for putting that comment in there.

And then, on SOEs --

MS. SHISTAR: I'm sorry, I didn't hear you.

MS. SWAFFAR: On SOEs --

MS. SHISTAR: Oh, SOEs.

MS. SWAFFAR: -- you mentioned that, you know, we haven't heard from beekeepers and we

maybe shouldn't relist it because we don't have standards here in the U.S.

Are you aware of anything internationally since the U.S. doesn't produce much honey at all, it's all coming out of Brazil, any -- do you know anything about any of that production in Brazil?

MS. SHISTAR: No.

MS. SWAFFAR: Okay. I might have questions later.

Is that all? Can I go --

MR. CHAPMAN: Sorry, I had Steve, Asa and A-dae.

Steve:

MR. ELA: I support your comments about antibiotic use in agriculture and human use. Is there -- would you just draw the line if there is any human use for an antibiotic that should not be used in agriculture or is there some threshold, I mean, if it's extremely minor use, I guess, yes, we kind of wrestle with these questions that, you know, black and white

sometimes becomes very rigid.

MS. SHISTAR: Well, it's hard to draw a line in a hypothetical situation, right? But, the problem is that any time you use antibiotics, antimicrobials, you're increasing the chance of resistance.

And, we just don't have that many antimicrobials left that can treat human disease. So, you know, it would take a lot to convince me that something needed to be used in agriculture if it was used to treat human disease.

MR. ELA: And, I guess as a follow up, if a, I mean, let's take natamycin which is an antifungal, which could reduce rots and things in fruits which also have human health consequences, for example, patulin and some of those.

Where -- is there any tradeoff there?

MS. SHISTAR: Well, I think you have other options with the fruit. And, as I said, any use of these antimicrobials increases the chance of resistance.

So, even the use in medicine increases

the chance of resistance. So, it's really that's where I think the risk benefit needs to be, you know, needs to take place.

My view is that it doesn't belong in agriculture because the risks are too high.

MR. CHAPMAN: Asa?

MR. BRADMAN: I have a question about AITC. Yesterday, there was a suggestion by a commenter that there may be a use for AITC with nursery stock and that use of it in that setting only might actually reduce the use of harsher conventional pesticides for nursery stock that's produced and then moved into the organic sector.

And, I'm curious if you have any thoughts on that particular use of AITC?

MS. SHISTAR: Well, first of all, I don't think we have any control over what happens in the non-organic sector which is where those things are being grown, where they're being fumigated with those highly toxic materials.

And, adding, you know, adding something to the national list only increases the

risk in organic. It's just not compatible with the way we do things in organic.

MR. BRADMAN: Right, but these are -- sorry, my mic seems to be problematic.

These are plants that are, you're right, they're produced in the non-organic sector and then they're moved into the organic sector.

MS. SHISTAR: Right.

MR. BRADMAN: So, I guess, again, is there a use there that it might actually reduce the use of some harsher conventional pesticides?

MS. SHISTAR: I don't --

MR. BRADMAN: And is that --

MS. SHISTAR: -- see it.

MR. BRADMAN: Okay.

MR. CHAPMAN: Okay, I had A-dae, then we'll to Rick then Ashley and Emily.

MS. ROMERO-BRIONES: So, my question is regards to your comment on Japones peppers under 606.

So, one of the things I struggled with was figuring out how to get information about the

availability of organic supply for some of the materials that are being proposed to be listed under 606.

And, in your comments, you mentioned that we should take a lesson from the experience with hops. Can you just briefly summarize that for me? Because I'm not privy to that.

MS. SHISTAR: Well, the main lesson is that, as long as you're allowing the non-organic product, there's no incentive to develop the market for the organic product.

The hops was a very complicated thing because hops -- because the people who use the hops had to contract with the hop growers and they're contracting for a specific varieties.

But, the -- they worked it out, you know? And, I think the same thing happens with peppers and with just about anything that I can imagine being petitioned for 606 is such a long period between the time that if you approve it, you know, if you were to approve the petition here and now, it's going to take at least a

couple years before they can use them because of all the regulatory process it goes through.

And, peppers are not that hard to grow. Right, Emily? So, it's something that could easily -- there could easily be organic producers that fill that market that fall into the market in that time.

MR. CHAPMAN: Then I had Rick.

DR. GREENWOOD: I had a question. You were very definitive about not using antibiotics in agriculture. But, I wanted to hope that you could clarify that doesn't mean not using them for infected animals?

MS. SHISTAR: Well, what we're -- as I understand the regulations, the regulations require that organic producers treat infected animals --

DR. GREENWOOD: Okay, well I --

MS. SHISTAR: -- but they go out of the organic system.

DR. GREENWOOD: Yes, but I just wanted to make sure that that was clear.

MS. SHISTAR: Yes, yes, yes.

MR. CHAPMAN: Ashley and then Emily?

MS. SWAFFAR: So, everyone's favorite topic is paper pots so I had a question for you.

So, I always look to you and Jay for the conservative voice in the room and --

MS. SHISTAR: And here we are saying that you should have an extension.

MS. SWAFFAR: Yes, I wanted -- because you raised concerns about the adhesives and you guys always raise a lot of concerns and I think they're always well thought out and I appreciated them.

So, why should we have an extension on an item if you have a concern about the adhesive?

MS. SHISTAR: Well, because I read the TR on newspaper and recycled paper and I was, you know, when I read it, I think I said this last time I was up here, we were lobbying for a TR on newspaper because we thought, oh, if all these new inks, it's probably, you know, there's probably new information that make it less, you

know, maybe things are less toxic, maybe the colored inks annotation isn't necessary.

But then, readying the TR, there are so many things that can be in paper. So, you know, and then looking at the petition on the paper pots, it seemed like this is peanuts compared to what is already allowed.

And that -- and it also seemed like the particular -- the adhesives that they're talking about are already in the paper.

So, I, you know, it just -- so, I'm looking at, okay, so what if you can't approve this petition this time. So, what if you approve it the next time, what happens -- well, if you -- if they stop allowing paper pots, then you'd have, you know, people going off and finding some new way of doing things or else threatening their certification and I really don't like that tactic.

But, and then, they come back, you know, and say, okay, you've approved them and then it'll be a couple years before they actually

use them because it won't go on the list.

Okay, but what if you approve an extension here and then you approve -- and you approve something that's on there. If you don't approve it, then people have to go do something else.

But, if you do approve it, after approving the extension then it causes much less disruption and, you know, those people won't have had to go.

And, sure, you would have had, you know, it'll still be time for it to be on -- it'll still be a couple years before it's actually on the national list. But, you probably won't mind proposing another extension at that point since you've already approved the material.

MR. CHAPMAN: Thank you, thank you.

MS. SWAFFAR: Just one word answer follow up. If we were voting on paper pots today, would you say to list or not?

MS. SHISTAR: I couldn't tell you. I think that it's important to look at the

technical review and get all the information. I'm not going to say that they should be approved right now.

I think it's an ingenious system, it's saved a lot of work for a lot of small growers.

MR. CHAPMAN: Thank you.

MS. SHISTAR: So, I hope that it turns out well.

MR. CHAPMAN: Thank you, Terry.

Emily?

MS. OAKLEY: Two follow ups, one to Asa's question about AITC. I mean, I think the question the way you were proposing it was sounding as if we would approve that material in the hope that conventional growers would then use it for products or plants that organic farmers would then buy. Is that what I was hearing?

MR. BRADMAN: No. Well, I mean I guess my hope would be is that there could be a certified organic --

Hello? Is this working now?

MR. CHAPMAN: Yes, we can hear you.

MR. BRADMAN: -- that there could ultimately be a certified organic phyto, you know, sanitation certified product that was produced entirely with less toxic organic methods that can then go into the organic system. It would create a market for that kind of nursery stock.

Not that we would approve something with the idea that, you know, maybe conventional growers would somehow switch out, you know, this material.

MS. OAKLEY: Thanks for that clarification.

And, just to A-dae's point, and I hope my head shaking was clear. I was trying to say that, Japones peppers, capsicum frutescens and it's very easy to grow and I could grow that.

MR. CHAPMAN: Can you also process it into a dried product in a --

MS. OAKLEY: I knew you were going to say that.

MR. CHAPMAN: -- third-party additive

FSMA approved facility?

MS. OAKLEY: I knew you were going to say that, and so, let's carry that discussion over to the Handling Subcommittee section.

MR. CHAPMAN: All right.

I don't see any other questions for you, Terry. Again, thank you for answering our numerous questions.

MS. SHISTAR: Okay.

MR. CHAPMAN: Up next is Jose followed by Laura Batcha.

MR. QUIRCE: Good afternoon, good morning. Good afternoon, my name is Jose Carlos Quirce. I'm here today on behalf of the Ministry of Foreign Trade of Costa Rica, its trade representative in the United States of America.

I would like to thank the National Organic Standards Board for giving us the opportunity today to provide our comments and suggestions regarding the involvement of ethylene gas in the production of organic pineapple.

In addition, I would like to underline

our recommendation of the transparent way in which the United States is conducting this rulemaking process.

I want to take this opportunity to respectfully urge the Board to vote against the exclusion of ethylene gas from the national list and, instead, extend a sunset period for the use of ethylene gas in organic pineapple for an additional five years in accordance with the Organic Foods Production Act.

Costa Rica has been positioned as number one producer and exporter of pineapple in the world with more than 2.2 million tons in 2017.

Pineapples are Costa Rica's second most important products in terms of value and Costa Rica is the main supplier of pineapples in the U.S. market.

Producers of the commodity include 141 exporting companies of which 63 percent represents small and medium sized enterprises.

And, they employ 32,000 workers

according to statistics form 2017.

Pineapple growers provided 85 percent of pineapple imported by U.S. which in 2017 reached $633 million and 976 tons.

In addition, in 2017, organic pineapple represented 21.5 percent of the total organic production in our country. That same year, it was the second most important product in Costa Rica organic production.

Organic producers have 1,875 hectares of certified organic land growing on an average and a rate of 14 percent in yearly basis, taking into account the years 2012 to 2017.

Due to this high productivity levels and efficiencies, Costa Rica has positioned itself in the right place to increase pineapple production from 29 tons to 49 tons per hectares, almost 66 percent increase in the last 25 years.

Costa Rica has decades of genuine commitment to sustainable production from both pineapple growers and organic pineapple growers.

The industry is an important

contributor to the export diversification policy and the development of our country.

A change in worldwide regulations like the use of ethylene in organic pineapple flowering might affect hundreds of people and a good amount of small and medium sized producers.

These producers work hard to differentiate their products and to comply with market requirements while meeting the strictest, most secure safety and health center.

In all this, ethylene gas is a key factor for the production.

Thank you very much.

MR. CHAPMAN: Thank you.

Any questions for Jose?

(No audible response.)

MR. CHAPMAN: Thank you very much.

MR. QUIRCE: Thank you.

MR. CHAPMAN: Up next is Laura followed by Natalie Krout.

MS. BATCHA: Hi, I'm Laura Batcha with the Organic Trade Association and I wanted to

talk to you today about origin of livestock, clarify something around flavors, and if I have time, to talk about the impact to our membership of a shortened period for providing comments on the docket for this meeting.

So, just on the flavors discussion that happened before, clarify that the Organic Trade Association a few years ago submitted a petition to require organic flavors when commercially available, passed by the Board, when to USDA, went through the proposed rule process. We're waiting on a final rule. That petition was in accordance with the 1995 recommendation passed by the Standards Board.

So, I just wanted to make sure everyone and new Board members understood that.

On origin of livestock, we've heard discussions about it here at the meeting in the session and in the hallway. There's really a couple of issues.

One of them is new and one of them is old and I have a request for the Board in regards

to this discussion.

So, the new issue is the sort of what we would consider the revelation of the practice of moving an animal born to an organic mother out of organic production on a certified organic farm and then moving it back in later for a re-transition one animal at a time.

That practice is against our longstanding understanding of how the rule should operate as a trade association.

The old issue was, of course, the two track system and continuous transition that the Board passed six recommendations on between '94 and 2006 for which there was an OIG audit that referenced this issue.

And there was a proposed rule that was released, comments were received and the proposed rule was closed at USDA.

We heard from the program, there are real challenges around taking clarifying action with the underlying rule being the state that it is.

Yet, we don't have the proposed rule moving to final on the unified agenda at USDA.

So, this is a conundrum, you can't get there from here. So, my request to the Board is for you all to consider passing a resolution at this meeting urging the Secretary to move directly to final rule on origin of livestock.

The information is all there, 1,500 comments were received. Five opposed the proposed rule as written and those objections to the proposed rule were on the basis of there being an under supply of milk which we all know is not the situation now.

So, I would respectfully request you consider that as you finish your week out.

On the comment period, I will just say, 13 business days where a membership-based organization. As the leader of the organization, I don't like our positions to be driven by staff thinking in a vacuum.

We reflect the will of our members and we have really good processes about how we review

the comments, we form task forces, we go out we vet a draft comment, then the working group releases the draft comment to the entire membership so that thousands of members have an opportunity to see where we're going with something, provide comment, finalize them, submit them.

That's a lot of process for the team to work through in 13 business days. It limits our ability to give you guys good input from the trade.

Thank you.

MR. CHAPMAN: Questions for Laura? Ashley?

MS. SWAFFAR: So, Laura, we heard from the program and last year from the Secretary about some of the items that this Board has worked on and wants to work on that we should just have the industry do process verified labels.

Does the trade association have any views on adding more labels to products?

MS. BATCHA: So, I think the suggestion of PVP being an alternative route to advance issues is an interesting one and one that we have considered as a trade association and done some sort of strategic work amongst the memberships and sort of, in theory, it might make sense.

What we've run into in engaging with staff at the process verified program through an attempt to do that for transitional certification program and some other ideas is, again, one of these what we're finding ourselves in which are Catch-22's.

So, our thinking on how you might use PVP to advance some of this stuff would be that it would be entirely tethered to organic. And so, you would have to be certified organic first and we would want to utilize the existing ACAs as the verification arm for whatever this additional layer was.

The feedback that we've gotten most recently from the process verified program is

they don't think they can allow cabining and tethering to the organic standards and the exclusive use of the organic ACAs.

So, we're getting two different conflicting suggestions about how that path forward might be an option for us just because, quite frankly, we're the Organic Trade Association, we're not interested in a process verified claim in a vacuum that isn't tied exclusively to organic as the base.

MR. CHAPMAN: Dan?

DR. SEITZ: I didn't quite understand the point you made about flavors. Are you saying that the Board has, and if you can refresh my memory, that the Board has already put out a recommendation that that language be adopted, that you must use organic flavors and may only use others if organic is not available and that hasn't yet been acted on?

MS. BATCHA: Yes, so I'll do my best to clarify. I think most of you that know our team at OTA know that I am certainly not the

flavor expert and Gwendolyn is. But, I know enough to I think answer your question.

So, the Organic Trade Association petitioned for the change in the listing of natural flavors as a nonsynthetic, nonagricultural allowed ingredient.

And, our petition called for there to be an annotation to that listing requiring that organic be used when available which was consistent with what NOSB did back in 1995.

That petition went through the process, to the Board, approved the petition, back to USDA. USDA has released the proposed rule, received comments on proposed rules, closed. We're waiting on a final rule.

We don't have any indication to think that the final rule is stalled in any way. But, I just wanted to make sure that the folks on the Board understood that the issue came through the process. You guys made a recommendation and action has happened.

Does that help?

DR. SEITZ: It helps a lot. Thanks.

MR. CHAPMAN: Paul, can you at all speak to the status of that proposed rule?

DR. LEWIS: Sure, thank you, Tom.

So, I think Dr. Tucker mentioned this during her opening remarks because we have a number of National List rules that are going through the clearance process. It's really hard in terms to make an estimation for the Board and for the public as to when that will go through clearance.

Clearance goes through a number of levels. So, we appreciate peoples patience as we go through reviewing the public comments and, more important in terms of just, importantly, going through the clearance process in the Department.

MR. CHAPMAN: Would it be fair to say it's being actively worked on?

DR. LEWIS: Yes, I would say it's actively worked on and obviously, briefing leadership in the Department in terms of how to

move forward on this.

Thank you.

MR. CHAPMAN: Any other questions for Laura?

Laura, in terms -- I have a quick one on the comment piece. If we were to piecemeal our proposals out, would that meet the needs of the Trade Association to get feedback from its membership? What other suggestions do you have?

There's clearly -- there was some -- I'm not sure if you were here earlier, there was some explanation of the tradeoff between Board time to work on stuff, NOP clearance times and then the amount of time the public has.

What's your suggestions that we --

MS. BATCHA: Yes, so I completely recognize that everybody needs more time in the system and certainly don't disagree with the outline of how long it takes to move something through USDA and the time it takes you guys to get to a recommendation.

I think asynchronously posting them as

final recommendations, from my perspective, would be a preferred route to posting drafts because I think it's just really hard to get to the heart of the matter in a membership organization when you're having a conversation about something that may change by the time it gets posted.

So, I think I, from a workflow and getting really good feedback for the Board would prefer to see them posted one at a time as they get finalized.

MR. CHAPMAN: Thank you.

MS. BATCHA: Thank you.

MR. CHAPMAN: Thank you, Laura.

Up next is Natalie followed by Keith Lindsey.

MS. KROUT-GREENBERG: Great. Good afternoon, my name is Natalie Krout-Greenberg. I am the Director of Inspection Services at the California Department of Food and Agriculture.

I'd like to extend a welcome to the two new NOSB Board members, Dr. Greenwood and Mr. Schwartz from California.

The Inspection Services Division provides inspection and enforcement oversight to agriculture commodities in California and specific to this audience, Inspection Services houses both the California organic input materials program and the California State Organic program.

Since Dr. Dale Woods already covered specific areas to the OIM program yesterday, my comments will be focused on the SOP and reflect the work being done relative to the Pasture Rule as well as imported grain products.

California Organic Foods Act of 1979 established the state organic program. And, in 2003, the Act was written to conform with the NOP standards.

And then, 2016, it was recast as the California Organic Food and Farming Act.

Some numbers for a perspective, California accounts for more that 40 percent of all organic products sold in the U.S. and the state has 1.7 million acres in organic

production.

This past fiscal year, the state organic program registered over 4,200 organic operations in California who process nearly 2,000 cost share applications reimbursing just over $1.1 million, handled over a 100 complaints, conducted over 1,400 inspections.

And, during the past three years, the SOP obtained 883 organic samples and analyzed them for pesticide residues of which approximately 4 percent of the surveillance samples were found positive.

We have seven state staff dedicated to organic program, five of which do enforcement work solely. And, we hold contracts with 53 counties who perform work on inspections on behalf of the state organic program for CDFA.

The California Organic Product Advisory Committee, or COPAC, makes recommendations to the SOP and the California Secretary of Agriculture.

Through public comment and at our

COPAC meetings, the complaint process and meetings with organic dairy industry, we have heard concerns associated with enforcement of the pasture rule as well as imported grain products.

First, regarding enforcement of the pasture rule, there are 85 registered dairy operations in California. Our team has been working closely with the industry to understand the issues and with our partners at the NOP and certifiers in the state to address the voiced concerns.

This is an organic enforcement priority in our state.

Second, regarding imported products, California is an 86 percent grain deficit state. We receive grain by ship, rail and truck in order to feed the state's livestock population.

The SOP continues to work closely with our state mandated feed inspection program and federal partners to provide surveillance to the products coming through our California borders.

We continue to collaborate with the

NOP and I want to thank Dr. Tucker and her team for help addressing these concerns.

And, finally, I appreciate your time as NOSB members and your dedication to that.

I'd be happy to answer any questions. Thank you.

MR. CHAPMAN: Thank you.

Any questions? I know I have a question.

Okay, I will go then. So, first of all, thank you for speaking. I want to recognize as one of the four Californians on this Board. And, as people know, any chance I have to brag about California.

There's five? Did I miss someone? Who'd I miss? No, there's four of us. Yes, four Californians.

I always take a chance to brag about California. I really want to recognize the State of California, particularly the CDFA program for its contribution to organic integrity and enforcement, with the programs you outlined and

the stats you just outlined show the large share of the burden that the State of California takes up.

And, it should be recognized that that then frees up federal resources for enforcement integrity activities elsewhere throughout the nation.

And, that doesn't come free, that comes out of costs the California organic producers and handlers who then through fees assessed on them fund that state organic program.

And I'm hoping California can, through a course of dialogue, share some of its best practices its learned in its enforcement program, particularly its surveillance program.

As an organic consumer, I'm always heartened when I go to my farmers' market and see a CDFA inspector checking organic certificates at the market. And I think I spook them when I thank them for that activity.

But, it's heartening to see it actually happening out there and seeing that

enforcement at all levels of the supply chain beyond, you know, big operators as well as grain like you spoke about, also though down to that farmers' market level.

And then, my question for you, if you're prepared to answer it was the share kind of where are your enforcement challenges and what role you would see the NOSB in playing in that arena.

MS. KROUT-GREENBERG: Okay, so, to your first point, Tom, and thank you for those comments to the state organic program.

So, for your first point as far as relative to our enforcement surveillance work, you did mention farmers' markets.

So, one of the unique things about Inspection Services Division, we house three particular branches.

One is our Center for Analytical Chemistry which does all of our enforcement work tied to analysis.

The other is our Feed Fertilizer

Livestock Drugs program which Dale is a part of.

And then, we have our Inspection and Compliance Branch. So, that houses organic and houses direct marketing and houses our food safety program that's handling all things FSMA related.

So, with that, you mentioned, we go to farmers' markets, but we have contracts with DPR, Department of Pesticide Regulations, tied to our chemistry lab. And, when they are out also exploring markets whether it's a farmers' market or whether in a retail operation, they share that organic data with us as well.

And so, leveraging that, leveraging our feed partners, we're able to have surveillance arms in multiple facets throughout and across the division.

Regarding challenges, I think we've seen probably some of the biggest challenges surface within the most recent 12 months to 18 months.

And, for us, it was visibility into

our ports of entry. California has 11 ports of entry. And, just when you have borders and our that much of a grain deficit state, understanding and knowing what's coming into those ports was a challenge.

We work closely in our relationship with the Food and Drug Administration as well as our partners at USDA.

But, just having that visibility into those database systems and how it was working was probably the biggest challenge as of late and it continues to be.

And so, that's, I guess, one thing that I have continually been working with our partners at the NOP to have that added visibility as well as our state partners in the feed inspection program because they do have a strong relationship with FDA in that sense as well, just from a food safety perspective.

But, that, when you marry those pieces all together, it gives you added value in that surveillance program.

MR. CHAPMAN: Thank you. Thank you very much for your comments.

MS. KROUT-GREENBERG: Thank you.

MR. CHAPMAN: Up next is Keith Lindsey followed by Dolana Blount.

Keith? Keith, going once? Keith going twice? All right, no Keith.

Dolana Blount, are you here? I think you are.

If you could start with your name and affiliation? After Dolana is Alesia Bock.

MS. BLOUNT: Thank you.

My name is Dolana Blount, I with PURE Bioscience, the petitioner for silver dihydrogen citrate.

I thank you for the opportunity to present you with additional comments in support of its listing on the national list.

The need for SDC is especially important in organic and conventional processing and production. SDC based products like pure hard surface disinfectant sanitizer and pure

control processing aid enhance food safety practices and support processors in meeting robust food safety programs.

Produce processing which, to date, has not seen a processing kill stip available will especially benefit from SDC.

Several food industry leaders consultants and our customers including the leading produce processor have already shared their support for SDC in the written comments.

SDC is a molecular complex of ionic silver weakly bound to a citrate ion. Citric acid supports the ion in solution and assist entry into the bacterial cell. This is not nanotechnology and it does not meet the most standard recognized definitions of nanotechnology.

When formulated for use, SDC solutions are 95 percent water with silver present only at .003 to .016 percent.

Ionic silver is strongly attracted to sulfidal groups which are found in structural and

functional components of an organism and will bind to those complexes while silver ions are taken into an organism by the citrate.

This dual mode of action results in rapid efficacy while mitigating resistance.

After use, any remaining silver and bacterial waste will be transported into the facility's waste water treatment system.

SDC is used in facilities that have either onsite waste water treatment that discharge to publically owned treatment works or the discharge to surface waters under the appropriate EPA or state permit.

Here, they will be met with concentrations of organic matter and other compounds, primarily sulfides and be rendered inert.

Only insoluble silver salts and very minor amounts of silver ion, if any, are expected to survive the water treatment process in the facility.

In the sludge, silver concentrations

are estimated to be approximately 20 fold lower than the level required disposal as a toxic waste and any silver that can remain in the water has a final estimated environmental concentration which is below the EPA's national recommended water quality criteria for aquatic life.

This is even under worst case assumptions of use.

Through our registrations with USEPA and FDA, the human and environmental exposures have been already thoroughly evaluated and considered safe.

And finally, while we recognize what you are trying to accomplish by adding the particle size restriction to the listing, we feel strongly that this misrepresents the petition substance.

There are no particles in SDC so this disclaimer is confusing and will require users of SDC based products to continually prove that this irrelevant criterion is met.

We feel confident that SDC will be a

positive addition for organic processors and a good addition to the national list.

Thank you for your time and for all of your efforts in the organic program.

MR. CHAPMAN: Thank you.

I think I'll start with one question and then we can have Steve and maybe we'll actually start with two.

So, I want to talk about the nano or ask about the nano pieces that you talked on there. Because we received several public comments about saying that this is nanotechnology and I just kind of want to get to the root of that.

Correct me if I'm right in the understanding of your logic. This is not a nano material because it's less than one nanometers and it's not specifically engineered for its size?

MS. BLOUNT: Certainly, yes. It is simply ionic silver, so it's atomic in scale. There's silver atoms with citrate ions.

Nanoparticles are clusters of silver that are then compounded and capped in order to prevent aggregation. They are maneuvered to not act the way or be the way that a silver ion is in nature.

Ours is a silver salt really no different than a silver nitrate which is a balance of ionic silver in an organic solution.

MR. CHAPMAN: Okay.

We heard from a commenter yesterday about fear of using this and I guess there's EPA restriction about municipalities being notified about waste water containing silver.

And the fear that this would be used in locations not on municipal water.

Do you have any thoughts or comments on that?

MS. BLOUNT: So, the people -- I don't have knowledge of facilities that aren't required to report. The facilities that would use our product either have, you know, waste water treatment facilities in house where what the 95

percent, 94 percent of the silver that would be used in our worst case assumptions go to the sludge. Any remaining would be in the water, as I reported before.

Those then send out to a publically owned water treatment and they would still have to notify to them if silver was at a level above the EPA concentrations.

It's only facilities that then directly export to waters that would have to go under a state permit or an EPA permit.

MR. CHAPMAN: I guess that's slightly different. Would a use of this material -- would it be a potential use of this material to wash produce in the field --

MS. BLOUNT: No, it is not.

MR. CHAPMAN: -- directly after harvest?

MS. BLOUNT: No, it is a post-harvest -- it's a processing aid when it's used directly on produce. It's used within processing facilities by definition. It is not a harvest

use at all.

MR. CHAPMAN: Thank you.

Steve?

MR. ELA: I guess following up on that a little bit, but I mean, you're talking about approved waste water facilities and municipalities.

I mean, for example, our own processing plant, we're on septic system. We don't have a municipal sewer system.

So, I'm, you know, I didn't see like as we were talking about this that we needed to annotate it for only for use in processing plants attached with municipal water systems. That really hadn't come up until this discussion.

So, how do we -- I mean, is a septic system what you're calling an approved -- I mean, that's -- our county approves that, but it's not really fitting your definition of what you're defining.

MS. BLOUNT: My comments were simply to help you understand that there's two levels of

regulation for the silver's fate in the end and that primarily the plants that we deal with and the produce processors or the food processors, they don't have to just be produce processors, typically have onsite waste water treatment.

In certain areas, we've dealt with poultry processors in investigative use where they may, instead of going to a publically owned work, they may discharge straight to water just because their volumes are so small. But that is under permit.

So, I'm sorry if I'm not understanding your question.

MS. ELA: Well, I mean so a septic system is somewhere in between the two. It's not straight discharge to water because it goes through a leech field and such. But, yet, it's sort of is.

And, I think, I mean, in somebody hearing we've got a product that now you're saying you only sell to these big processors, but when we put it on the list, that doesn't limit it

to the big processors.

And, I mean, we have to think of the generic broad based, you know, what could happen. And so, how do -- I mean, I'm hearing we need to annotate it much more tightly for who can use it and who can't.

MS. BLOUNT: And, I didn't mean to intimate that we only sell to large processors. The evaluations through the environmental impact statement that the FDA made for our -- for the use as a direct food application as a processing aid took into account what happens to that silver waste down the streamline.

I highlighted for you the largest ways. I'm not a waste water expert so I don't want to make statements that I can't support other than the fact that the EPA has determined the use as a surface disinfectant and sanitizer and the silver that would end up into waterways through any disposal was not of concern based on their evaluation as well as the FDA's environmental impact statement which is part of

the FCN also made that conclusion.

MR. ELA: So, would a septic system be okay or not?

MS. BLOUNT: Well, so what I know of our product is it is ionic silver which is highly reactive with organic matter. So, when you hit a septic system, it's going to make all of that silver inert. You essentially have an inert form of silver, but it's not going to disrupt that system.

MR. ELA: And then, when that tank's pump, you can get notify -- I mean, if it's in the sludge, because you pump septic tanks you then need to notify the municipality that sludge goes to?

MS. BLOUNT: I don't have an answer, I'm sorry.

MR. CHAPMAN: I've got two follow ups, maybe easier, maybe not.

I understand that it's use in relation to fruits and vegetables excludes citrus and grapes for wine making. Do you know why those

two crops were excluded?

MS. BLOUNT: Sure. When we were going forward, we were looking at the exposure allowance that the FDA had. We also didn't feel that grapes and citrus were a big market for us or a big need for an antimicrobial processing aid. It just wasn't something that we felt was necessary that we needed to fight for.

MR. CHAPMAN: Would something with those crops lead to a greater exposure?

MS. BLOUNT: No, the exposures were when you do an FCN you say, what are you treating? And, what is, you know, the human eating habits and exposures based on that?

What we found in uses that relatively no silver is left on the food after it's treated. When it runs through the processing process, per se, but when you're using a modeled system in order to do this, they have weighted averages based on consumption practices of people.

And, that was just some place where we felt that it might take us over a comfortable

limit that the FDA might find concerning. So, we didn't include it.

MR. CHAPMAN: Okay. And then, we've heard lots of comments about the use of silver in medical uses and concerns around, you know, microbial resistance.

Have you heard concerns about this from medical associations, from CDC or other similar regulatory agencies about microbial resistance and the use of this material in agriculture or in food production?

MS. BLOUNT: I have heard none. I have heard the comments, you know, that were presented here to this group, but I have not heard specifically, nor has our company heard those same comments.

I think that Mark Farina shared comments in webinars with you about microbial resistance and why that's low. Silver has such a broad spectrum of action that it's different than an antibiotic which you take and you ingest and typically are made to have very specific targets

in order to kill microbes that makes an easier way for them to grow resistance but with a broad spectrum, silver ions work on the outside of the cell, on the inside of the cell.

With SDC, and let me back up, that resistance that they see against silver is simply in a transient mechanism where when silver is present, the cell is able to try to pump the silver out of the cell to mitigate the damage.

That costs the cell a lot of energy. It's not sustainable.

So, with SDC, the beauty is that the citrate hides the silver. It's able to get on the inside before it's really recognized, before that mechanism is established and it's already killed the microorganism before that pumping action really takes place.

MR. CHAPMAN: Thank you. I think that's all the questions, thank you very much.

Up next, Alesia Bock and then up last is Marty Mesh.

MS. BOCK: Hi, I'm Alesia Bock. I'm

with AgriSystems International Consulting Group for organic clients.

However, today I'm commenting on my own behalf. After hearing some comments today, I felt the need to provide some information to the Board for your consideration.

As a food professional, I've been in the food industry as a quality and R&D professional for almost 30 years and I've been in the organic industry for about 20 years.

And, just some comments regarding what you might have heard today. First of all, I wanted to say xanthan gum, while you might have heard that it's not grass, there's some grass information you can self-grass.

However, xanthan gum is listed in FDA Part 172 of 21 CFR Subpart G as a food additive directly approved for human consumptions. So, xanthan gum is already listed as approved for human consumption.

And, xanthan gum is considered by processors to be an ingredient and as needing to

be labeled as such. It's not considered a processing aid or adjuvant. If it's functioning in the finished product, it must be labeled as an ingredient not a processing aid.

Number two, even if gums such as xanthan gum are from microbial fermentations from soy, corn or wheat, FDA labeling indicates whether the final ingredient is considered an allergen.

Obviously, corn, soy and wheat are allergens. However, gums in this case are non-allergenic.

In the case of natural flavors, while I appreciate the need to develop organic flavors and potentially take the category of natural flavors and make them more specific like we did with colors several years ago, I wanted to mention that handlers who use natural flavors, even if they're not organic, must fill out a supplier affidavit from their certifier.

And I know because we've done it many times back before I was a consultant, I worked in

the food industry. We had to show that those ingredients were not processed using GMO, irradiation or any other prohibited methods.

And, some of these flavor affidavits are about three to four pages long. So, they're very in depth.

So, to state that these flavors may be from genetic processing for use for organic is incorrect.

Finally, and I think I need to channel John who used to always be last in the public comments to increase or maintain the toolbox for processors, I normally deal with handling comments, but for today, I would like to mention that ethylene for farmers, especially organic pineapple farmers, my personal opinion, based on what I heard today, ethylene's been on the list and it's been through Boards several times.

It's been sunsetted many times and stays on the list for a reason. And, for those who are using it for organic pineapple farming, even though your marketing, NOSB doesn't take

into account the market necessarily for commercial availability, they I think please consider keeping it in the toolbox because converting conventional land to organic, even in the case of pineapples in Costa Rica, I think would be a good thing for the organic industry and consumers.

Thank you for your time.

MR. CHAPMAN: Thank you.

Questions?

(No audible response.)

MR. CHAPMAN: Thank you.

(Off microphone comments.)

MR. CHAPMAN: All right, up last is Marty Mesh.

MR. MESH: Marty Mesh with Bellevue Gardens Organic Farm, that's the affiliation and that's how I'm here as well as personal comments.

For the new Board members, welcome and I started my journey in 1972 as a farm worker in conventional agriculture, in '73 I started growing organic personally.

In '76 I started Bellevue Gardens Organic Farm and we shipped a lot of semis of watermelons to California.

In '87, I helped start Florida Organic Growers and our certification program now known as Quality Certification Services as well as the nonprofit doing education, advocacy, working on improving food systems, social justice and policy.

I've worked on probably six farm bills and gotten some tucked in organic certification cost share in farm bills in the past and other things and we're working on getting, obviously, more money for organic research in it which the research will come in.

I'm no longer employed by FOG and QCS but the passion is never going to go away. This is what I've been doing for decades and I'm not stopping now to try to leave the planet better than how I found it, and leave farm land, my soil, better than how I first got it when I inherited it.

So, thanks to the National Organic Program and the NOSB for their good work. I served on the Board for two meetings in the rotating certifier regimen before accreditation of the first round.

I echo the comments on the national list on the toolbox. You know, I was probably helped be responsible for ethylene in the beginning and I've helped keep it that way.

And, I -- really, I mean, if you look at conventional pineapple production and what the small use of ethylene does, i.e., if you look at fatty alcohol, whatever it is, you know, and what that does for people that smoke cigarettes or, you know, being able to choose organic tobacco and the farm workers and farmers that are exposed to all the poisons and stuff, I mean, I've got to say, you know then go after petroleum distill -- the petroleum dormant oil.

You know, if you're going to take everything out of the toolbox, then go after petroleum dormant oil and see how that works out

for the fruit growers.

So, you know, the cotton delinting issue that I begged the Board to continue with, that resulted in Farm Aid moving all their cotton to certified organic cotton.

So, the difference in acreage on just a little material is really substantial.

Michael's comments on tying it to research I thought was helpful and, in fact, you know folks, you know, that I was involved in trying to get an industry wide check off and now we're moving towards a voluntary check off because USDA didn't go to referendum with the check off vote.

But, a voluntary check off we hope everybody will be involved in and we'll have public comment opportunity out the first week of November I believe.

In 1996, I begged against the listing of sodium nitrate. And, I'm passionate -- ah, shit, man. You know, I do have got a couple -- I do have a couple other comments if there's a

question on it, I could give it to you.

MR. CHAPMAN: All right, we'll look around. I've got myself first and then --

MR. MESH: And then, I did have deferred time --

MR. CHAPMAN: Hold on, hold on, I've got a question for you, Marty, first and then we'll see if anyone else has a question for you.

I was wondering if you could comment on whether or not you thought Scott's beard was compliant with the system of organic agriculture?

(Laughter.)

MR. MESH: Yes, I'm not going to -- I'm not going there. I had to trim up and shape up, but I think it's fine.

MR. CHAPMAN: Do you want to wrap up real briefly?

MR. MESH: The seaweed part, as somebody that took their daughter to watch whales when I was working on the Farm Bill in August in policy meetings, and had her and a three-year-old come back and say, dad, you know, the orcas

aren't there because there's no salmon because of the habitat destruction.

So, I really applaud the effort to look at the sustainability of wild crop harvesting of seaweed and applaud that process.

And then, I also echo Laura made the point about a longer comment period. You know, I will try to provide comments and submit comments, but we need more time to do so.

MR. CHAPMAN: Thank you, Marty.

MR. MESH: And then, also then the last thing, I didn't say was that I support the continuing improvement of organic seed as a farmer that saves seeds for decades and still do, but you know, that continuing improvement process to try to help get more viable seed opportunities for organic farmers to utilize.

MR. CHAPMAN: Thank you, thank you, Marty.

Any other questions for Marty? Anything beard related?

(Laughter.)

MR. CHAPMAN: Okay, thank you very much, Marty.

MR. MESH: Well, the last thing between me and lunch or you and lunch, so and then, I'm missing a hoodie and I'm from Florida so, it's really cold. If there's a hoodie that somebody finds it's somewhere in this building.

(Laughter.)

MR. CHAPMAN: All right. If you find a missing hoodie, you can bring it to us and we'll get it to Marty.

Yes, Asa?

MR. BRADMAN: (off microphone comments) I just wanted to thank you for your comments and the spirit that you bring to the Board and the conversation here.

And, I just want to give you a shout out and some applause.

(Applause.)

MR. MESH: Now Emily's going to take it all back.

MR. CHAPMAN: Emily?

MS. OAKLEY: This is actually just a comment to all stakeholders that before I joined the NOSB I didn't follow this process very closely. And, everyone always comes up and thanks us for all the work that we do. But, I also thank you for all the time that you take to read all those materials and to provide us with important comments that help us in our work. So, thank you for what you do.

(Applause.)

MR. CHAPMAN: All right, it's 12:52 and we have concluded public comment. I want to thank all the commenters, particularly as mentioned earlier, the delegation that came all the way from Costa Rica.

Public comment is vital in this reaching all communities, be it handlers or small farmers and everyone in between. It is vitally important to this process and it's extremely difficult to do that and I really thank folks that go above and beyond to get the message out and get those comments back to us.

So, thank you very much and we appreciate everything. And, I think Jenny wants to say something as well.

DR. TUCKER: And, I want to thank you, you facilitated that beautifully. There's a lot going on with these public comments and to stay as focused and on point is hard. And so, thank you very, very much.

MR. CHAPMAN: Thank you.

(Applause.)

MR. CHAPMAN: All right, it's still 12:52, so we will break until let's call it 2:15. But we're starting right at 2:15 so no wandering in at like 2:20, 2:25, 2:15 we'll start back up with the Materials Subcommittee.

(Whereupon, the above-entitled matter went off the record at 12:53 p.m. and resumed at 2:21 p.m.)

MR. CHAPMAN: We've got all Board members present so we'll come back into order.

And first up on our agenda today is Materials. Once concluded, we will either move

on to CACS or take a break and then move on to CACS. And, if time allows, we will get started with the Livestock Subcommittee.

So at this time, I'm going to hand the meeting over to the Materials Subcommittee Chair, Harriet.

MS. BEHAR: Hope everyone had a good lunch and is fortified.

Okay, so the first thing I wanted to do is just give you an update on the sanitizer work agenda item. And that is we are moving forward with that.

I actually did visit the Ecolab research and development facility on my way up here and made some very good contacts and helping us kind of coalesce into exactly how we're going to do this comprehensive review, what our goals are. And we do have, of course, obviously, the Organic Food Production Act that we are based upon.

But to just to let all of you who did mention in public comment about the sanitizer

work agenda item that it is not languishing. I won't guarantee that anything will be coming forward at the next meeting, but we are definitely moving forward.

So first on our agenda we do have four items in the -- in the Materials Subcommittee research priorities, genetic integrity of seed, excluded methods and -- what's our fourth item? The marine materials.

So I will be basically the sandwich in between the two pieces of bread of Emily. And so we'll start out with research priorities and Emily.

MS. OAKLEY: All right, this will be a shorter piece of bread. So this is a portion of the NOSB's tasks that have been going on since 2012, and we thank the stakeholders for their comments on these priorities.

For those who may not be familiar, the Livestock, Crops, Handling and Materials Subcommittees submit their priorities. Over the past couple of years, we've worked on

prioritizing previous years' priorities, taking some items off that may not be as important or as significant at the current time and then addressing any new priorities that have come up.

So as stakeholders present comments to us for new materials or new research topics, we do take those into consideration. We track them through both the spring and fall meetings, written comments and oral, take them back in each Subcommittee and discuss them. And then additional topics that come up to individual members are also discussed.

So I won't review in too much detail those criteria, but they are listed in the proposal. So what I want to do is just discuss those areas that were most significantly addressed by public comment.

So in the Livestock Subcommittee, the evaluation of methionine in the context of a system approach in organic poultry production received a significant amount of feedback. And one commenter also suggested that we address the

issue that the FDA has now recommended black soldier fly larvae as a poultry feed input and that the Livestock Subcommittee consider requesting a TR on this material as a natural alternative to methionine.

Another issue in livestock that also received more attention than others was the organic livestock breeding, especially for outdoor access. One commenter pointed to the University of Guelph's research in this subject.

In Crops we did receive, as we have for the past several years, quite a bit of feedback on the biodegradable biobased mulch film topic. A number of stakeholders across the spectrum wrote in about that.

The organic no-till also did receive quite a bit of comment, and we did receive a comment to include expanding the scope of this as to whether or not this topic might increase opportunities for carbon sequestration on organic farms.

We heard a little bit less about some

of the other subjects but did hear a little bit about the disease management, management and control of invasive insects, nutrition in organic crops. And then we did hear some comment on the side-by-side organic input trials that came actually directly from the Crops Subcommittee itself rather than through public comment.

Just a caution that we not consider the results from side-by-side trials as sufficient on their own for making policy decisions on the national list.

In Handling, celery got some attention, and alternatives to BPA got quite a bit of comment. And I know that that's not an active -- BPA is no longer an active item on the Handling Subcommittee, but it is important to note through public comment that there is quite a bit of interest still within the stakeholder community on this subject and adding -- how do you pronounce that word -- phthalates, thank you, to this work agenda item -- or this, sorry, this research priority as well, so asking for research

on that subject as well.

Materials, I think the greatest amount of comment came in the integrity of breeding lines and ways of mitigating small amounts of unwanted genetic material, prevention of GMO crop contamination, and the evaluation of effectiveness.

In terms of new topics that have come up, we heard about increasing the focus or specificity on soil health, climate change, pathogen prevention, specifically in terms of raw manure intervals that are needed to prevent pathogens, alternatives to fatty alcohols, we've obviously heard that here in this meeting, and it was also in written comments. And then, of course, we heard today, covered agriculture and ecological farmscape practices.

I think one thing that wasn't actually mentioned as a specific research priority but came out through some of the public comments from land owners in Maine might be alternatives to some of the seaweed materials. There were

definitely comments that alluded to the fact that there are a lot of materials available for input fertilities for organic producers and evaluating maybe the effectiveness of some of the rock weed or kelp materials when other materials might be available.

Are there any questions or comments or additions, things I might have missed?

All right, I am done.

DR. LEWIS: Harriet, can I make a few remarks? Thank you. So I want to, again, thank the Material Subcommittee for working on this issue. Let me just make a few remarks about the research priorities in terms of what we do next with this.

So when we get the final document, we'll be sharing this with the National Institute of Food and Agriculture to help them in terms of strategizing, providing direction in terms of research funding, and one of the recommendations that you addressed was for control of fire blight.

And recently -- the NIFA recently announced 25 grants that support farmers and ranchers grow and market high-quality organic food, fiber, and other products through the Organic Agriculture Research and Extension Initiative and their Organic Transitions Program. One of the grants that they are funding is optimization of a bacteriophage for managing a fire blight disease. So I just want to at least let you know that in terms of information that you provide for them helps them in terms of their funding, so you can see a direct relation with them.

Also appreciate, in terms of one of the -- one of the research priorities dealing with biodegradable biobased mulch. So this is something that we're also going to be looking at as a program, so thank you for raising that and drawing attention also to the public comments that came in in that area.

MS. OAKLEY: Harriet, if I may, one more comment. Within the last couple of years

we've included the Executive Summary that is largely the document that many people read. They don't read this whole longer discussion of each research priority when the program is presenting this to NIFA and others.

We've also discussed on the subcommittee ways of expanding access to these priorities within the academic research community and will be discussing that further in terms of steps that we might take to help increase that.

VICE CHAIR BEHAR: And I want to thank the Program for doing the advocacy work and to the other -- to the research -- the place where the money resides for research --

DR. LEWIS: Thank you.

VICE CHAIR BEHAR: -- and bringing that forward for us. We appreciate that.

DR. LEWIS: You're welcome. Thank you.

VICE CHAIR BEHAR: Tom?

CHAIRMAN CHAPMAN: Yes, two things. One, really appreciate the Program sharing that

and all the work on this item. Sometimes, sometimes I feel like we make recommendations and they just go into a black hole. But with these research priorities, like it's great to see that we're setting some priorities, the Program has taken it internally, and funding and other direction is being sent out from that point forward. It's really great to see the influence and the process working here, and this is just -- reiterates the strong public/private partnership that the NOSB is meant to facilitate. So I'm happy about that.

My other just general comment to people in the audience that are still here is we got a lot of great comments for our research ideas at the fall meeting, which I think we're open to receive great comments on research ideas anywhere, anytime, anyplace.

But the most effective location for that is the spring meeting, so if we receive it at the spring meeting, we can review it at the subcommittee level and then bring it forward in

the fall. We always publish this in the fall, and so just the spring meeting is a bit more timely.

We'll take all the comments, and we'll review it, but you won't see this document again until the 2019 Research Priorities, so getting that in the spring or in the open docket is really the best way to get it timely added to the research priorities.

VICE CHAIR BEHAR: Are there any other comments? Well at this time I -- oh, Steve?

MR. ELA: Well, I just wanted -- from what you just said, Tom, I think one of the problems we have in the spring is we don't actually put the research priorities out there, so there's not anything to respond to.

So I wonder if it would be a good idea on the spring docket just to publish this list again as we put those things out in the packet so people can say oh, this was your list. They can respond and give us feedback of what we should add, and then we can do the updated list in the

fall.

CHAIRMAN CHAPMAN: That's a great idea. I hope the future Materials chair and lead on this item will take that forward.

MS. OAKLEY: And that is a great idea. The only trouble with that idea is that it's sometimes like herding cats to get everybody to have the time to address research priorities within their subcommittees. So we could publish the previous year's, but we would need to make clear that they are not the current year's finalized version.

MR. ELA: Yeah, I would just suggest we publish the one we have now and say this was last year's, what should we add or take away. So we get public comment ahead of when we're trying to finalize it.

VICE CHAIR BEHAR: I think we want to facilitate as much public input as we can. Anyone else? Okay, at this time I will entertain a motion to -- well, Emily, would you like to --

CHAIRMAN CHAPMAN: There's already a

motion.

VICE CHAIR BEHAR: So we're ready to vote?

CHAIRMAN CHAPMAN: Yes, if there's no more discussion. Seeing no more discussion, I think we can move to a vote. So this comes as a seconded motion from the subcommittee. The motion was made by Emily, and it was seconded by myself. And the motion was to adopt the document, which was the 2018 Research Priorities, which is in the agenda that has been previously distributed.

Voting will start with Emily and will proceed around the room. This is our first vote, so I'm going to spend a little time explaining it. We've got some new members, and it's been a while.

We're going to proceed around the room in order, so starting with Emily, Sue, and then so on. You'll say your vote. The options are yes, no, abstain. Recuse is also an option, but we would have expected recusals at this point.

So yes, no, and abstain, and we'll go around the room. Just a note that it switches each time you vote, so the next item we vote on, Sue would start, and it loops around the room, and the Chair always votes last.

So on this motion, a yes vote is to adopt the proposal, a no vote is to fail the proposal, and the voting starts with Emily.

MS. OAKLEY: Yes.

MS. BAIRD: Yes.

MR. BUIE: Yes.

MS. SWAFFAR: Yes.

MR. RICE: Yes.

VICE CHAIR BEHAR: Yes.

DR. SEITZ: Yes.

MR. MORTENSEN: Yes.

MR. ELA: Yes.

MR. BRADMAN: Yes.

DR. GREENWOOD: Yes.

MS. DE LIMA: Yes.

MR. SCHWARTZ: Yes.

MS. ROMERO-BRIONES: Yes.

CHAIRMAN CHAPMAN: Chair votes yes. Fifteen yes, the motion passes. Harriet, back to you.

VICE CHAIR BEHAR: Okay. The next item is the complicated title of Genetic Integrity Transparency of Seed Grown on Organic Land. This document grew out of what we've been calling Seed Purity for the previous about five documents, and Dan Seitz and Dave Mortensen were my partners on the development of this fairly complicated document.

The fact that the docket was late in coming out -- many commenters who gave excellent comments also mentioned that they felt they could have been more thoughtful and probably give even further comments if it went back to subcommittee, and so we on the subcommittee have decided to do that. So we will be bringing it back to subcommittee.

However, this is your chance. So we would like to give you until December 7th, that's a Friday, to give us comments on the document as

it currently exists. So for those of you who felt that you did not get enough time to give us information, we're not going to give you something new to look at, but you can kind of take a second shot at what we gave you this time around, and then we will bring something forward at the spring meeting.

With that said, I do want to kind of go over some of the points that were in the document to kind of let you know what we've heard and what we think we might head forward with and give you some idea of maybe what you want to comment in the future.

I want to thank everyone for the almost universal support for the direction that this proposal has taken. It is somewhat different from what we have put forward in the past. It's a difficult issue, and the Materials Subcommittee appreciated all the suggestions, and especially the agreement that this was a good first step.

This proposal is meant to aid organic

farmers in their choices in seed. There's a growing number of non-GMO farmers who may also need this information. So there are farmers who are not organic who are growing into the non-GMO market who need to know, as well, what is the genetic contamination of the seed that they are using.

As just a personal interest, this spring when I came to Washington, D.C. for the OTA fly-in, a group of us visited the new Risk Management Agency Administrator, and he shared with us that his son, who is now taking over the farm, has now started to enter the non-GMO market. So that made me think that this is a larger issue than just for the organic community. The administrator also noted that farmers need multiple market opportunities and help in accessing those markets.

So there were quite a few comments about the burden that organic farmers would have under this proposal. I think some of it was maybe not clearly understood, which of course

could be the fault of the writer, or just the fact, too, that it was fairly complicated.

For farmers who use organic seed, all organic producers would be mandated, under this proposal, to test for presence of genetic contamination, and there were those levels of purity that they could fit into.

For farmers who choose to use non-organic seed on organic land, they could ask their seed supplier to provide that information. If that non-organic seed supplier chooses not to, then the farmer would be required to do the testing and provide that in their organic system plan to their certifier.

As we heard from one speaker, Jamie Welch from EnviroLogix, this is available. It's publicly available. Farmers could mail samples to a laboratory, and I don't know what they're going to charge, but the baseline cost for them is $35. So we're not asking farmers to do $450 PCR tests in order meet this proposal. We wanted this to be accessible.

And of course, if and when this moves beyond corn -- this is kind of a pilot project just for field corn -- that may not always be the case for every type of commodity that might have a genetically-modified equivalent, but we felt that this -- that's kind of why corn, since it's pervasively tested in the marketplace.

The other thing, too, is that if farmers are in a region where there may not be a lot of organic seed available to them, or a lot of other organic farmers, they all know each other. So if they work together buying non-organic seed, they could buy the same lot and share the cost of the testing between them. So in some regions that would maybe help again with the cost.

It's a little bit of -- nobody likes to add cost or have to spend more money, but part of it is also, this is a little bit of the medicine that they need to take because they need to know that information, because at the other end, when they grow their crop, there will be

people testing.

And so if they are trying to get into a market, they need to know what they are starting out with or else they'll go through a whole season of growing an organic crop, and it will be rejected. So that's kind of actually the main purpose of this is to really protect organic farmers so they know what they're getting up front before they even plant.

The testing requirements, there were quite a few comments about patents and legal protection on proprietary traits that might be present, so I will do a little bit more, and I'll ask my co-writers to help me with this, on whether or not that testing is prohibited and how difficult this might be.

That was a question I can ask Jamie as well, for what kind of traits they are looking for. But I don't think that there is that much in field corn that would be considered proprietary. Most of those proprietary traits are in genetically-modified seed, which would not

be allowed to be planted on organic land anyway.

As far as violating seed labeling laws by putting the level of purity on the seed tag, we can look at that as well. Perhaps there could be a second tag on the bag, or it's somehow provided up front to the farmer. I would prefer that the farmer would not have to make a phone call and catch somebody. We just want it to be as transparent as possible.

As far as there were questions about what is a lot and what are the testing options, we can go into that a little bit more clearly in the proposal next time.

The Organic Trade Association had a lot of support for their point that it should have been organized a little better, as far as the 17 items that were part of the proposal, by actually assigning which item needs to be done by which party. What does the organic seed supplier provide? What do they have to do? What does the farmer have to do? So we can do that fairly easily, and we intend to.

As far as the level of purity, the seed tester would have the choice of either providing the exact level of purity, or they could be within those categories. It's really a transparency-based proposal.

There were comments about whether the traits should be -- it says now all known traits versus commercially-available traits. I understand that the testing would be harder for everything that has ever been put out there, but that was put in there partially because of the experimental genetically-modified wheat that we had problems with in Washington State, and that was not a commercially-available trait, and yet it did cause quite a bit of consternation for farmers when that contamination appeared in their wheat. So I'm not sure how we'll deal with that, but we'll take a look and see if there's any way to capture that or not.

Retaining seed samples, there was -- for farmers, that -- and I found this kind of interesting that a certifier recommended this,

and it was many certifiers then -- other certifiers who didn't like it. But I agree that the farmers should save that sample. We could give some direction on how easy that would be and how much they would have to retain.

Again, this is something for the farmers to protect them, so if they find genetic contamination in their final crop, they could go back and verify that level of purity by testing the sample, so they would have kind of a secondary check. Besides the tests that they receive from the supplier, they could then check their own sample. And this would provide information to the farmer whether or not their genetically-modified mitigation efforts are effective or not on their own farm so that they could modify what they are doing.

The other thing is about the database. So the database, the purpose to that was to start gaining information about what is the pervasive nature of genetic contamination in the field corn seed supply.

And it's not going to be, obviously, everything, but since organic farmers do use a fair amount of non-organic seed, and especially in areas where there are not organic seed suppliers and people especially in the Southeast and the South, we felt that it was important to see -- it would show both hot spots, but it would also show areas where there was a pretty good chance that people could grow seed corn and not have GM contamination. So it would offer seed growers some information about where they could go.

I know one seed grower right now is growing out organic seed corn for sale in the United States, and he's doing it in France. So if we can identify some areas in the United States, within our borders, that there's less chance of contamination, that would be good information for them as well, and we could keep that -- yeah, Dave, just -- okay, go ahead.

MR. MORTENSEN: Just on that point, which I think is a really important one, you're

making the point that it helps us as a community to not only identify hot spots and cold spots -- so clean places and less clean places with regard to the germplasm, it also enables us to determine the characteristics of that place that tend to keep it a good place or a place that we need to take some action to see if we can get neighborhood behaviors to change in the farming community.

And I think that's a really hopeful thing that could be an outgrowth of this proposal, you know, this way of thinking about the problem, because in my opinion, to date, the whole issue, which a number of our presenters and visitors have presented about co-existence, we really don't understand what co-existence looks like when it's working well, and then I guess we're not co-existing when it's not working well. So I think this helps us get there.

VICE CHAIR BEHAR: Thank you, Dave. There were a few that wanted us to have a more clearly-stated purpose and goal. We will do

that. Oh, I want to go back to the database.

So the last thing with the database, which now we have a little bit more time to discuss with the Program would be who would manage it. And I do have in the proposal that it could possibly even be farmed out. I haven't asked any organization if they want to do it, but I've thought about OMRI, I've thought about a certifier, I've thought about -- I don't know.

I don't know who would do it. It could be done internally by the NOP, or it could be farmed out, either one, as far as maintaining the information that all the certifiers are giving of the state or province and country of origin of the seed and what that level of purity was.

And I think through that there would be -- it would be anonymous who grew the seed and who planted the seed because the documentation within the certifier can't be FOIAed. That's confidential information, and the only thing that the certifiers are passing on is where the seed

was grown and what the level of purity was. And it's by state, so it's not by county.

So if you -- you know, it would be Minnesota. I don't think that you could necessarily say that it was any specific farmer or any specific seed grower who grew that in Minnesota and be able to attribute a high level of GM contamination through that database because, again, we want people to feel comfortable in giving the information.

Okay, open for discussion. Sue?

MS. BAIRD: I really appreciate all the work that's gone into this document. I think that you guys have done a great job of looking at different issues.

However, I am a little concerned about the direction. We have been told for 20-plus years that organic certification is a process certification and not a product certification or not based on testing. And if we implement this, we will be moving into a testing of product certification as opposed to process

certification.

The only place in the regulation that even mentions testing at all is 205.671, when it talks about pesticide residue testing being 5 percent above EPA. I love the whole idea of what we're trying to do here. I'm concerned about requiring testing, which is not part of the regulation currently.

VICE CHAIR BEHAR: Dave or Tom?

MR. MORTENSEN: Yes, thank you, Sue. I think that the whole spirit of the draft is helping the farmer know where they're starting. Because if they don't know where they're starting, meaning seed out of the bag into the planter box, and there are problems on the back end, we have -- this whole idea that we have the capacity to identify patterns of behavior that result in good or bad outcomes is undone by not having that insight.

And so this isn't intended to be something where we're coming down on the farmer; rather, enabling the farmer to do what it is

they're trying to do, sometimes in places where it's difficult to do that, and then having the information they need to know how to take remedial steps.

VICE CHAIR BEHAR: Tom?

CHAIRMAN CHAPMAN: Similarly on the cost concern, I was -- I mean most of the comments I received that were somewhat critical of this was the cost burden of the testing, and I was curious to hear from the farmer members, as this would be borne by the farmers, what they thought of those comments.

VICE CHAIR BEHAR: Steve?

MR. ELA: Grow perennials.

(Laughter.)

CHAIRMAN CHAPMAN: In your representative role, I think is what I meant.

MR. ELA: Like for the corn, I can't really speak to it because we really are so different. But in my head I go okay, this is the pilot case. If it were expanded to represent all organic seeds, I could see, for vegetable

growers, where you're buying small lots for a 100 row feet or less, that testing requirement could -- that's where it could really add up.

Where you're planting 100 acres of something, it's one thing. Where you're planting 20 square feet of something, it's a whole different story. So that scalability of the amount of seed you're buying and such, the cost burden could become important.

VICE CHAIR BEHAR: Asa?

MR. BRADMAN: I just want to follow up with Sue's comment. How would you see this proposal for testing different from requirements to test for pesticides periodically in organic products?

Can you hear me now? Okay. How would you see this proposal as being different from testing that's done for pesticide residues in organic produce, and is that a case that also kind of went beyond the process-based versus testing? And I was just curious if you feel like this proposal contradicts those requirements.

MS. BAIRD: There are no requirements for producers to test for pesticides. The only time the certifiers are required -- a percentage -- is it five percent of their crops. Is if five, Scott? I think so. Of their clients to test for pesticides, but producers are not required, nor -- I've lost my train of thought.

But even so, they do five percent, or they do in case of a complaint. But producers do not required to be tested. And this says every lot has to be tested.

MR. BRADMAN: Right, so the distinction here is the producer requirement --

MS. BAIRD: Right.

MR. BRADMAN: -- versus the certifier.

MS. BAIRD: Right.

VICE CHAIR BEHAR: Jesse?

MR. BUIE: As a small farmer, I'm 100 percent organic, so it would not be a factor to me. But I think you said it would be about $35?

VICE CHAIR BEHAR: That's what the cost is to the people who have that testing

system in place. I don't know what Iowa State might charge someone. But I would think it would be less than $100, but probably -- maybe $50 or something.

MR. BUIE: Okay. Is that per batch or --

VICE CHAIR BEHAR: Per lot.

MR. BUIE: Well, yes. Okay. That's --

VICE CHAIR BEHAR: Okay. Emily?

MS. OAKLEY: I mean, I think the question comes down to how many lots would an individual producer have in a given year. I can't imagine it being more than a couple hundred dollars in a season, which is not cost-prohibitive in my view.

I have many expenses that are far beyond that. I obviously don't grow grain crops, and we did explicitly exclude vegetable corn, and there aren't very many vegetable crops that would be at risk ever in the future and require any additional testing, so I think it's kind of

weighing apples to oranges. But I don't think a couple hundred dollars is of concern.

VICE CHAIR BEHAR: Ashley?

MS. SWAFFAR: I just want to make sure you guys spell that out really, really clear on those vegetable crops because I'm just thinking on my small, or anybody else's small market farm that -- Emily, you're kind of in my boat. You grow a jillion different things for a variety, and so just please make sure you specify that very, very clearly, because, boy, if we've got to test all the varieties of tomatoes that we grow, boy, that could add up real quick.

VICE CHAIR BEHAR: Just to respond to that, it would be at-risk crops that would be under this proposal, so until there becomes -- and at-risk would be defined sometime in the future of what can be cross-pollinated easily -- I mean, tomatoes don't typically cross-pollinate with others, even right next to them. So that would not be a heavily at-risk crop.

Okay. So next is Sue.

MS. BAIRD: I'm involved with some non-GMO grain crop growers, specifically corn. They have to test to sell as non-GMO. By the time they do their whole package, it costs about $125, I think, for the package, and they lot per field and per times of harvest. So it could, depending on how many fields you've got, it could run into thousands of dollars. But non-GMO people do it anyway, so the precedent is there.

MR. MORTENSEN: Maybe just -- and I don't know how much time you want to spend on this -- these are the kind of details, getting this feedback and getting it from the stakeholders. It will be extremely valuable.

I think we do need to just remind ourselves that we're talking about seed into the planter box, so you could buy a lot in and plant that in five or 10 fields. That's a very typical thing to do in Nebraska, for example.

So in that case we're talking about a small sampling on the front end where you may be -- I think -- it would be fairly typical of a

grower to have two or three field corn cultivars that they might be buying in. In that case it would be three samples.

VICE CHAIR BEHAR: Emily and then Ashley.

MS. OAKLEY: I was just going to make that clarification that the proposal says each seed lot, not each field. So the lot is defined by the seed as Dave just explained.

VICE CHAIR BEHAR: Ashley?

MS. SWAFFAR: Harriet, I just wanted to follow up. When you were asking for the public to comment to the subcommittee by December, you're wanting them to do that through the open docket? Just so that I'm informed that I need to run that by the Program?

VICE CHAIR BEHAR: Yes. There will be an open docket, but we don't know exactly when. So we'll be trying to communicate -- I was trying to give the subcommittee enough time and you guys enough time, but the docket may not be open for a few weeks yet, so Tom is going to speak to that.

CHAIRMAN CHAPMAN: Yes. The regulatory process released in the docket; the Program does everything they can to get it out as quickly as possible, but there are items beyond their control from date of when it's going to be open is not possible, and so there is a chance, although probably unlikely, that the docket won't be open up until December 7th.

I also believe the Government is on a continuing resolution until the 7th. So that's also not particularly good timing, budgetwise, if there's no budget approved for the Federal Government. So we might want to look at, instead of setting a firm date, perhaps a number of weeks after the docket opens to get those comments in.

Since folks have the proposal in front of them, they can start working on those comments, and then they just need to submit it to that docket once it opens. So I think a short time after the docket is sufficient, in my opinion, so it's something like two weeks. But I'm looking for the Board to give feedback on

that. I see some head-nodding, so --

VICE CHAIR BEHAR: Yes. I think --

CHAIRMAN CHAPMAN: -- we want to just revise that to say, two weeks. Please provide comments to the open docket within two weeks of its opening so we can have it timely and be able to have the subcommittee be able to make revisions to this as necessary. Does that satisfy -- yes.

VICE CHAIR BEHAR: Yes. So everyone is given due notice out there in the audience to start. You have your homework. Tom?

CHAIRMAN CHAPMAN: Do folks have a sense of how many public comments we heard from grain farmers who would be most impacted by this?

VICE CHAIR BEHAR: Not that many.

CHAIRMAN CHAPMAN: Not that --

VICE CHAIR BEHAR: Mostly through Organic Valley, and then it was mostly certifiers and grain Organic Seed Alliance, American Seed Trade Association, and some seed suppliers.

CHAIRMAN CHAPMAN: Okay. It would be

great if, in the interim time period, if members of the public who have contact with grain farmers could try to solicit their feedback on this exact proposal as well, since they would probably be disproportionately impacted by this.

VICE CHAIR BEHAR: Personally -- well, this went out to the Organic Farmers Association to OFARM, and I asked them, but they didn't respond. But OFA did.

I guess I could go a little bit into the background. In the development of this, Kiki, as I mentioned during the public comment, provided the names of a group of different seed suppliers, both organic and non-organic that service organic farmers.

I called all of them and kind of ran the proposal by them and tweaked it according to what works for them, what doesn't work, and trying to be as practical as possible. So it was not really done in a vacuum; it was done mostly with seed growers and the testing community, rather than farmers.

More comments? Any other discussion? I would encourage the NOSB as well, not just the Materials Subcommittee, to please read that again and for you all to get us comments on it as well, because it is quite detailed, and it's kind of a different approach.

One last thing; there were a few comments about wanting zero tolerance, and that we should have gone towards tolerance, but our regulation does not have that. You could have presence of genetic modification, contamination, in your seed and yet still sell the crop as certified organic.

You're not allowed to use genetic engineering intentionally in the production of an organic crop, but if it's there unintentionally you do not lose your certification. So we wanted to kind of stay within those bounds and not set a tolerance level.

So with that, we're going back to subcommittee unless there are some more comments.

CHAIRMAN CHAPMAN: Do you want me to

make a motion?

VICE CHAIR BEHAR: Okay. So I'm going to make the motion --

CHAIRMAN CHAPMAN: To refer back to subcommittee.

MS. OAKLEY: I second.

VICE CHAIR BEHAR: Okay, to go back to subcommittee with this.

CHAIRMAN CHAPMAN: All right, unless there is further discussion, I'll take it to the voting. Okay.

So we have a motion from Harriet and a second from Emily. The motion is to refer the Genetic Integrity Transparency of Seed Grown on Organic Land proposal back to subcommittee.

This isn't a matter of business; is should have said this at the start of this item. The Board conducts matters of business by a two-thirds majority vote. This is not a matter of business to refer back to subcommittee and therefore it follows Robert's Rules of Order, and Robert's Rules of Order dictates that an

amendment, something to refer back to subcommittee would only require a simple majority. So this is only a simple majority vote; eight votes will send this back.

A yes vote would refer this back to subcommittee; a no vote would keep it on our agenda here for further discussion and votes. So the voting starts with Sue.

MS. BAIRD: Yes.

MR. BUIE: Yes.

MS. SWAFFAR: Yes.

MR. RICE: Yes.

VICE CHAIR BEHAR: Yes.

DR. SEITZ: Yes.

MR. MORTENSEN: Yes.

MR. ELA: Yes.

MR. BRADMAN: Yes.

DR. GREENWOOD: Yes.

MS. DE LIMA: Yes.

MR. SCHWARTZ: Yes.

MS. ROMERO-BRIONES: Yes.

MS. OAKLEY: Yes.

CHAIRMAN CHAPMAN: Chair votes yes.

MR. RICE: That's 15 yes, zero no.

CHAIRMAN CHAPMAN: Fifteen yes, zero no; the motion passes. This is referred back to subcommittee, and I hand the meeting back to Harriet.

VICE CHAIR BEHAR: Okay. Michelle? Oh, I have it. Okay. So Excluded Methods Determination, and we put a date on it because this is kind of an ongoing item on our agenda, and we thought that over time, we're going to want to try to keep track of which determinations we had at which time. So going forward we're going to try to have a month and a year on each of these, and it will be called Excluded Method Determinations.

So in this is a repeat of the terminology that we passed in the fall of 2016, and the various criteria by which we determine if a method of production would be considered an excluded method, meaning genetic engineering or genetic modification or -- there are many

different ways of saying that.

And so also included was a chart including everything up to this date that we have determined to be an excluded method. So we'll probably keep doing that just to kind of have a running total so that the most recent document would not just include only the item that we're discussing for this proposal, but would kind of keep all of them in one place to help everyone see where we're at so you wouldn't have to keep going back and looking at previous documents.

So we did receive quite a few comments about the transposons with discussion that the naturally-occurring transposons occurred due to drought, heat, or other means of physical stress are not an excluded method. We did have universal agreement on that.

For the method transposon produced through chemical, artificial, ultraviolet radiation, or other synthetic stress or interaction, we had quite a bit of non-agreement there, feeling that we needed to separate out the

chemical, artificial, ultraviolet light, and put in in vitro transposons -- transposons produced through in vitro manipulation.

So that would be into the nuclei; that would be the excluded method, and the chemical, artificial, ultraviolet light and radiation or other synthetics would be to be determined yet, because that is more of an induced mutagenesis system.

Also, in further discussion with the Program, transposons are actually the result of a method; they are not actually the method. So we want to take back the transposon part entirely and bring that forward in another document in the spring and separate out those three methods that result in a transposon. For those of you who didn't read that, it's kind of a jumping gene type of change to the genetic makeup of an organism.

However, we would like to bring forward for a vote the embryo rescue in plants as a non-excluded method and let that be allowed for

use in organic seeds and crops and plants.

So I believe Michelle has the change -- thank you, and thank you to Tom for helping with that. So I'd like to open it up for discussion from the --

CHAIRMAN CHAPMAN: Can you show the Word document? We just removed references to transposons from the document and added it back to the TBD list, so we'll show that really briefly so folks will understand the entirety of the amendment when it gets requested.

It's the Word document. Sorry, Michelle, I can't hear you.

VICE CHAIR BEHAR: It's in the table. It's in the Excluded Methods.

CHAIRMAN CHAPMAN: If you could just project the Word document, and then we'll scroll through it.

VICE CHAIR BEHAR: Okay, while they're looking for that, I hope I explained it. If you don't understand it, this your chance to ask me questions. Any questions on what we're about to

do and why we are doing it? Well, if you want to talk about transposons, you can, but it is going back to subcommittee, and it is considered a To Be Determined Material right now.

MS. SWAFFAR: I do want to talk about transposons because it relates to livestock. So I think that I learned a lot through this via Harriet on transposons and how vaccines are made.

Those people who thought that vaccines were made from excluded methods technically were never made from excluded methods because transposons even though it's a process. It's something -- that's how they're made, and that's why I think it's very critical that our work agenda request for vaccines hopefully be accepted by the Program to put on our work agenda because technically there are no excluded methods for vaccines at this time because transposons are not an excluded method through us.

So if we were to -- I was very hesitant to vote on this on transposons because I felt like that was the work-around that the

industry had for vaccines at this moment.

VICE CHAIR BEHAR: And so we now have some time too, to figure out how those transposons were -- which method was used. Are they in vitro? Are they through chemical or radiation, etc., or are they naturally-occurring transposons? So we'll try to dig a little deeper into how those vaccines are actually made. Good luck. I think, you know, through some of the universities, I think maybe I could get some help.

DR. LEWIS: Just a point of clarification for Ashley; in terms of the work agenda request that you submitted to the Program and based on the conversation now, is there any modification that you'd like to make to the work agenda request to address your question?

MS. SWAFFAR: No. I think our work agenda request still possibly stands as it is, just because there's a lot of people that have -- we're not sure how every vaccine is made, and so there's some made with transposons and possibly

other methods. We would just like to address it once and for all for clarity across the industry and across certifiers.

DR. LEWIS: Great, thanks for the clarification.

VICE CHAIR BEHAR: Just for the public, to remind them that we have asked for a work agenda item to review some work on livestock vaccines that have been produced through excluded methods. Tom, you look like Michelle.

CHAIRMAN CHAPMAN: All right, I do. So like we said, so people have some sense of the edits; it's just removing the references to transposons. You'll see when we get to the proposal section that it's limited to discussing embryo rescue of plants, and then you'll see in the TBD section we added the transposons back in there. Then at the end at the actual proposal, it only mentions embryo rescue, not transposons.

VICE CHAIR BEHAR: One other item I wanted to bring to the attention of the Board is that we did kind of bring forward items that we

would be looking at for the next reiteration of this excluded method determination document, April 2019, and that includes induced mutagenesis which will take into account the transposon method.

So we were already planning on that, and I encourage the public too, that if they see items that we don't have on our To Be Determined list that you feel need to be reviewed as excluded or not, to bring them to our attention, because this is a fast-moving area of science, and it's really hard -- a lot of ways to keep track of what could be out there.

More discussion? Okay, I will make the motion to remove the transposon information from the document and only include as the proposal part to add embryo rescue in plants should be listed, not an excluded method. Emily?

MS. OAKLEY: I'll second.

CHAIRMAN CHAPMAN: All right. So we have a motion to amend to remove the mention of transposons from the proposal in the document.

So we'll vote first on the motion to amend. That's a simple majority. Then if there's no further discussion we can move to adopt the amended proposal, and that would be a two-thirds vote.

So the first vote is to adopt the motion to amend, which is to delete the sections that you saw earlier, as well as delete the transposons section here from the proposal wording. A yes vote is to amend the document and delete the language; a no vote is to retain the original version. The voting will start with Jesse.

MR. BUIE: Yes.

MS. SWAFFAR: Yes.

MR. RICE: Yes.

VICE CHAIR BEHAR: Yes.

DR. SEITZ: Yes.

MR. MORTENSEN: Yes.

MR. ELA: Yes.

MR. BRADMAN: Yes.

DR. GREENWOOD: Yes.

MS. DE LIMA: Yes.

MR. SCHWARTZ: Yes.

MS. ROMERO-BRIONES: Yes.

MS. OAKLEY: Yes.

MS. BAIRD: Yes.

CHAIRMAN CHAPMAN: Chair votes yes.

MR. RICE: That's 15 yes, zero no, zero absent.

CHAIRMAN CHAPMAN: Motion passes; further discussion? All right. Seeing no further discussion, we'll vote on the main motion. This is a seconded motion that came from the subcommittee. The motion was made by Harriet and seconded by Dan.

I'll read the amended proposal, which they say must recommend the NOP add the following table to excluded or non-excluded methods to the NOP excluded methods guidance -- a lot of excluded there. Embryo rescue in plants should be listed not an excluded method.

This is a two-thirds majority vote. A yes vote is to adopt this amended proposal, and

the voting will start with Ashley.

MS. SWAFFAR: Yes.

MR. RICE: Yes.

VICE CHAIR BEHAR: Yes.

DR. SEITZ: Yes.

MR. MORTENSEN: Yes.

MR. ELA: Yes.

MR. BRADMAN: Yes.

DR. GREENWOOD: Yes.

MS. DE LIMA: Yes.

MR. SCHWARTZ: Yes.

MS. ROMERO-BRIONES: Yes.

MS. OAKLEY: Yes.

MS. BAIRD: Yes.

MR. BUIE: Yes.

CHAIRMAN CHAPMAN: Chair votes yes.

MR. RICE: That's 15 yes, zero no, zero absent.

CHAIRMAN CHAPMAN: The motion passes. Harriet?

VICE CHAIR BEHAR: Somebody's got work to do. So I'm going to pass this now to Emily,

and she's going to discuss the public comment and the discussion document Marine Materials in Organic Crop Production.

MS. OAKLEY: Thanks, Harriet. So I just first want to recognize that this is work that was started by the Board prior to my time and in particular by Dr. Jean Richardson, so thank you very much to her work. A lot of this discussion document took from her original work, so I just want to acknowledge that and thank her.

I also just want to say that the reason that we're still working on this issue, even though it's kind of laid out pretty clearly in the discussion document is that this is a long trajectory and that the concern over environmental impact for the harvest of marine macroalgae hasn't gone away. Even though this is a difficult issue to address, the fact that it's hard doesn't mean that we shouldn't try to tackle it.

So I will spare you the whole discussion of how we got to where we are, because

that's in the discussion document pretty clearly. But what I want to say is that we got unanimous support throughout this process, from when it first came up in 2016 until now, to address the issue of sustainability.

What we tackled and tried to address was, what are we talking about when we talk about sustainability in seaweed? And in this case, we're really addressing the environmental impact.

So then we discussed, well, how can we address the environmental impact? What tools are available to us? And in the absence of third-party certification that our university agreed upon by both industry, conservationists, producers, consumers, we looked to the tool that we already have at our disposal, which is the wild crop standard.

So that's what we did with the discussion document was to put out this really new idea or way of looking at a crop input to see what stakeholders would think, to get their feedback, and to try to be as transparent about

our thinking process as possible. We don't assume that it's the only correct way to look at this, or even the correct way, but it's to try to continue this dialogue about how to address this issue.

So we basically took the approach of addressing the crop section of this for the time being. I know that some you might remember, but new people might not know this; we did address this also from a handling perspective, and originally it was looking at nomenclature. We decided to try to sort of run a test run through addressing this issue on a more focused scale and crops. And so that's where we are now.

I'll give you a little bit from the discussion document, and then I'll summarize some of the public comments, but what I'm really most interested in in this portion of the meeting is hearing from my fellow Board members.

I've combed the public comments very carefully and clearly, but what I don't know necessarily is where everyone else stands on this

issue, and that will be really important to know as we go forward and try to figure out what the right direction would be to take.

So I think the most important thing to note is that what we are trying to do with this when we address the wild crop standard here is to address the environmental impact and not destructive to the environment.

We're also looking at the contamination piece of the wild crop standard, but I think what's also critical to note is that marine macroalgaes are really different from a lot of other crop inputs, and that they're harvested directly from a wild, native, ecosystem. There really aren't that many other crop inputs that can meet that category. I can think of a few, and some commenters provided some as well, but this is a really unique situation, and I think we've heard from the stakeholders on that.

I think the other issue that we realized for so many in this discussion was that

the Wild Crop Standard is loose or vague in some of its terms, certainly compared to a crop production standard. And we know that, and we recognize that we would need additional guidance or additional information of help format how such a standard could be applied in a marine environment.

There are certifiers who are doing it now, and they're trying to adapt terrestrial standards as best they can to a marine ecosystem, but if we were to move forward in any direction on this, we will definitely need more input on how to do that, and I think that can only be done with experts in the field, producers, and wide group of stakeholders.

So just to summarize some of the public comments; there was really a spectrum. There were those who felt that we shouldn't be harvesting all or some types of seaweeds at all for use in crop inputs because those marine environments are so fragile and don't recover quickly. Then there were those who felt that

current standards or current government regulations are already sufficient to regulate the industry and their activities.

So that's a pretty broad spectrum, but none of those people said we shouldn't address the environmental impact. I think they all recognize the need for that.

So I think that in terms of the greatest degree of concern that got brought forward through the public comment, there were two main areas. One was concern that by certifying a crop input ingredient there might be a domino effect of increased scrutiny on other natural crop inputs, where that might lead to the request for certification for many others.

So what I'll say first is that we sometimes give a tremendous amount of scrutiny to synthetics that we use, and sometimes those synthetics are found in incredibly small quantities on farms and on fields, and we should give scrutiny. But at the same time, I don't think we want to stop looking at or stop

investigating more deeply the natural materials that we apply, sometimes in very large quantities.

That being said, the intent of this is not to create a domino effect, and I want to spell that out really clearly. I think the difference here is what I tried to illustrate earlier, that this is an ingredient from a wild, native, ecosystem and it is a very unique situation. It is not the same thing as compost.

So I hope that can help assuage some concerns, but another, probably predominant concern was the difficulty of certifiers to verify organic claims since certifying fertilizers was out of NOP's purview.

But I think what might have not been clear from the discussion document is that we're not looking to certify the fertilizer. We're looking to certify the ingredient, and in this case seaweed is treated as an agricultural crop, both in livestock and in human consumption.

So we're still considering it an

agricultural crop, but it's an ingredient that goes into an input. So the input, the product itself, would not be certified, but that ingredient, the agricultural crop of seaweed, we're suggesting would be.

We did hear comments from some people thinking that that might not pass the legal muster, the NOP, so I'd really like to find out if that's true and discuss this further with the Program once we go further with this in the Materials Subcommittee.

I think it's also important to realize that there are some boats that are currently harvesting, as we've heard from some testimony already, marine macroalgae for the use of livestock feed, and in that case it is already certified to the wild crop standard.

In that same boat those same harvesters will then go and harvest the same exact same species for a crop input, and that's not getting certified. So in some cases we have this sort of double standard situation on the

exact same species and marine environment, so I think that's part of what we're trying to address here.

There are also some products already on the list that do contain certified seaweed ingredients. Now, whether or not -- as we heard from material review organizations, they're going to go then verify that -- we know that it's being done, and I think that if we treated this ingredient itself as the certified input, it would lessen the burden on certifiers and material reviewer organizations because the product would then come with that certification, and presumably would then be searchable on the Organic Integrity Database as well. So there would be multiple ways to check that.

So there was some concern expressed that certifiers don't have the skills needed to certify, and unfortunately if that's the case, we already have them doing that work. So we probably need to address that regardless of whether or not we're going to include crop input

ingredients in wild crop certification, and I think that some of the certifiers that do do this right now would greatly like to see increased standards or guidance for harvesting seaweed. I think that's something that can be addressed and discussed later.

There were suggestions also for third-party certification, and I think we could look to some of those standards like the Marine Stewardship Council, but they're not universally agreed upon. I also wonder if we really have the authority to require a third-party certification.

There were suggestions for just annotations within the language in the national list, maybe using some of the wording or even additional wording in the wild crop standard, but not requiring a certification. I think the problem with that that I can see initially is that we don't have a verification process at that point.

Then it just becomes an attestation that someone says they're doing what they say

they're doing, which is why we ended up continuing to come back to this idea of wild crop certification, because that's why we created organic in the first place, so that we can verify that we are doing what we say we're doing.

I think I would be remiss if I just didn't note that there were a number of residents in Maine who wrote in about the impact of harvesting on their lives and their communities and on their property. There were also producers that wrote in saying that they try to make the best case possible for those landowners.

But we did have one specific landowner that said -- in the case of rockweed in Maine -- they had someone come in an intertidal zone, which we have already heard is up for the old contention -- that they asked the producer to stop harvesting. They did, and then not 18 months later another producer came in and was harvesting the same species in the same area. So I think some of those issues could also be addressed potentially through this.

People asked for a phase-in period if we were going to do something like this, and I think that's a definite given. They also asked for guidance and additional standards. Some pointed out that terms were used interchangeably in this document, and they were. Initially that was intentional, but I think it would be better if we just start using marine macroalgae and provide some definitions.

So just in conclusion, even though this is a new way of looking at a crop input, I don't think that means it's outside of our purview or scope of investigation. I think that the farmers and consumers who rely on us to review materials are depending on us to examine and verify the environmental impact of these materials.

I also just want to say that there was widespread support, regardless of anyone's comments, on the creation of a working group, so I will be discussing this with Jennie to see if that's possible. This would be an informal

group; it wouldn't be a task force. Anyone would be invited, and I think we'd want a wide range of stakeholders' participation in this to help us scope this issue, decide if wild crop certification might actually be feasible, and if not, what other ways might be better to try to address this.

This is a long-term process. This is obviously not something that we're going to figure out in the short term, and it will probably be beyond my term on this board. So some of you new people might want to take it on, just like it was handed to me.

So I guess in conclusion, for real, I think that we can find a middle ground. I really don't think we're that far away. I think you can hear from the testimony that there's a lot of consensus on the desire to address this; it's just trying to figure out what is the best means to do that.

As I said at the beginning -- I just want to end with that -- even though this is

hard, I don't think that means that we can't figure it out. I do think we can. I'm really curious to hear what everybody thinks, and if you have reservations, please share them now, and any thoughts. Thanks.

VICE CHAIR BEHAR: Any comments from the Board for Emily? Thank you for all of your -- kind of above and beyond for a landlocked Oklahoman to take the ocean to heart. Steve?

MR. ELA: Thanks, Emily. This is one that makes my head swim, pun not intended. I'm trying to work through the wild harvesting in my head, and it comes back that some of these seaweed products are international.

I understand we're only USDA, and we're certifying to USDA, but given where some of these products might come from international companies, do you have any thoughts on how we handle that?

MS. OAKLEY: Yes, that's a really great question, because if we don't address that, this won't go anywhere.

I think my first stop is to look at the OMRI list of products that are out there and maybe try to contact some individual producers of products and see if there are some people that may have contacts with international producers of these materials, and also to get a better sense of how many products are coming internationally versus maybe from the North Atlantic, which where it seems the majority of it might be concentrated; also kind of in the Mediterranean region.

I don't know how you pronounce this one, but I'd call it maerl, which is one of the red algae and has probably one of the most clear environmental impacts, because it's achieved through dredging. But yes, I definitely think we've got to look at international users and producers before this would go anywhere.

VICE CHAIR BEHAR: Asa?

MR. BRADMAN: I actually haven't raised my hand, but I will say that I think this issue is really important. I think it's hard,

but we have to deal with it. This can't be ignored. Any situation where we're basically extracting resources from wild environment to put them on a human-manipulated environment, organic or not, it needs to be considered.

I'm a little concerned about the wild harvesting criteria. It looks like they're divided a little bit, and you have to either maintain or improve that. I don't get, actually, how the improve aspect of that could apply here. I think if you're taking something out of a wild environment, you're definitely not improving it. But we have to not damage it.

I think this is a really hard nut to crack, but I just want to state again, middle ground here, I think what we really want to support is not a middle ground, but we don't want to compromise and sacrifice some zones. We want to come up with some standard that protects it.

I actually like the idea of a certified wild-crafted product, and then we have some criteria defining what that is. If we can

actually get that through rulemaking, then we have a common understanding of what makes this material legitimate in the organic sector.

VICE CHAIR BEHAR: Okay, Steve, and then A-dae. Oh, you want to respond? Steve, A-dae, and then Rick.

MS. OAKLEY: Can I quickly respond to that? I think that's a really good point. I think that the reality, though, is that we already have a middle ground, because we have those who don't want to see it harvested at all, and those who think that we need any changes from the status quo.

So just in my line of thinking, I don't think either one of those is probably going to be the correct path forward. So when I say a middle ground, I guess I'm trying to say, can we bring those two ends of the spectrum closer together? But I agree, we don't want to compromise marine environments. There will be those who will say that just by allowing it at all, we are. So I just want to put that out

there.

MR. BRADMAN: Right, and I guess I would be comfortable with not allowing it if we felt like it did compromise environments.

VICE CHAIR BEHAR: Okay, back to Steve and then A-dae.

MR. ELA: Yes, I'm just following up on my previous comment. This is probably one of those cases where my ignorance is going to show, but are the Europeans -- is there any place we can plagiarize?

MS. OAKLEY: Yes, the EU came up and commented, and I'll be looking at that.

MS. ROMERO-BRIONES: So can the Program answer the question that you posed them in your summary, which was, "Is this out of the purview of the Board when it comes to ingredients?" Was that your question?

MS. OAKLEY: I don't want to make them answer that right now, because I don't know what their answer would be. I want to give them ample time to think about that, unless it's favorable,

of course.

MS. ROMERO-BRIONES: I asked that because if getting their perspective would help us understand how we need to frame this, and if we're spinning our wheels on something that they're going to immediately reject, that's a consideration.

On a more personal note, this issue is very close and dear to my heart. I come from a community that has been harvesting and eating some of the seaweeds that we're talking about for thousands of years. My family just came from harvesting seaweed on the coast for out tribal community in the beginning of this year, and I think that perspective, for sure, has not been articulated at all in these conversations.

It's to the point in California where you can actually have physical altercations when it comes to seaweed harvesting along the coast of California, particularly between tribal seaweed gatherers and the organic community where some of these organic products or supposed organic

products are being sold in places like the Bay Area.

So I think there's a lot of perspectives that need to be considered, and there are grey areas. It makes me really, really sad and emotional to think that some of the traditional foods that have sustained tribal communities for a thousand years are being used as fertilizer or cow feed, particularly because some of these tribal communities face some of the highest insecurity rates in this country, and when it comes to winter months, seaweed is a pretty important food staple for a lot of hungry families.

I haven't quite gotten to the point where I'm comfortable with having wild food labeled organic under the Wild Food Provision, so at this point I'm really opposed to moving forward on anything until we get those perspectives on the table.

VICE CHAIR BEHAR: Rick was next, then Sue, then Tom, and then Emily.

DR. GREENWOOD: Remember yesterday I asked the question about quantity of kelp that was harvested versus organic versus conventional, and I think when we look at this whole area, we need to make sure that we have a wide range of harvesters that include the conventional people, because they probably have practices that are incompatible with what we're looking for.

I know we don't have jurisdiction, but I think we need their input when we come up with something. I'd hate to have us come up with something that's very good, and then meanwhile you go down to the ocean and there's other people destroying the kelp beds. So if we can do it in a way that would cover that whole area of harvesting, I think it would be very beneficial.

VICE CHAIR BEHAR: So it -- does the Program want to -- then Sue.

DR. GREENWOOD: Can I just make one remark? Just in terms of the Program's perspective on this, one thing to take into account is -- and we've been talking about this

in the executive committee and also here at the meeting in the beginning, was thinking about the Program's role and our engagement with the federal partners.

And when I think about this activity obviously it means being engaged with NOAA in terms of what NOAA's responsibilities are in terms of their Fisheries management and other factors. So one thing to think as you work through this issue is the relationship with NOAA in terms of their regulatory authority in this matter.

VICE CHAIR BEHAR: Sue?

MS. BAIRD: I appreciate A-dae's perspective; I had not thought about that. I like the idea of moving into wild crops harvest as opposed to crops. There's a definite difference in wild crops, which means you don't add any inputs; you do no management of it. You just harvest it. Crops, you have that management practice.

I've done inspections for wild crop

harvesting for a few certifiers. There's not a whole lot of certifiers out there that do wild crop harvesting. Some do a much better job of defining criteria to preserve the natural culture of that crop than do others.

I find it interesting -- and you were asking, could we plagiarize some -- FairWild is an organization that certifies wild crop harvesting, and in fact, NOP has recognized FairWild's standards as meeting our standards, the organic wild crop harvesting standards. It's based on risk assessment; what practices are you implementing that will preserve that colony of wild crops?

So I agree we've got to do something. We've got to do something to address the sustainability of our natural habitats; food habitats, whether it's food or fertilizer, whatever we use it for; we have to preserve it, and the only way we can do that is some kind of regulatory action.

Wild crops is where it fits; it

doesn't fit in crop production, because we're not doing production practices. Just my take on it.

VICE CHAIR BEHAR: Emily?

MS. OAKLEY: I just wanted to respond to A-dae and say that we should discuss how best to incorporate and approach and include tribal communities. I completely agree with that perspective, and I think it's incredibly painful to see that collision of perspectives, and I hope we can try to address some of that, at least in this discussion document. Thank you.

VICE CHAIR BEHAR: Any other comments? Dave?

MR. MORTENSEN: I think this work that you're spearheading here, Emily, underscores that our foodshed is much larger than the fields and the farms that we farm. If we follow the logic, if we're internally consistent, at our very last meeting we voted to protect ecosystems of high integrity or not recently-disturbed, for the purposes of enhancing ecosystem services.

It seems to me this is -- I mean, how

can we not do this if we vote in favor of protecting the environment ecosystems and ecosystem integrity and services? I agree with you that A-dae's points were really moving and definitely need to be in this.

I moved to New Hampshire two months ago. I would say every other morning on public radio there's at least a 10-minute piece on the declining fisheries in the North Atlantic; haddock, cod. The size distribution of lobsters has shifted to very small lobsters. It's affecting catch. Native American peoples, but mostly European peoples in the Northeast.

So this whole thing is interconnected deeply. I think we all know that, and when we start taking things out of an already depleted ecosystem, we certainly have to be concerned about that. So I applaud you for pursuing this, and it seems to me to be entirely consistent with what we've been working on since I got on the board.

VICE CHAIR BEHAR: Okay. I think

we're going to wrap that up, and I want to just echo what Dave said. We're the terrestrial world, and the marine world, and we're very connected. The oceans are the vast majority of the coverage of our planet, so we need to be part of the stewardship of that as well.

So with that, the Materials Subcommittee will come to a close, and we've eaten our sandwich.

CHAIRMAN CHAPMAN: All right. So up next is CACS. What time is it? It is 3:52, so we will take a brief break and come back at 4:10 and start up with the CACS. I want to thank Harriet for taking us through the Materials Subcommittee. We're in recess, and we'll be back at 4:10.

(Whereupon, the above-entitled matter went off the record at 3:52 p.m. and resumed at 4:11 p.m.)

MR. CHAPMAN: It looks like we have 12 members present, so that's enough to call it a quorum. And we'll come back into session, so up

next on the agenda is the Compliance, Accreditation, & Certification Subcommittee chaired by Scott Rice.

I will hand the meeting over to Scott in a second. I just remind him it's, what time is it? 4:10. And if we do have time, we would like to get to the livestock sections.

So just warning you to, you know, track yourself, check that beard to make sure that beard might not want to talk too much just so we can move along.

MR. RICE: Okay, we did a lot of work on the CACS this year, it's been defined by the focus of the program and the community on integrity of the organic supply chain.

There's been a lot of discussion on that both about domestic and international supply chains. Had a lot of comprehensive and detailed discussion in a number of areas that integrity touches on.

And that's to say every corner of organic trade certification and accreditation.

So you'll recall a lot of panel discussions and public comments, discussion amongst the Board, written comment.

It's truly been great, and I thank everyone for their input. We've focused on about the last year on inspector and reviewer qualifications in training. And also assessing risk when addressing accreditation oversight.

So the first, taking a look at what we're looking at today. We've got a proposal on risk criteria for accreditation oversight as well as training and oversight of inspector and certification reviewer personnel.

And we're going to get a sneak peek of the LMS system or the Organic Integrity Learning System. Is that really it? The OLLS, the Organic Integrity Learning System now, is that what we're? All right.

And a verbal update from Tom on the feedback that we saw from the spring 2018 work and panel. So as we dive in here.

Looking at risk criteria for

accreditation oversight in early this year the NOP requested that the NOSB provide input on the factors that contribute to an accredited certifier having a higher risk of fraud and that either within its organization or the operation that it certifies.

We're looking to establish that criteria for assessing the factors when engaging in the oversight. And that oversight includes onsite visits as well as desk audit activities of the certifier in both their primary and satellite offices for those that have those offsite facilities or locations rather.

And as I said we received a wealth of information that informed us and in the most recent public comment period solicited some ideas for additional criteria that were not considered in this.

And again, received some really great feedback. And so I was going to summarize some of the comments that we heard as well as some of those additional criteria points.

We did, excuse me, we presented this as an unranked list, but many commenters suggested that the list really should be ranked based on the level or degree of risk that is seen.

Further commenters pointed to the importance of developing a scorecard or a risk matrix to group and rank risk behaviors. And/or consider a category of probability or likelihood against a category of consequence severity.

Commenters also pointed to the importance of looking at these factors proactively and how certifiers implemented mitigations to address them before issues arise. So that we're not just reacting to the things that we find in an auditor.

Commenters strongly advised prioritizing required data reporting, specifically aggregate acreage data. And as we heard in other discussions today, data is continually coming up as an important piece of integrity and ensuring that we have the most

comprehensive data will help in all of our efforts.

In relation to the data reporting, it's suggested that overseas certifiers be directed to work with domestic certifiers to send the information requested by certifiers here to confirm data that may not necessarily be available in the Organic Integrity Database.

We've heard about some challenges in that communications were either long response times or no response. It's suggested that the certifiers be directed by NOP to respond to that information request.

One comment noted that instead of focusing on the number or lack of positive residue sampling results to focus on the sampling system in place to ensure it's sufficient and meeting the requirements as set out by the NOP.

Other commenters wished to see greater detail in the risk mitigation actions and when outcomes of those measures would warrant a non-compliance or prevent a certifier from gaining

initial accreditation.

Just to point out again the intent when drafting those various response steps was that any findings would be evaluated and responded to as other findings would in an audit.

Which depending on what is found may include non-compliance action or adverse action when it's deemed necessary.

And commenters suggested a greater detail of definitions, well, greater detail in definitions for some of the terms used so that the risk factors may be applied equally and objectively.

And on a similar note, looking to have a better understanding of what say average means when it comes to risk factors such as residue samples or number of non-compliances issued.

This relates again to the overall importance of accessibility to the data and that there's a common baseline of understanding and common access to the data.

Regarding risk factors on reporting

that data to the Organic Integrity Database there were some comments that did not feel reporting the minimum data required should be considered a risk factor for a couple of reasons.

One being that the certifier would be meeting the requirements, if not the minimal, as well as the fact that the database is still relatively new.

Certifiers are continuing to update their systems and are also cautious about not wishing to disclose confidential business information.

Again, I think some of those challenges can be addressed through aggregate data, and I think we're seeing that already.

Some commenters wanted clarification on what a breakdown in a control system is or looks like. There's general support for greater scrutiny during certification audits.

Concern was expressed regarding the cost of those longer, more detailed, deep dive audits, more intense audits, and that that cost

should be born at least, in part, by USDA.

Right now we as certifiers receive a bill for those services and it's a hefty one no matter the size of the certifier.

Something that I think we're happy to have happen and respect the work that NOP puts into that but the more that we start looking at other or additional factors and the longer those audits are there's definitely, I can see a tipping point, as some pointed out.

Finally, there was some concern expressed about the identification of one risk factor as the sign of potential fraud. And just to reiterate this was a list intended as a guide to looking at areas that have been noted as risk.

It's not the intention for the presence of one to automatically trigger greater scrutiny again pointing back to that initial idea of ranking this, of creating some sort of matrix.

We heard some from some folks the last couple days of examples of how they've incorporated that into their systems. And invite

those folks to share some of those models in the public docket.

And a number of commenters noting a holistic systems-based approach is essential when evaluating risk. So lots of, again, really good, really good feedback and then diving into specifically some of those comments speaking to additional criteria that we may have overlooked in the first round.

Some suggested adding that a certifier providing service to an operation that employs a former member of the certifier staff or a certifier hiring or seeking advice or in an advisory capacity or consultancy services from someone who's previously employed by an operation that certifies or alternatively a certifier engaging with a formal, former rather USDA employee.

There might be something like a cooling off period or some expectation that there would be a separation of time to avoid any real or perceived conflicts.

Another suggestion if a certifier misses one or more of the NOP annual trainings, NOSB meetings were also noted, that specific to the annual trainings that NOP include an evaluation of whether the appropriate staff were in attendance at the training.

And an evaluation of whether the information received at the training is adequately disseminated to certifier and inspector personnel.

We do see a really good turnout at those annual NOP trainings. And it's an excellent opportunity for that community to exchange ideas and strategies but it would be great to get to a 100 percent on that.

Another idea of including a greater specificity in the criteria regarding requirements specific to dairy management. That would be training and creating dairy-specific risk factors.

Another suggestion of program review or internal audit if USDA sees that those audit

reports contain major non-compliances or a significant number of minor non-compliances. That might trigger a closer look at what's going on there.

Another risk factor might be failure to implement and maintain internal procedures supporting the stability of the certification agency.

This again speaks to that overall control or quality system that should be in place if something like that is seen perhaps more emphasis is needed on verifying the health of other parts of the certifier's quality system to ensure that the full range of the certifier's procedures are robust enough to handle the present capacity as well as future growth.

That kind of ties into another suggested a surge in applications for certification could potentially be a risk if there's a lack of resources to keep up with that demand for services.

And sort of be the flip side of that

is a drop could suggest the presence of a system that is inadequate at providing the necessary services to maintain a healthy control system.

Let's see here. There were other areas of feedback that didn't necessarily fall into the column of a risk factor per se and thought it worthwhile to mention here.

One being a suggestion that NOP improve the process by which it engages in peer reviews. Heard some public comments on that pointing to several aspects of what those peer reviews look like in terms of qualifications of staff or if those involved what their respective expertise is.

Looking at strength in oversight and response to the import of organic grain. That's, of course, something that we've heard about in general quite a bit.

In frequent communication with the U.S. Customs and Border Patrol ACE System to provide more standardized, detailed info on organic products. We heard from the program on

efforts already underway to address that.

And strengthening and making consistent the process by which certifiers engage in those internal reviews and following up on their findings. And more closer look at kind of getting those processes or expectations more even across the board.

I know that we've seen a good flexibility, or enjoyed flexibility in how we approach those internal audits. Whether it's done by the program itself or an outside auditor, having that flexibility is still important. But having some common expectations of what that audit looks at would be a worthwhile focus.

And finally, the NOP should incorporate risk-based accreditation into the equivalency agreements that they engage in so that foreign certifiers are held at the same scrutiny that our domestic certifiers here the U.S. are.

And moving on from that, you know, as we heard in a lot of comments. There's an

interest in continuing to engage in this process and that this is not a finite list.

This is not a finite process, so we don't hand it off, and it just disappears. So looking to continue to be engaged and have this be more of a living document or a living process and would invite the program just to comment on perhaps how they see that best operating.

And the criteria, any thoughts on the criteria itself and just an opportunity for feedback there. Yes, sure.

DR. TUCKER: So I would say generally I want to just overall thank and appreciate all the thought that has come into this. I think I shared yesterday when we were looking at priorities for moving forward.

Inspector qualifications and training is incredibly key. Risk-based oversight is incredibly key, and technology is incredibly key. And all three of those variables have been sort of folded nicely into this set of work from both the Board and the public comments.

I'm intrigued with that as I do additional research on how other industries are implementing risk-based oversight. So much of it comes back to personnel. The personnel is always at the core of any risk-based system.

Which, you know, when you stop and think about actually really make sense. But to have it be that overt as your personnel is your risk is I think clarifying.

And so I think the way that the proposal was crafted and thoughtfulness of the comments are very much appreciated.

We are looking in terms of our accreditation and international activities group how do we think about certifier audits in a different way, in a risk-based approach that's still consistent under the regulations?

So we need a system that is again hi-fidelity to the regs while also reflecting kind of the world and environment we're in.

I think I mentioned that we have a new staff member with a lot of skill in risk-based

thinking, economics, and a really good eye for all the different international resources that are available for assessing risk which has been very eye-opening and helpful.

In terms of the equivalency arrangements, there is a group of countries that comes together on a regular basis as a working group. And so there's a meeting in December where we'll be talking about some of these issues and how all of us can work together.

Those conversations on risk-based have already begun in terms of both where there are sort of high risks how we collaborate. I think the enforcement collaboration, in particular, is really improved over the past couple of years.

Also, I think one of the risks in talking about risk-based oversight is that you have to remember that you can add all sorts of things at high risk but that means you also just from a resources perspective, you have to identify what the low risk is and what that means.

And then how you would detect a red flag at low risk that would elevate it in high risk. So you end up having enough of a monitoring system. But we do need to work both sides of the spectrum here, and so that's sort of the holistic.

You can't just concentrate on doing more, more, more at the top. You also have to think about, okay, well what does that mean we're not going to do as a result in order to reallocate resources responsibly while still having a red-flag system?

So this is going to take a little bit of time and some experimentation, but we're already taking steps in terms of introducing, for example, unannounced inspections not only of operations but we've had a couple of unannounced visits with certifiers, and so I think continuing that element of it.

So that's my overarching reaction to this work. Again, I'm very, very grateful for the comments and insight from the community as

well as the Board, so thank you.

MR. RICE: Thanks, Jenny. Appreciate the feedback and insight on how the program's tackling this. I wanted to open up to discussion and any questions or comments from board members on this. Emily.

MS. OAKLEY: This is back to your question I guess to the program to how we can use this document as a living document? It kind of reminds me to some extent the excluded methods process that we're working through.

So do you have thoughts or does the program have thoughts on how we can, you know, pass what we've got before but continue to work on it, especially on the couple of comments we got?

MR. RICE: Yes, I'm not quite sure. I think having that ability to have the open docket for the community to continue to weigh in but having a way to capture that similar to that excluded methods process would be helpful too so that we're all on the same page and can see in a

centralized fashion where the thought process is and where the action is.

I don't know if Jenny, you want to add anything to that or thoughts on how process-wise we can do that?

DR. TUCKER: I would love to have this be sort of an ongoing conversation so whether that means there's sort of a living document and sort of an artifact that collects that ongoing conversation. I'm open to that.

I think there does come a point at which there are going to be some things that we do from a risk-based oversight perspective that perhaps we don't publish because, you know, at some point you want to be able to do some of this and have it be at least a little bit of a surprise.

So isn't, you know, by the way, we're going to come in look at drawer one, four, and five of your, you know. And so I think there is when we're looking at risk-based oversight a real balance between transparency, openness in the

process.

We always want the process to be fair, and so I think openness and transparency supports fairness. And also sometimes when you're, you know, playing poker there are times when you're not showing your hand. And so that is part of it.

Sorry, somebody brought up a poker reference earlier in the meeting, so I'm feeling the need to extend that metaphor a little bit.

MR. RICE: It's better than a beard. Tom.

MR. CHAPMAN: Sometimes you hold them, and sometimes you share them, all right, my memory of the song "The Joker" is not that great.

A couple of things on this that I've been thinking about. One, is we all have opinions on the risks that are out there in the accreditation field.

And we got the public comments; the committee put them out in this document. But we also have to respect the fact that the people

doing accreditation, running an accreditation program also have a perspective and an experience that also needs to be weighed in on this.

And so our own opinions may not be the only opinions that matter on this. That being said, the other thing we need to keep in mind is the difference between all potential risks and the minimum amount to accurately segment the certifiers into high, medium, and low risk.

And you may not need to identify all risks to be able to appropriately segment into high, medium, and low. We did get some comments from certifiers that I wasn't particularly a fan of.

But everyone's entitled to their opinion around, you know, assigning high risk to minimum requirements as an example. And if you hit the minimum requirements that should subject you to a higher risk rating and I cannot disagree with that more.

Risk doesn't mean that you're non-compliant. Risk just means that there's the

potential for an issue there. There's risk, there's opportunity, and it needs to be evaluated further.

So that's a couple things to keep in mind. How I would like to see us move forward on this in my own mind is I'd love the program to go and take back these factors knowing the resources that they have, the capabilities.

The programs that are already in place and the processes, see how they interact with how they run their accreditation programs and then come back to us in a period of time to give us feedback on what of these 13 criteria were useful.

Which ones they're looking to incorporate or have already incorporated and how they're going about managing that risk. Or whether they may have additional questions and then that's how we can continue this conversation forward.

But to some degree, this document needs to be internalized by the National Organic

Program and turned into a Risk Management Program for accreditation. And unfortunately, we're not the ones to be able to write that in its full detail.

The other comment I just want to make from opinion and I don't know if others of that committee had a different opinion. We chose not to rank these items, that's not to say that they shouldn't be ranked.

But again it was to kind of respect that we were trying to identify risk factors. But of course, some risk factors may weigh more than other risk factors than those.

And I'd hope that the program would take that into account as they have, you know, this special insight of what they see when they go out and do these accreditation audits.

And the impact of certain risk factors have on their assessment of certifiers. I think at that point a weighting of these would be quite appropriate for them to implement in their own program.

As another avenue forward and as part of the public comment, we received information about risk assessments and certification of clients. And I also could see that as an area of us continuing and expanding those conversations.

To take a further look into risk factors with clients and making a similar document that we would recommend into certifiers to be able to take a more holistic approach and identify general risk factors that should highlight and segment their clientele for greater or less scrutiny.

MR. RICE: Thank, Tom. I've got Rick, Emily, Harriet, and Dave.

DR. GREENWOOD: Question actually for Jenny and Paul. I assume you have historical data where you should be able to rank these, and I guess the question we need to think about too is, are we talking about financial risk or reputational risk?

I mean there's all kinds of risk and so I'm just wondering taking these 13 items will

you be able to sort of do that and give us feedback in terms of what's the riskiest and what you think the risk is?

DR. TUCKER: I think, so over, I think we still have some learning to do. That's how I think I would respond to that. I think we have over the past three years had, maybe three or four years.

We've had simply because of sort of transitions in career and other variable we've had almost 100 percent turnover in our accreditation and international activities division.

We are at a point right now where we have the strongest accreditation team that we have ever had. I mean, that's natural in an organization to build over time.

And it does mean that the quality of the detection they're able to do now at a system's level is much more robust. And so we need a bit of time to be able to get more audits done at that level of assessment before I'm going

to feel comfortable that we're even able to rank these.

Now some of these jump out as, yes, absolutely. And so, I mean honestly, number 11 seems like a big one. Right? If you have an open, it takes a lot to get a proposed suspension or proposed revocation or to have another government kick you out of their system. Right?

So that one, yes, right, that's a big one. Other ones are interesting in terms of how you would actually then translate it into some kind of quantitatively fair assessment. We need a little bit more time to think through that. That's it.

DR. GREENWOOD: You think about risk, and there's, risk isn't one word, really. I mean it's the whole thing. You think about Chipotle and food poisoning, and it was reputational risk and financial risk. So you have to sort of parse it out to see what you're really looking for.

DR. TUCKER: Yes, reputational harm is certainly part of it, and certainly I think the

case studies for that are very clear in imports in dairy. Right?

And so those highlight very specific parts or sectors of the market. They both have a high market impact in term of financial impact, but also just reputationally that's, you know, consumers get those things.

And so, yes, reputational harm is part of that. How do you translate that into how you're looking at a particular certifier and then again to do like a proposed suspension or revocation you also have to have a lot of evidence against very specific citations.

So the risk-based model might help you see where to look but it really also comes down to do you actually have violations that you have strong evidence for that are against certain clauses.

I think one of the things we're doing based on all the audits we've had to help inform this is we are creating more of hierarchy in threes of the citations themselves.

In terms of when you look across all the citations in the regs, which ones, and that's another element that hasn't really been captured.

It's sort of captured in 12 a little bit. "Received a non-compliance that points to a breakdown in a control system."

So that means actually really looking at the regs and saying, "Okay, what would in the regs there'd have to be a non-compliance against for me to consider that?"

So at some point, all of this, then also has to feed back into, "How would I actually cite it?" So that again is a process that takes time and thought.

So, for example, we've done citations of certifiers in the past where, well, they didn't have staff that knew the wild crops regulations very well. Or we had mistakes in certificates, or we had mistakes in a material review.

So at one point are those three separate violations? And at what point is

actually you don't have sufficient, capable staff to carry out your mission?

And that's an entirely different part of the reg and so getting real thoughtful in terms of how we map all those pieces to each other.

Is this a system capability issue? Is it a personnel issue? What is the actual issue and how does that pertain to risk? That's the work we're doing right now.

MR. RICE: Thank you. Emily.

MS. OAKLEY: This is a question for the program. We got really public comment on this document, so I was wondering the extent to which the program is engaged in that public comment and able to incorporate some of that in this current proposal?

DR. TUCKER: I think the public comment that has been coming in, I certainly read the public comment and I agree with the short window. So I think we need to spend more time on those. But they're certainly a resource side by

side with the work of the Board.

MR. RICE: All right, Harriet.

MS. BEHAR: So part of doing, you know, risk-based is I think also having a robust accreditation system for the certifiers, and I'm very happy to hear that you're feeling very confident about the current staff.

Because that can be a very big deterrent to fraud if when they are being accredited it's very obvious that the people who are there know what to look for, know how to look for it.

Understand the systems in great depth and can go through some of these risk factors without actually having them look like it's a risk-based assessment. It's just the robust system of review.

So, no, I think this is a good, it's got its value and its approach, but I think moving too far to just risk-based, I think, I don't want us to forget that we need a robust baseline as well.

Including enforcement because there's nothing that discourages something than hearing that somebody else got punished for doing something wrong.

DR. TUCKER: Right, I think the risk-based is one approach within a broad portfolio which includes the basic regs and accreditation system.

So for example, it's not that like mid-term accreditation audits are going away if you're a low risk or something. So there will always be sort of a baseline that's in the regs that we will always follow.

So, yes, the other thing, not only do we have better staff. We also have a better system now. We have with the remaining Farm Bill funding we did buy an accreditation management system which is also very helpful in actually tracking and being able to really start looking at trends over time with non-compliances.

MR. RICE: And Dave.

MR. MORTENSEN: Yes, I had a question

and a suggestion. I was, and I preface my comments about such certification work by, you know, this is not my field.

But I was really struck by the comment this morning by the pineapple farmer that the farmers themselves can serve as eyes on the ground and collectively be sort of looking after things in their neighborhood.

And so I just, this reading the document it's very much the certifier looking after, but I'm wondering if there are ways that we can be moving in a direction where we're encouraging farmers to work collaboratively to not rat on your neighbor but at least be, you know, eyes on the ground to keep things on the up and up. And calling things into question when they see it.

I didn't see anything of that flavor in this, but that's a question then, is should it be? Or is this not appropriate for this kind of thinking the way we are looking at avoiding the problem of undesirable outcomes in integrity?

MR. RICE: Ashley, I think you have a response.

MS. SWAFFAR: Yes, so I don't think that this document is the right place for that, but I do think that is a critical piece that can help with fraud detection.

You know, I fielded a formal complaint this year that came from another grower. So, you know, if they've contacted me because they didn't know how to do it.

So, you know, that's a way for us to expand on complaints and educating producers how to file a complaint. You know, they don't know how to do that.

So I think that's a good piece for certifiers to tell their clients how to file a complaint.

MR. MORTENSEN: Thank you, Ashley, and then the suggestion is I think it's now about a year and a half ago, maybe two years ago, that my recollection, that some of the big fraud concerns began to be discussed actively on the phones with

NOSB.

And I would find it helpful, and we had a beautiful panel on this issue at the last meeting, I believe, where we talked a lot about this approach.

I would find it very helpful if an NOSB member if we could have a, you know, fairly comprehensive and robust report back to keep the analysts and members up to date on how we're doing on this issue.

Because, many of us I'm sure we're being asked, you know, what are you guys doing? You know, I was at the MOSES conference, there were 50 farmers that Harriet and I sat in on a session.

And I'm not feeling all that well-informed about that as a board member.

MR. CHAPMAN: By us, do you mean the NOSB or do you mean the National Organic Program?

MR. MORTENSEN: I mean us board members, we board members be kept up to date I guess by the NOP folks on how we're doing. You

know, are things getting better, are they about the same? You know, are we backsliding? I don't have a good sense for that.

MR. CHAPMAN: So Jenny had a large portion of her presentation on Wednesday about enforcement activities that the NOP is taking. I want to make sure that we provide --

MR. MORTENSEN: I hope I was paying attention to that. I didn't hear a lot about the international issue in the grain trade from the east, which I think is what got us going about this; I remember specific phone calls.

John Bobbe, you know, I don't know. I don't feel well-informed after that session. It's no knock on Jenny's thing, I heard some very helpful things. I didn't hear things about that.

MR. RICE: About like Serbia and the --

MR. CHAPMAN: Serbia and you know corn, are we feeling better about the corn market? Are we feeling better about soybeans?

You know, yes, those sorts of things.

Is it possible that you know, lower prices from eastern Europe continue to be nagging at the price of organic grains in the U.S.? I didn't get a flavor for that. Those kind of specifics.

MR. RICE: Jenny.

DR. TUCKER: You know, it may be, yes, I realize the presentation on Wednesday, it focused, you know, I had all these time constraints, right, and I wanted cover the full range of both what I felt we had done as a program and what we were going to be focused on in the next year.

If we can, I'll ask permission, if we have, you know, five or ten minutes tomorrow morning. We do have kind of a one-page fact sheet that we use to illustrate where we believe we are.

One of the challenges with fraud is we're never going to be done. Right? And so we do have that conversation internally as well.

"How are we going to know when we're done?" And the answer is we're never going to be done.

I am actually more concerned about the challenge shifting. Right? Everybody's really focused on the Black Sea; I'm actually right now more focused, I'm as focused on the Black Sea as I am in other emerging risk areas.

So we're never done and it's never going to, this is just be an ongoing thing. I think I can provide more specifics that I believe illustrate the actions we have done in more specificity than perhaps I presented on Wednesday if we can build in a few minutes for that tomorrow morning, I'd be happy to bring it up on Michelle's computer and just scroll through that if that would be useful. Would that help?

MR. MORTENSEN: It would be useful to me.

DR. TUCKER: Okay.

MR. MORTENSEN: And maybe other members, so I would find that kind of detail generally helpful. Jenny, I think that I totally

get it that it's a moving target.

I just would find it helpful to be better informed about where we are. And what the current and anticipated targets are that we're concerned about. Those sorts of things would be helpful for the Board to be appraised of. Thanks.

MR. RICE: Great. Any, Steve.

MR. ELA: I just have a question, and I'm not sure quite how to answer it because I don't, or how to pose it. I mean do we see any, I mean we have the state programs, and we have the private certification programs.

And I know state programs are hamstrung by full-time equivalents and budgets, I mean, so are private ones but, you know, they have to work within a governmental mandate.

Do we see any real differences between programs? I mean are there any red flags we need to be aware of between private certifiers and state programs or is it just some states do better than others?

Some private certifiers do better than others, I mean are there any inherent problems or flags in the system? Like you say I'm not trying to point any fingers, I'm just curious if, you know, different modes of action have different results.

MR. CHAPMAN: I just want to point out real quick there's actually three. There's private; there's non-profit, for-profit and state.

MR. ELA: Good point, sure.

MR. RICE: And state organic programs.

DR. TUCKER: So I'm sorry, so you're looking for sort of a generalized sort of description of --

MR. ELA: I guess I'm just wondering if, I mean, in the time we've been accrediting certifiers and you've been issuing non-compliances or anything.

Is there any, do you see any differences between the structure of the program and ability to follow through or risk factors or

--

DR. TUCKER: So I think a couple of them have been raised through here like the presence of satellite offices is automatically a risk.

And also from an audit perspective that is a bit of a challenge in that, you know, we publicize the fact we have about 80 certifiers.

When you start actually adding in the number of satellite offices, it actually jumps up to more like 120 offices. And so getting out to visit all of those satellite offices is a challenge.

So automatically that is going to be a risk just in terms of any distributed organization. They're going to be challenges and how do you get word from the mother ship out to all the other ships? I mean, that's just going to be part of it.

I don't think I could characterize, sort of further than that. I think it is

interesting to look at sort of the size dynamics of different certifiers and how many operations they have in terms of what that looks like in terms of staffing profiles and risk management.

You know, how large do you need to be in order to have like a real solid infrastructure or quality management or things like that? I think honestly we try and be really transparent about this.

In that, if you go to our website, you go to the Organic Integrity Database. If you look up a certifier, you can access their most recent audit.

So and we have a lot of folks in the stakeholder community who keep a very close eye on the most recent audit. So once audit reports are finalized, certifiers have a chance to give their corrective actions and we evaluate those corrective actions.

Those audit reports do go online. So I think if there are questions about any particular certifier, reading those audit reports

will give you a general sense of what's going on with any particular group.

MR. RICE: Great, thank you. Any further discussion or questions on this area? Yes.

DR. TUCKER: One very quick final action. We've been really, you know, talking about all the areas of improvement and risk with certifiers.

I do want to say there are a lot of certifiers doing an amazing job out there. And so we tend to focus on well, where do we need to improve? Where do we need to get better?

But there are some amazing people out there doing amazing work to protect this market and this industry. And I just want to make sure that we do a shout out to the work that they are doing.

Because it is an incredible group of professionals working out there on the ground every single day.

MR. RICE: Let's give a round of

applause for our certifiers. All right. Thanks for that, really great discussion. And with that, I think we can move to, let me get my place here.

MR. CHAPMAN: We'll move to a vote.

MR. RICE: Move to a vote.

MR. CHAPMAN: All right. So this is a motion that comes from the CACS subcommittee and motion was made by Scott Rice and seconded by Ashley Swaffar. And it's a motion to approve the proposal on developing criteria for risk-based accreditation oversight.

A yes vote is to adopt this proposal, a no vote is to reject it, and the voting starts with Scott.

MR. RICE: Yes.

MS. BEHAR: Yes.

DR. SEITZ: Yes.

MR. MORTENSEN: Yes.

MR. ELA: Yes.

MR. BRADMAN: Yes.

DR. GREENWOOD: Yes.

MS. DE LIMA: Yes.

MR. SCHWARTZ: Yes

MS. ROMERO-BRIONES: Yes.

MS. OAKLEY: Yes.

MS. BAIRD: Yes.

MR. BUIE: Yes.

MS. SWAFFAR: Yes.

MR. CHAPMAN: Chair votes yes.

MR. RICE: That's 15 yes, zero no, zero absent.

MR. CHAPMAN: The motion passes.

MR. RICE: Thanks, Tom. Next up we have training and oversight of inspector and certification review personnel, and I turn it over to Harriet who was the lead on this one. Harriet.

MS. BEHAR: Okay, so we did get some really great comments on this. And I say really great because most of them were positive, so I like that.

There were some reminders that as we continue to develop inspector training modules

and various methods and standardization that certifiers should always be kept in the loop.

I think that's understood, but we will keep that in mind. The Organic Seed Association said always keep seed issues in mind.

There was some really great information provided by both IOIA and ACA giving us some really good topics for trainings areas where inspectors could use baseline skill trainings and knowledge as well as more advanced.

So it could be kind of a priority setting list from both of those organizations. I like too that IOIA also brought up that it's not only knowledge of the organic standards that's important for a good inspector.

They have to be a good interviewer, an excellent observer, and then be able to communicate that information in a clear, concise way to the certifier in order to do a good job in passing on the information that the certifier needs to make their determinations.

Most of the commenters agreed that it

was a good idea to include certification review personnel in this area. Although some certifiers felt that they needed to be more directive to their own employees and that they feel that they're already doing a good job.

However, they did agree that this was an area that should not be forgotten that reviewers also need to understand the regs and be able to read what's being communicated to them and picture what's being transmitted.

Because they have a basic understanding of handling or livestock or crops or wild harvest when those items are being discussed so they can then make their final review.

IOIA also recommended looking at other post-secondary educational institutions as places to provide knowledge and skills to organic inspectors.

And they felt that a more in-depth survey could be done where current inspectors could express where they feel they might be

lacking in skills and knowledge in order to do a good job.

There was discussion that the National Organic Program should step up and help fund some of the more advanced trainings that right now it's kind of part of the, you know, the inspector's pay and the non-profit or these, you know, small staff organizations are putting on these trainings and they don't have the real funding behind them to do some of these more technical trainings.

Especially to bring in outside personnel that might be fairly expensive. So that was an interesting. Others also talked too about when we discussed having a list of what skills inspectors had so all certifiers would then have access to that.

Some were concerned about the privacy for the inspectors that there would have to be some kind of release or something. So that was something I had not considered, but that's an interesting thought.

Again, ACA had some great survey questions. They had quite an extensive public comments on this and even examples of like an evaluation form of inspectors and that sort of thing so that we could really see that the certifiers, you know, have the starts of a really robust system.

We know that there's some areas where there can be improvement, but it's definitely an area where they are not ignoring this. They are paying attention because when there's a poorly written report or they get a complaint from a client that the inspector didn't know what they were doing.

Of course, both of those kind of make their job a lot harder and reflect poorly on the certifier. So the same thing with inspectors as far as doing some kind of survey to see where there's areas of lacking.

There was discussion about doing the same with review staff. Where do they feel they need some more help? And that sort of thing to

help make sure that we're not just filling in gaps that are not there and then ignoring areas that we never knew were a problem.

So but mostly very much the public agreed with where we went and liked what we did. And the public comments mostly gave us a little bit more on the priority areas that we can set by using these tools that we have laid out here. And that's it.

MR. RICE: Thanks, Harriet. Discussion from the Board and question? Ashley or someone else while Ashley prepares her thoughts? Tom.

MR. CHAPMAN: I mean I don't have any deep thoughts on this other than I think it was an excellent proposal that we received a lot of support on. And I look forward to passing it.

MR. RICE: Ashley.

MS. SWAFFAR: Yes, so I've been fortunate to live on both sides of this issue as a client, as an inspector, and now back as a client.

So I feel like I've seen a whole gamut of fun stuff between inspectors and reviewers. And, you know, I just want to say for inspectors I don't feel that IOA's the only way, you know, for training for inspectors.

All right, mic difficulties here. But I do want to point out that I really think it's critical when we're looking at inspectors in scopes.

You know, I was a livestock and crop inspector, but it was not all species of livestock. And I think that is what I heard from clients so much is you know, "Man, I have this inspector. They didn't know a thing about chickens."

And that's so frustrating for a client. So I think that's a place that really needs to be looked at by certifiers when they're assigning inspectors to operations. It's really looking at what do they know anything on a commercial level on those operations?

Not just like for poultry, you know

backyard, but you don't know what you're looking at going into a larger farm. It can be very challenging because I see looking at an inspection, some of those inspectors, they don't do a great on mass balances.

And those are the critical areas that we're looking at for fraud prevention and things like that. So you know, really specializing in what they're doing.

And then the same thing with review staff because I see a lot of variation with review staff when they're reviewing files, and so I think, you know, specialized training for them is critical on this too.

MR. RICE: Sue.

MS. BAIRD: Yes, I echo what Ashley says, I think that I think the inspector needs to be upfront with what they can do scope-wise. Sometimes they say, "Well, I've got a lot of stock," and I think that's livestock.

And livestock might be a dairy but certainly not a poultry or vice versa. And I

think the certifier needs to be diligent to pursue what the scope of the inspector's knowledge base is.

And I also heard and I applaud someone who said that sometimes it's beneficial that we have team inspectors. And I see that especially when you go into the really complex handling operations.

To date, there are some, but a lot of certifiers still want to give you maybe four hours to do a complex operation. And it just don't work.

Not if people do a real true mass balance. Not if you're going to be comprehensive enough to detect a fraud.

Now you can go in and maybe do an overview. So I think it needs to be education of our industry as well. That they understand to protect their reputation and to protect the whole Organic Integrity's reputation.

They must be prepared to pay for a more comprehensive and to be; just I'll put it

there, be prepared to pay for a more comprehensive inspection.

When I was a QA manager at Cargill, we had a HACCP audit, and we expected those auditors to be there for a week. I mean that's just the way it is.

If you're going to do a comprehensive that's just what we allocated to do it on HACCP inspection you expect them to a good four hours.

So I think it's not only, not only the inspectors but we need to educate our clients themselves on what to expect and the value for them.

MR. RICE: Thanks. Ashley.

MS. SWAFFAR: Yes, I will say I see that a lot because I honestly in new poultry get a whole lot of chicken inspections and they've got to, they got a taste of it for those first mass balances that I did.

They were used to it by the end, but they just didn't understand why it was so thorough. And when you explain to them, you want

me to do this to you, and then you want me to do it to your neighbor, they kind of got it.

Like, oh, it makes sense now. You know, so I think there's some education there for sure.

MR. RICE: All right.

MS. BEHAR: So having been an organic inspector trainer for many years and having mentored many inspectors and having done team inspections and having done multiple-day inspections, I agree with you.

So I think that one area of team inspections and peer mentoring is kind of an area that is very, very useful that has not really been instituted, and there's times as an inspector trainer that I would see someone in a class.

And within 25 minutes of discussion on some subject, I could tell who got it and who didn't. And I really have been trying to figure out what is that magic? What is that?

You know, and it was hard for me to

say what does it mean that they got it? But they understood the traceability; they understood the holistic system, they understood how in an interview you might hear something off to the side.

Like "Oh, I'm using my brother-in-law's bin," or something like that. And it's in a discussion about a family wedding or something like that they're talking about and that you have to follow that thread, because, oh, that bin was not on your organic system plan and we have to go visit it.

So and it's the same thing at a handler. There might be some discussion about oh I had to change a supplier when you're looking at the warehouse. But certain people will understand that that was an important kernel of information and others it will go right over their heads.

And I don't know how you identify that and I don't exactly how you instill that in people. But I think mentoring is a very good way

because most people learn by experiencing.

And so if it's like on the job training with somebody there to kind of be the safety net to make sure that the job is being done correctly, I think that really works well.

But there is really very little funding for this because that's a big burden on the mentored inspector if they're just going to go along on these inspections and not get paid.

And it's extra work for the actual inspector who's probably the one who takes the responsibility for the inspection to then spend the time with a mentee and go over things and say, oh, this was missed or whatever.

So I'm not really sure with the program or whatever but I would like to continue working, especially on the mentoring and the team inspections which I think can be very, very useful.

MR. RICE: Sue.

MS. BAIRD: I wanted to commend the subcommittee on identifying approving skills how

to diffuse negative situations. I think that's pretty critical.

Especially we seem to be becoming more of a society that perhaps would take offense at things. And my way of doing it is to become a little bit more Southern lady the further along we get.

We get into a tense situation and I just kind of giggle, "I just don't understand how this is just not balancing." And just get a little bit more dumb the whole time as I go along.

Now that's my method, and it works for a little old Southern lady, I'm not sure how other people do it. But I think that's critical as well.

We don't want to portray to our clients that they're committing fraud. We just need to help them to understand that there's another piece of information we need here.

And I think that's critical. We're seeing some strange climate out there. People

really want to get angry; it appears to me. So I like that addition on that.

MR. RICE: Okay, I wanted to respond real quick. In terms of, I agree there's that aptitude that some people just innately have, but then it's important to look at some of the resources that we have outside of our, kind of certification frame of mind.

And one of the things that we take advantage of or have the ability to advantage of some courses and trainings through the state that maybe are more targeted to investigative situations that we've found are really helpful for our staff both review and inspection.

And one of the things that's been really helpful if sending folks to training on investigations that includes the IRAC method where you identify the issue, the section of the rule that applies to that issue.

The application of that and coming to a conclusion and keeping it very fact focused. And I think when you're able to kind of walk that

line it also helps address some of those diffusing kind of situations where it's, you know, we're not attacking a person we're looking at an issue, and we can tie it directly to the rule.

And if you find yourself out in left field and you can't tie it to the rule, then you need to walk back a little bit. But it's sort of touching on a few things in there.

And also I wanted to highlight that there were a number of commenters that also from certifiers saying that they appreciated a baseline but still wanted to maintain some or hold on to some flexibility in how they get to that baseline.

And I think that's really important when we don't want to necessarily take tools that are working away from anybody but still allow that innovation.

Ashley and then I think we need to wind it up.

MS. SWAFFAR: Great. So I just want

to say I do think there's a lot of really great inspectors out there that do a really good job.

But we're getting ready to lose a whole lot of inspectors. If you look at the age of inspectors out there, I mean, they're ready to hang it up and go home.

So like they're tired of being on the road. I did it for three season, and I couldn't cut it. I want to be in Arkansas. So I think that this document is critical moving forward for, you know, for such a growing industry that we have.

We need inspectors, and we need better guidelines on, you know, what we expect out of those inspectors. So hopefully this can get in place before a lot of those folks retire and the new that comes on.

MR. CHAPMAN: Do we need a round of applause for the inspectors?

MR. RICE: I think that would only be fair. All right, I think we are ready to move to a vote.

MR. CHAPMAN: It's not projecting, but I can get it off my screen. All right, so the motion, we have a motion that comes from the subcommittee. The motion was made by Harriet and seconded by Rick.

The motion is to adopt the proposal as guidance of the NOP inspector certification review personnel training and oversight.

A yes vote to adopt this proposal and a no vote is to reject it, and the voting starts with Harriet.

MS. BEHAR: Yes.

DR. SEITZ: Yes.

MR. MORTENSEN: Yes.

MR. ELA: Yes.

MR. BRADMAN: Yes.

DR. GREENWOOD: Yes.

MS. DE LIMA: Yes.

MR. SCHWARTZ: Yes.

MS. ROMERO-BRIONES: Yes.

MS. OAKLEY: Yes.

MS. BAIRD: Yes.

MR. BUIE: Yes.

MS. SWAFFAR: Yes.

MR. RICE: Yes.

MR. CHAPMAN: Chair votes yes.

MR. RICE: That's 15 yes, zero no, zero absent.

MR. CHAPMAN: The motion passes.

MR. RICE: I'm going to turn it over to Jenny Tucker now for a look at the Integrity Learning Center.

DR. TUCKER: Is this automatically on? It's off, okay. So my main goal here is to just show you this is real.

And to give you a sneak people and to invite you to come to the November 15th the webinar to lead more. And so the goal of the Organic Integrity Learning Center is to provide online training.

So that's the piece of the action that we're filling is the online training to support the professional development and continuing education of organic professionals working to

protect organic integrity.

Now, we are really focusing on inspector and reviewers and certifiers. We'll also have a section for organic farmers and handlers.

That's where we will put all of our collection, for example of Sound and Sensible modules because they're a very good training in there for our farmers and handlers that came out of the Sound and Sensible Initiative.

So we are still working on what all the different topics will be, this is where having feedback from you will be helpful during the webinar and where the NOSB worked so far.

It will be very informative in building this out. So this is hosted on a platform called blackboard.com. Blackboard is used by colleges and universities across the country.

And so this is the landing page on the Blackboard server so we already have the infrastructure stood up and so this is just a

placeholder home page.

Eventually, once this is launched which we're really targeting for January. Where people will be able to come and register for the system.

They'll be able to go to a dashboard, and they'll literally be able to see the courses that they can register for. So the different topics that they can register for depending on who they are whether they're an inspector, reviewer, or certifier.

They'll be able to see their completed courses, they'll be able to print a transcript that shows what they have successfully completed.

So then an independent inspector, for example, couple print out their transcript and take it to a certifier and say, "Hey, here's the continuing ed that I have done in this system."

Now we are developing material that we don't believe exists out there in the public domain that we think everyone needs. We are also interested in a crowdsourcing content that other

folks have already developed and that are either willing to just give us to up and make available to others.

Or we are willing to commission training development depending on the topic. And so we're looking for a content in a lot of different ways. And we do see this being an ongoing effort.

Based on the competencies and skill that continue to emerge as the top priorities. So again just wanted to provide that this is actually a system that lives on a server that people will be able to log into and take training through, again, ideally starting sometime in January.

MR. RICE: Excellent, that's for the sneak peek, Jenny. And I'll look forward to learning some more about that.

DR. TUCKER: Yes, thanks for the work from the Board on this and all the stakeholders who have contributed to this effort so far.

MR. RICE: Great, thank you. Now I'll

turn it over to Tom for a synopsis for a synopsis of a lot of what we've been talking about.

MR. CHAPMAN: All right, so this is the verbal update, analysis, and feedback from the spring 2018 import panel.

And there's no document in here yet. The concept here was to provide a summary of comments and concepts received from both the publish and the panels. And both panels at the spring 2018 meeting bucketed into major themes or actions.

This document is sufficient as kind of being a strategic roadmap for potential future action with possible next steps carry's the responsibility in potentially some ranking of importance or impact for prioritization work.

Some of these items that were discussed in that meeting are already under action either by the NOP or by the NOSB by the fact of the two matters we just passed.

So and then just by evidence of the NOP 2019 strategic plan that was shared

yesterday. So we really just wanted to put this on the agenda so members of the public who have provided their comment knew that we were continuing to work on that, collate that information, and continue to work forward to present then something that was usable by future NOSBs and the program the program to find ways to increase organic integrity and supply chains.

Just, if we were to try to get it out at this meeting given other priorities and other workload. It would have been a deterrent to the the robust comment and feedback we received.

So more on that to come. And we hope to have something that will come forward in the spring 2019 meeting.

MR. RICE: Great, thanks Tom. With that, we complete the work of the CACS, and I turn it back to you Tom.

MR. CHAPMAN: Thank you, Scott. Actually, I think we can get through the livestock section in three minutes.

MR. RICE: No, I think we will, I will

give you three minutes of your life back today. Perhaps there was one too many beard jokes that took up too much time.

So we will move into recess in a moment. We'll start back up tomorrow morning at 8:30 with the Livestock Subcommittee. Following that will be the Handling Subcommittee. And then following that and if we're running behind we won't stop for lunch.

Following that will then be the Crop Subcommittee, after that we would deal with any deferred proposals. Review the NOSB work agenda and then go forward with officer elections.

Hopefully wrapping up by 5:30 or 5:00 so folks can set their prices folks can go by 4:30 or 5:00 so folks can get their flights.

One last thing is to yet again remind folks that there's a networking reception, I believe, next door feature delicious cocktails and hors-d'oeuvres. Hopefully, they have organic pineapple as well.

And that starts at 6:30 and runs to

9:00. Thank you, everyone, for public comment. The Board for its attention, participation today, and the NOP as well. We'll stand in recess, until tomorrow at 8:30.

(Whereupon, the above-entitled matter went off the record at 5:28 p.m.)

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C E R T I F I C A T E

This is to certify that the foregoing transcript

In the matter of: National Organic Standards Board
Fall 2018 Meeting

Before: USDA

Date: 10-25-18

Place: St. Paul, MN

was duly recorded and accurately transcribed under my direction; further, that said transcript is a true and accurate record of the proceedings.

Neal R Gross

Court Reporter

UNITED STATES DEPARTMENT OF AGRICULTURE

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NATIONAL ORGANIC STANDARDS BOARD

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FALL 2018 MEETING

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FRIDAY,
OCTOBER 26, 2018

The Board met in Great River Ballrooms 1&4 of the Intercontinental Saint Paul Riverfront Hotel, 11 Kellogg Boulevard East, St. Paul, Minnesota at 8:30 a.m., Tom Chapman, Chairman, presiding.

PRESENT

TOM CHAPMAN, Chair
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DAVE MORTENSEN
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A-DAE ROMERO-BRIONES

ERIC SCHWARTZ

DAN SEITZ

ASHLEY SWAFFAR

STAFF PRESENT:

MICHELLE ARSENAULT, NOSB Advisory Board Specialist, National Organic Program

SONIA JIMENEZ, Deputy Administrator, Specialty Crops Program, Agricultural Marketing Service

CLARISSA MATHEWS, Ph.D., National List Manager

DEVON PATTILLO, Materials Specialist, National Organic Program

DR. JENNIFER TUCKER, Ph.D., Deputy Administrator, National Organic Program; Designated Federal Official

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

8:35 a.m.

CHAIRMAN CHAPMAN: All right. It's 8:35 and we'll come back into order for our last day of our NOSB meeting. Today we have the Livestock Subcommittee, the Handling Subcommittee, the Crops Subcommittee, a review of the work agenda and then officer elections. So quite a bit today.

But before we get into any of that, we're going to follow up on the request from Dave for some more information about enforcement activities, and I'm going to hand it over briefly to Jenny to talk a bit more about that.

DR. TUCKER: Okay. Well, we're starting by just reminding folks of the four NOP priorities, so that's the first slide. The goal here is to provide a bit more specificity around the actions that we've taken on imports and the successes that we have had in that area. So I think we sort of alluded to some of those yesterday, but we wanted to put them all in one

place.

So why don't I just -- I can just get up and come over there. There's not that many slides.

Okay. There we go. Thank you.

So let's review specific actions on imports. And again, I think I alluded to a lot of these in Wednesday's presentation, but having them all in one place with a bit more specificity will help, I think.

So USDA does continue to actively investigate foreign organic supply chains, and the Black Sea region certainly is an area of focus. So we have issued proposed and final revocations. We've successfully revoked three operations in Russia and Turkey and are pursuing a complaint for hearing against a fourth.

Multiple other investigations are in progress with the cooperation of both private and federal partners using technology and risk assessment indices. And so OIG and APHIS are important partners with us. I've been talking

about the relationship building that's been happening there.

We've been having close communication with U.S. importers. Increased information sharing there. We are investigating fumigation notices when products are destined for the organic market are treated at the border.

So sort of outcomes of that. As we've been monitoring what's happening with certification in that region of the almost 1,200 operations in that area that were formerly certified, only about 700 remain certified, so there's been a significant drop.

Many have surrendered or have been suspended or revoked by their certifier, so the actions that I just spoke about in terms of revocations and hearings or actions and OP has taken. But certifiers are also taking action there.

So the trade data. So the question is so what? What is the outcome? There has been a 95 percent drop in the volume of organic corn

from Turkey, and so that is taking the difference between the highest imported volume that was recorded in January 2016 and the most recent data point which was August 2018. So 95 percent drop. So hopefully that communicates some progress.

Next slide. Okay. Let's talk about specific action with certifiers. So face-to-face training in the U.S. and Europe. We have done webinars on adverse actions on verifying reported yields. This has been a challenge in terms of capability development.

We have been doing unannounced inspections and testing. It's been required for all grain and oil seed suppliers in Turkey and the Black Sea and for all incoming vessels in that region. So testing has not only resulted in product being diverted from the organic supply chain, but it's also directly resulted in some of those surrenders that I mentioned.

We have issued non-compliances to certifiers and we have proposed a suspension of a certifier's satellite office. That's on appeal

right now.

We have also focused our oversight on all those surrendered operations just to make sure they don't just reapply through some other certifier. And so we have asked certifiers to be keeping us up to date. There has been some certifier shopping of surrendered operations in that area, but to date they have not been certified.

Okay. Let's go ahead. So what we're doing, sort of government level. I talked about -- illustrated our rapid response approach for questionable imports. I walked through the Serbian case study on Wednesday. And so that rapid response approach allows us to pretty quickly figure out what's happening when we start seeing questionable imports.

We have developed a standardized process for ship-specific checks and have been -- and investigated multiple shipments in that way.

We've published two policy memos, I mentioned this on Wednesday, on the impacts of

APHIS requirements for organic imports. It's really raised awareness across the industry.

And we're also partnering more with our perishable commodity licenses. That's run through a different program within AMS. And so we issued a joint letter and that's gotten a lot of coverage in the produce community.

We are doing a much better job of sharing information on questionable imports. We have built relationships across APHIS. I did go to my Miami with APHIS in August. And we're communicating more with on-the-ground folks with the Foreign Ag Service. Those are bridges that are new for us in extending our capability overseas.

We are ready, I mentioned on Wednesday, to contract with CBP to initiate organic message SAT programming. So now that we're in a new fiscal year, that will make that project able to move forward more quickly.

Next slide. Okay. So what are some examples of blocked shipments? We had some corn

that were coming from -- corn was coming from Turkey. Crops were grown in Russia, Moldova and Kazakhstan. These were refused entry by APHIS. Corn and soybeans have been blocked coming from Turkey, with corn from Kazakhstan.

APHIS has been a very valuable partner in this work. We have blocked shipments of chickpeas, and there was a blueberry shipment from Chile which was not only stopped, but recalled and destroyed.

Let's keep going. All of this needs to be within a broader understanding of the risk. U.S. organic sector is now fully integrated with the global marketplace and imports have continued to increase in size and scope. So we are introducing new approaches to manage that, but when you look at the growth between 2011 and 2017, we have gone from $667 million over 20 HS trade codes in 72 countries. It's increased to 1.9 billion across 57 trade codes in 89 countries. That's just in six years. So this is a tremendous growth out there in the market.

And then here are some of -- so pictures of the type of analysis we're now better able to do quickly. I've mentioned that we were able to recruit an economist with very tight ties in with the Foreign Ag Service, and he has done a really nice job of helping us access and analyze data sources that we haven't really looked -- been able to look at as thoroughly before.

So here's a chart for example of import volume of organic corn where we're looking at Turkey, Argentina and Serbia. So Serbia again a case study I raised. Turkey we all know about. This is in metric tons, but it helps you see some of the trend lines over time. So you can see some growth in that Turkey market that has now dropped off. But this is also allowing us to see what is coming up and what has happened most recently so that we can adjust our risk-based oversight appropriately based on changes in these curves over time.

So that's the end of that presentation. Again the goal was to give --

respond to the Board's request for some additional context on both the actions we're taking and some of the successes over the last year. So thanks for listening.

CHAIRMAN CHAPMAN: Any questions for Jenny?

Dave?

MEMBER MORTENSEN: Jenny, thank you. And that is the very kind of thing I was asking about, so thank you for going to the trouble of pulling that together.

DR. TUCKER: Thank you for raising the question.

MEMBER MORTENSEN: It's clarifying. Thank you. And it is encouraging to see the progress in outcomes by the steps that we're taking to make change.

DR. TUCKER: It's a work in progress and will never be done, but we will keep on going.

MEMBER MORTENSEN: So if I could, just a couple of questions. Of the approximately 500

operations, I think you used the word an operation would be a farm or would that be a certifying agency and a farm and a -- what would an operation be?

DR. TUCKER: Yes, thanks for -- that's a good question. Operation includes farms and businesses, so we just call them certified operations. So listings in the Organic Integrity Database.

MEMBER MORTENSEN: Okay. So could you give us some insight into what it was about those 500 out of almost 1,200 that resulted in them having their organic certification revoked in a very short period of time?

DR. TUCKER: So different suspensions and revocations would have happened for different reasons, and a lot of those were done at the certifier level. And so I don't -- we don't have case -- when a certifier suspends or somebody surrenders, it gets logged in the Organic Integrity Database. We don't have all the context for the investigation that occurred that

led to that outcome.

MEMBER MORTENSEN: We wouldn't have access to that information?

DR. TUCKER: So we -- I mean, honestly we could ask the certifiers for all of the investigative records that led to the suspension. I'm more interested in getting them out of the game and going to the -- making sure we're getting a broad coverage.

Certifiers are our point of contact on the ground and that's what they're there for. And so we're doing capability development with them to make sure they're on the -- doing the right things on the ground and have issued notices of non-compliances. So I suspect that some of the non-compliances to certifiers caused them to change their actions which led to some of these adverse actions against operations.

MEMBER MORTENSEN: Yes, because that -- to me this is an example of the discussion that we had on the risk-based modeling yesterday, hot spots of non-compliance, cool spots of good

behavior. It would be interesting if the data could be mined in a way that we had some sense for the collective qualities about an operation that leads it to be one of 500 and the collective qualities of an operation that leads it to be one of the other 700 so that it helps us target not only the operations in Turkey, but in Serbia or other places. Is that possible with the data that we have or not?

DR. TUCKER: I'm not sure we immediately have that kind of data. This is a bit of a balance between -- there are a lot of hot spots out there.

MEMBER MORTENSEN: Yes.

DR. TUCKER: And so it's a bit of a balance between looking to what's next and analyzing where we actually think we've really had some impact. Yes, we can do more analysis on that to analyze it. I think honestly there are enough problems out there that I would rather take a more broad let's-go-to-the-next-hot-spot, and we know they're out there.

MEMBER MORTENSEN: Okay.

DR. TUCKER: Yes.

MEMBER MORTENSEN: And just one last question: There is a spike for example in the Serbian grain trade in the graph. None or so low that it was -- you can't see it on the Y axis to 2018 up to whatever 20,000 units. Does that set of a risk-based trigger?

DR. TUCKER: Yes, and that's why we immediately when we saw the -- we heard about the crops coming in from -- so that was a -- it was a good flag. And we have immediately deployed Foreign Ag Services on the ground there. We also -- it is true that that government has been investing in organic production and I think -- so we have to remember that just because there's a spike doesn't mean they're all bad actors. That there are countries that are investing in organic --

MEMBER MORTENSEN: Yes.

DR. TUCKER: -- as a growth area.

MEMBER MORTENSEN: Yes.

DR. TUCKER: But I think we have a good indicator of what the government has been doing to foster that growth responsibly and we have our Foreign Ag Service on the ground. That's capabilities we didn't have a year-and-a-half ago.

MEMBER MORTENSEN: Yes.

DR. TUCKER: And so I think that that's where we can -- again you see another sort of spike there that might tell me, well, gosh, maybe I need to go spend some time somewhere else, too.

MEMBER MORTENSEN: Yes.

DR. TUCKER: Yes, and that -- I think that's an early warning system that is new and that is useful.

MEMBER MORTENSEN: Thank you, Jenny, for pulling this together. It's very helpful. Appreciate it.

DR. TUCKER: Thank you. We are going to be; final comment, funding a project this year. I mentioned it at the spring; we weren't

able to get in place before the end of the fiscal year, but we are going to -- we are funding a project to do some pretty focal pilot commodity country studies. So how would you do a mass balance at a country level for a specific commodity?

And so one of the case studies we'll do will be in the Black Sea region and then one of the case studies will be in South America. And I think that will also give us yet another repeatable process that we can quickly field when we see these risk areas. We can immediately deploy a team. Okay. Let's go to that country and do this kind of ground-level work. We don't have a specific repeatable process for doing that yet, but in six months we will.

CHAIRMAN CHAPMAN: Since this isn't on the agenda, I'm going to ask folks to keep their questions brief so we can get back to agenda items.

Emily?

MEMBER OAKLEY: This is just a thank

you for that data. I think it was really helpful and I also think more of that at the beginning of each NOSB would be appreciated by the broader stakeholder community that might not be here today. But thank you so much. This was great.

CHAIRMAN CHAPMAN: Harriet?

VICE CHAIR BEHAR: Thank you. I reiterate thanking you, but our market -- and especially I think getting this out so this could deter bad actors because they know we're looking. But that being said, our market is still extremely attractive. And so I think we need to be continually improving. And I'm very happy about the block chain development because I think we need to stay ahead of them instead of them ahead of us.

CHAIRMAN CHAPMAN: Okay. Thank you very much, Jenny, for that and pulling it together on such short notice.

With that we will move back to our regular scheduled programming and I will hand it over to Ashley for the Livestock Subcommittee.

MEMBER SWAFFAR: So good morning, everyone. Welcome to the Livestock Committee. Many of you ended your evening with alcohol, so we're going to start our morning with alcohols.

So we'll start this morning with the program reading the first item.

DR. MATHEWS: Thank you. So we'll start the sunset reviews. We had Section 205. 603 of the National List, Synthetic Substances Allowed for Use in Organic Livestock Production. Paragraph (a) is disinfectant sanitizer and medical treatment as applicable, alcohols. And the listing is ethanol disinfectant and sanitizer only prohibited as a feed additive.

MEMBER SWAFFAR: Thank you.

Jesse?

MEMBER BUIE: The NOP has allowed ethanol use in organic livestock production for over 20 years. While there have been several -- while there are several alternatives to the material, ethanol is relatively harmless and provides an additional mean of disinfectant

thereby reducing the chances of developing bacterial resistance.

Public comments were overwhelming in favor of relisting ethanol. It is unlikely that large-scale spills and associated environmental contaminations will occur under the allowed use of ethanol as a sanitizer and disinfectant in organized livestock production.

Are there any questions?

MEMBER SWAFFAR: Thanks, Jesse.

Open it up. Anybody?

(No audible response.)

MEMBER SWAFFAR: I see no further debate.

Tom?

CHAIRMAN CHAPMAN: Okay. So this is a motion coming from the Crop Subcommittee. Motion is made by Jesse, seconded by Harriet. The motion is to remove ethanol-based products from the National List.

To remind folks this is sunset voting and in sunset voting in order to ensure each make

material gets a vote we vote to remove. We make motions to remove. So if you do not want to remove the substance, if you do not want to sunset the substance, then you vote no. If you do want to sunset the substance, if you do want to remove it, then you vote yes.

So this motion came from the subcommittee with six no votes. The voting will start with Dan. A no vote is to remove; a yes vote is to retain.

Dan?

MEMBER SEITZ: No.

MEMBER MORTENSEN: No.

MEMBER ELA: No.

MEMBER BRADMAN: No.

MEMBER GREENWOOD: No.

MEMBER DE LIMA: No.

MEMBER SCHWARTZ: No.

MEMBER ROMERO-BRIONES: No.

MEMBER OAKLEY: No.

MEMBER BAIRD: No.

MEMBER BUIE: No.

MEMBER SWAFFAR: No.

SECRETARY RICE: No.

VICE CHAIR BEHAR: No.

CHAIRMAN CHAPMAN: Chair votes no.

SECRETARY RICE: It's 15 no; 0 yes; 0 absent.

CHAIRMAN CHAPMAN: Fifteen no. The motion fails.

Ashley?

MEMBER SWAFFAR: Great. Back to Jesse, isopropanol.

Sorry, you want to read, Clarissa?

DR. MATHEWS: Still in Section 205. 603, paragraph (a), Alcohols. The listing is isopropanol disinfectant only.

MEMBER BUIE: The NOP has allowed isopropanol alcohol use in livestock production for over 20 years. It is used as a disinfectant only. No specific or significant information was presented that warranted removal of the material during the 2017 sunset.

Public comments were overwhelmingly in

favor of relisting isopropanol.

Are there any questions?

MEMBER SWAFFAR: Any discussion?

(No audible response.)

MEMBER SWAFFAR: Tom?

CHAIRMAN CHAPMAN: Okay. We have a motion to remove isopropanol from the National List. The motion was made by Jesse and seconded by Harriet. A no vote is to retain; a yes vote is to remove. And the voting will start with Dave.

MEMBER MORTENSEN: No.

MEMBER ELA: No.

MEMBER BRADMAN: No.

MEMBER GREENWOOD: No.

MEMBER DE LIMA: No.

MEMBER SCHWARTZ: No.

MEMBER ROMERO-BRIONES: No.

MEMBER OAKLEY: No.

MEMBER BAIRD: No.

MEMBER BUIE: No.

MEMBER SWAFFAR: No.

SECRETARY RICE: No.

VICE CHAIR BEHAR: No.

MEMBER SEITZ: No.

CHAIRMAN CHAPMAN: Chair votes no.

SECRETARY RICE: That's 0 yes; 15 no; 0 absent.

CHAIRMAN CHAPMAN: Fifteen no. The motion fails.

Ashley?

MEMBER SWAFFAR: Moving onto aspirin.

DR. MATHEWS: The listing in 205.603(a) is aspirin, approved for health care use to reduce inflammation.

MEMBER SWAFFAR: Okay. That's my material. So aspirin in an anti-inflammatory drug used for temporary relief of minor aches and pains. I think we all know what that substance does.

Overwhelming support in the public comment to relist it, those saying it was critically important to the humane treatment of their animals and it's a widely-available

medication for use. So open it up for discussion.

Yes, Harriet?

VICE CHAIR BEHAR: Since I live and work in a livestock, organic livestock area, this is a very important tool.

MEMBER SWAFFAR: Thanks. Anybody else?

(No audible response.)

MEMBER SWAFFAR: Tom?

CHAIRMAN CHAPMAN: So this is a motion to remove aspirin from the National List. The motion is made by Ashley and seconded by Harriet. A no vote is to remove; a yes -- sorry. A no vote is to retain; a yes vote is to remove. And the voting will start with Steve.

MEMBER ELA: No.

MEMBER BRADMAN: No.

MEMBER GREENWOOD: No.

MEMBER DE LIMA: No.

MEMBER SCHWARTZ: No.

MEMBER ROMERO-BRIONES: No.

MEMBER OAKLEY: No.

MEMBER BAIRD: No.

MEMBER BUIE: No.

MEMBER SWAFFAR: No.

SECRETARY RICE: No.

VICE CHAIR BEHAR: No.

MEMBER SEITZ: No.

MEMBER MORTENSEN: No.

CHAIRMAN CHAPMAN: Chair votes no.

SECRETARY RICE: That's 0 yes; 15 no; 0 absent.

CHAIRMAN CHAPMAN: The motion fails.

Ashley?

MEMBER SWAFFAR: Thanks. Next up is vaccines.

Clarissa?

DR. MATHEWS: in Section 205.603(a) the listing is biologics, vaccines.

MEMBER SWAFFAR: Thank you. Harriet?

VICE CHAIR BEHAR: Okay. So this is for relisting of this material that we will be voting on, but in addition we did ask for a work agenda item, which we have put forward to the National

Organic Program to deal with somewhat of the inconsistent implementation on whether or not genetically modified vaccines are allowed or not. Some certifiers allow, some do not.

In public comment there was universal agreement that this material should remain on the National List. Some commented that it was the most commonly used preventative health care tool. People noted that it's not just for the improvement of the herd as far as not losing animals, but also for long-term genetic improvement, keeping as many of your animals healthy and alive. And as a preventative it's very useful in an organic system.

Let's see. Numerous certifiers, advocacy groups and individual livestock operators all spoke to the need for this product and many spoke for the support for the work agenda item. There were not comments against adding this working -- adding to the work agenda, although some commenters were mute.

MEMBER SWAFFAR: Thank you, Harriet.

We'll open for discussion. Anyone?

CHAIRMAN CHAPMAN: There were no comments against adding to the work agenda? I thought I saw some in the written comment.

VICE CHAIR BEHAR: I did not see any comments speaking against the work agenda. I did see some commenters who spoke for keeping vaccines on the list and then didn't say anything about the work agenda, and then others who spoke to both issues in support.

MEMBER SWAFFAR: Tom, no discussion? Seriously?

(No audible response.)

MEMBER SWAFFAR: I just wanted to -- I'd call on myself then. I just say vaccines are critically important, and I think we heard that overwhelmingly from the public. And I do encourage the program to take a look at our work agenda request item because there is a very different take on this listing across certifiers with some asking if vaccines are -- asking their clients to double-check and see if their vaccines

are made from excluded methods whereas others don't address that at all. And so our work agenda request was to help with consistency for everyone throughout different certifiers.

Steve?

MEMBER ELA: For my own edification, Ashley, and not being a livestock person at all. So are there -- of the vaccines that maybe made using an excluded methods are there alternatives?

MEMBER SWAFFAR: For many of those there are not. So what you have to deal with; obviously I understand the poultry vaccines, we are federally mandated by the FDA to give certain vaccines to birds to prevent Salmonella enteritidis, and those are the ones that could be made by excluded methods, and to my knowledge there are no alternatives for those. And there's a few others that are given to poultry also that don't have those.

Emily?

MEMBER OAKLEY: Do you have any concern that the program won't add this to your work

agenda?

MEMBER SWAFFAR: Absolutely.

MEMBER OAKLEY: Okay. I know that no one from the program who can directly answer that is here right now. I don't want to put Clarissa on the hot seat.

Oh, you can answer it?

DR. MATHEWS: I can say that the work agenda item request is currently under review and we do anticipate a response fairly soon.

MEMBER SWAFFAR: A response that could say no. Yes.

MEMBER MORTENSEN: I wonder as we talk about these things could we really speak into the mic? I can't hear most of this discussion.

MEMBER OAKLEY: Can I just then clarify? I guess I'm saying that I would echo support for this work agenda item and I think probably many of us would. And if that would be helpful to the program and their deliberations, perhaps we could express that now.

MEMBER SWAFFAR: Harriet?

VICE CHAIR BEHAR: The work agenda item did specifically discuss the inconsistency between certifiers as well as that it's not our intention to take away either federally-mandated vaccines, nor to take away important tools for producers, but instead to just bring that consistency. Because right now there are some operations that cannot access GMO vaccines.

MEMBER SWAFFAR: They're not GMO. They're made from excluded methods. Just want to say that.

VICE CHAIR BEHAR: Okay.

MEMBER SWAFFAR: Correct terminology.

Any further discussion?

(No audible response.)

MEMBER SWAFFAR: Tom.

CHAIRMAN CHAPMAN: So we have a motion to remove biologics, vaccines from the National List. The motion was made by Harriet, seconded by Jesse. A no vote is to retain; a yes vote is to remove. And the voting will start with Asa.

MEMBER BRADMAN: No.

MEMBER GREENWOOD: No.
MEMBER DE LIMA: No.
MEMBER SCHWARTZ: No.
MEMBER ROMERO-BRIONES: No.
MEMBER OAKLEY: No.
MEMBER BAIRD: No.
MEMBER BUIE: No.
MEMBER SWAFFAR: No.
SECRETARY RICE: No.
VICE CHAIR BEHAR: No.
MEMBER SEITZ: No.
MEMBER MORTENSEN: No.
MEMBER ELA: No.
CHAIRMAN CHAPMAN: Chair votes no.
SECRETARY RICE: That was 0 yes; 15 no; 0 absent.
CHAIRMAN CHAPMAN: The motion fails.
Ashley?
MEMBER SWAFFAR: Okay. Moving onto our next substance, electrolytes.
Clarissa?
DR. MATHEWS: At section 205.603(a) the

listing is electrolytes without antibiotics.

MEMBER SWAFFAR: Thank you. Harriet?

VICE CHAIR BEHAR: Electrolytes are used extensively for again promotion of health of replacement of vitamins and minerals.

And there was universal support from certifiers, advocacy groups, farmer organizations and milk buyers and sellers all there. So basically every aspect of the organic community supported the relisting of electrolytes.

MEMBER SWAFFAR: Thank you, Harriet.

Open it up. Any discussion?

(No audible response.)

MEMBER SWAFFAR: Great.

Tom?

CHAIRMAN CHAPMAN: So we have a seconded motion from the Subcommittee. The motion is to remove electrolytes from the National List. The motion was made by Harriet and seconded by Dan. A yes vote is to remove; a no vote is to retain. And the voting will start with Rick.

MEMBER GREENWOOD: No.

MEMBER DE LIMA: No.

MEMBER SCHWARTZ: No.

MEMBER ROMERO-BRIONES: No.

MEMBER OAKLEY: No.

MEMBER BAIRD: No.

MEMBER BUIE: No.

MEMBER SWAFFAR: No.

SECRETARY RICE: No.

VICE CHAIR BEHAR: No.

MEMBER SEITZ: No.

MEMBER MORTENSEN: No.

MEMBER ELA: No.

MEMBER BRADMAN: No.

CHAIRMAN CHAPMAN: Chair votes no.

SECRETARY RICE: That was 0 yes; 15 no; and 0 absent.

CHAIRMAN CHAPMAN: The motion fails.

Ashley?

MEMBER SWAFFAR: Thank you. Moving on next to glycerin.

Clarissa?

DR. MATHEWS: At Section 205.603(a) the

listing is glycerin allowed as a livestock teat dip. Must be produced through the hydrolysis of fats or oils.

MEMBER SWAFFAR: Thanks. Moving on. Sue?

MEMBER BAIRD: Glycerin is a byproduct of the soap manufacturing process. It can be either done synthetically or by natural hydrolysis, therefore the reason for the annotation. It is used extensively in teat dips either as the sole component or as an ingredient in others, including chlorhexidine.

There was actually 18 comments and all of them were in support of using and relisting glycerin on the National List. Beyond Pesticides did want more clarification on the process of fermentation which is not addressed in this.

MEMBER SWAFFAR: Thank you, Sue.

Opening it up for discussion. Anyone?

Tom?

CHAIRMAN CHAPMAN: I mean, just as a procurer of glycerin in my day job there's -- the

fermentation segment of the glycerin supply chain is small to non-existent. It is almost all a product of the soap industry and other industries like that, but fermentation is a very, very small subsection.

MEMBER SWAFFAR: Thank you.

Any further discussion?

(No audible response.)

MEMBER SWAFFAR: Great.

Tom?

CHAIRMAN CHAPMAN: So this is a motion that comes from the -- a seconded motion that comes from the -- a seconded motion that comes from the Subcommittee. The motion is to remove glycerin. The motion was made by Sue and seconded by Harriet. The motion is to remove glycerin from the National List. A yes vote is to remove; a no vote is to retain. And the voting will start with Lisa.

MEMBER DE LIMA: No.

MEMBER SCHWARTZ: No.

MEMBER ROMERO-BRIONES: No.

MEMBER OAKLEY: No.

MEMBER BAIRD: No.

MEMBER BUIE: No.

MEMBER SWAFFAR: No.

SECRETARY RICE: No.

VICE CHAIR BEHAR: No.

MEMBER SEITZ: No.

MEMBER MORTENSEN: No.

MEMBER ELA: No.

MEMBER BRADMAN: NO.

MEMBER GREENWOOD: No.

SECRETARY RICE: That's 0 yes; 15 no; and 0 absent.

CHAIRMAN CHAPMAN: The motion fails.

Ashley?

MEMBER SWAFFAR: Great. Moving on to phosphoric acid.

Clarissa?

DR. MATHEWS: At Section 205.603(a) the listing is phosphoric acid allowed as an equipment cleaning provided that no direct contact with organically-managed livestock or

land occurs.

MEMBER SWAFFAR: Thank you. Moving on, Dan? Dan?

MEMBER SEITZ: So phosphoric acid is allowed as an equipment cleaner provided that no direct contact with organically-managed livestock or land occurs

There were 15 comments on this all in favor of continued listing. The substance is not without some problems. It can be harmful to health and the environment. Nonetheless it's considered by all commenters as being essential. A couple of commenters noted that there is some inconsistency among certifiers regarding whether there should be a rinse after use and this inconsistency comes from the fact that some of the phosphorous materials have inert ingredients included with them. So there were a couple of commenters who suggested that there be an annotation made for this substance in the future.

MEMBER SWAFFAR: Okay. Opening it up to discussion.

Harriet?

VICE CHAIR BEHAR: Since I live in an organic dairy area this is an essential ingredient both on the farm and in processing, if it's a non-farm processing, for removal of milk stone in the pipelines.

MEMBER SWAFFAR: Any further discussion?

(No audible response.)

MEMBER SWAFFAR: I would just like to say hopefully the Materials Committee can look at this also in their sanitizer review and we'll go from there. Great.

Turning it back, Tom.

CHAIRMAN CHAPMAN: So we have a seconded motion from the Subcommittee. The motion is to remove phosphoric acid from the National List. The motion was made by Dan and seconded by Harriet. A yes vote is to remove; a no vote is to retain, and the voting will start with Eric.

MEMBER SCHWARTZ: No.

MEMBER ROMERO-BRIONES: No.

MEMBER OAKLEY: No.

MEMBER BAIRD: No.

MEMBER BUIE: No.

MEMBER SWAFFAR: No.

SECRETARY RICE: No.

VICE CHAIR BEHAR: No.

MEMBER SEITZ: No.

MEMBER MORTENSEN: No.

MEMBER ELA: No.

MEMBER BRADMAN: No.

MEMBER GREENWOOD: No.

MEMBER DE LIMA: No.

CHAIRMAN CHAPMAN: Chair votes no.

SECRETARY RICE: That's 0 yes; 15 no; 0 absent.

CHAIRMAN CHAPMAN: Motion fails.

Ashley?

MEMBER SWAFFAR: Thank you. Moving onto hydrated lime.

Clarissa?

DR. MATHEWS: At Section 205.603, paragraph (b) is Topical Treatment External

Parasiticide or Local Anesthetic as Applicable, the listing is lime, hydrated as an external pest control not permitted to cauterize physical alterations or deodorize animal wastes.

MEMBER SWAFFAR: Thank you. A-dae?

MEMBER ROMERO-BRIONES: Lime, hydrated is primarily used to control pests, and I emphasize that it is not permitted for use as -- to cauterize physical alterations or deodorize animal wastes.

The majority of comment were in favor of relisting. The Subcommittee discussed a possible annotation. One commenter suggested that that is outside the purview of the Subcommittee, but the majority suggested relisting.

MEMBER SWAFFAR: Great. Open it up for discussion. Anyone?

(No audible response.)

MEMBER SWAFFAR: I just want to say why we added that annotation part in there was because some certifiers have written in that hydrated lime -- many producers want to use it in

bedding for deodorizing animal waste, so we were looking to get comments there, and we did from one certifier that the operations that they work with do request hydrated lime to be used for bedding and for whitewash to help with deodorizing animal waste. So we will talk about that as a Subcommittee if we want to work on that annotation.

Any other discussion?

Harriet?

VICE CHAIR BEHAR: Well, this is one of the strengths of our National List, that it -- if there was -- if it was going to be used in bedding, it would probably have to be -- have discussion with the Crops Subcommittee because of the effect that that bedding is not just going -- it's going to go out on the land. So that's one of the reasons I think it was not. So you can use hydrated lime on organic land -- I mean, on organic crops and livestock for those specific uses. So that is a strength in our National List that we can identify the specific areas and then

prohibit it in other areas.

MEMBER SWAFFAR: Thank you. No further discussion.

Tom?

CHAIRMAN CHAPMAN: So it's a motion that comes from the Subcommittee. The motion is to remove hydrated lime. The motion was made by A-dae and seconded by Jesse. A yes vote is to remove; a no vote is retain, and the voting will start with A-dae.

MEMBER ROMERO-BRIONES: No.

MEMBER OAKLEY: No.

MEMBER BAIRD: No.

MEMBER BUIE: No.

MEMBER SWAFFAR: No.

SECRETARY RICE: No.

VICE CHAIR BEHAR: No.

MEMBER SEITZ: No.

MEMBER MORTENSEN: No.

MEMBER ELA: No.

MEMBER BRADMAN: No.

MEMBER GREENWOOD: No.

MEMBER DE LIMA: No.

MEMBER SCHWARTZ: No.

CHAIRMAN CHAPMAN: Chair votes no.

SECRETARY RICE: That's 0 yes; 15 no; 0 absent.

CHAIRMAN CHAPMAN: The motion fails.

Ashley?

MEMBER SWAFFAR: Moving onto mineral oil.

Clarissa?

DR. MATHEWS: At Section 205.603(b) the listing is mineral oil for topical use and as a lubricant.

MEMBER SWAFFAR: Thank you. A-dae?

MEMBER ROMERO-BRIONES: So mineral oil acts as an external parasiticide when applied topically to animals infested with mites, lice and other parasites.

The majority of commenters suggested relisting. One commenter wanted some clarification on the FDA listing because NOP was informed that mineral oil was not received -- has

not received approval through the FDA drug approval process for external label use by licensed veterinarians, but the majority suggested relisting.

MEMBER SWAFFAR: Any discussion?

Harriet?

VICE CHAIR BEHAR: So this is an illustration that even if the NOSB requires something that the FDA and other areas within the USDA and the Federal Government have to also approve that use in order for it to be used in organic production. So even though the NOSB in response to producer requests voted to allow it for release of constipation, it was not approved by FDA. So it can't -- it's not allowed to be used.

MEMBER SWAFFAR: Devon, you want to say anything about that?

MR. PATTILLO: I think mineral oil is one of the substances that's in a proposed rule right now, and while it's -- I believe there are off-label uses allowed at veterinarian

discretion.

PARTICIPANT: (Off microphone comments.)

MR. PATTILLO: I believe under FDA regulations veterinarians are allowed to use substances for off-label uses in certain circumstances. I believe in the proposed rule we have some discussion about the FDA approval of -- and their -- I guess their perspective on these uses.

MEMBER SWAFFAR: And for clarification one of those uses would be an oral use for impaction.

So, Harriet?

VICE CHAIR BEHAR: Just for clarification mineral oil is a petroleum product.

MEMBER SWAFFAR: Steve?

MEMBER ELA: So just so I'm clear, but the use externally as we read is approved by FDA? So it's just that for impaction or -- that is on the -- in the question mark?

MEMBER SWAFFAR: Well, and like Devon

side, there is some approval for off-label use for veterinarians by the FDA. And that comes in the new set of rulemaking stuff, so they will have a discussion in there. But it's also used for lubrication and various other uses also.

Harriet?

VICE CHAIR BEHAR: So the lubrication is typically used by technicians who are doing artificial insemination, and so they're -- if you've never stuck your arm in a cow, it's quite an experience.

MEMBER SWAFFAR: We'll leave it at that image.

Back to you, Tom.

CHAIRMAN CHAPMAN: We have a motion to remove mineral oil. It's a seconded motion that came from the Subcommittee. The motion was made by A-dae and seconded by Sue. A no vote is to retain; a yes vote is remove, and the voting will start with Emily.

MEMBER OAKLEY: No.

MEMBER BAIRD: No.

MEMBER BUIE: No.

MEMBER SWAFFAR: No.

SECRETARY RICE: No.

VICE CHAIR BEHAR: No.

MEMBER SEITZ: No.

MEMBER MORTENSEN: No.

MEMBER ELA: No.

MEMBER BRADMAN: No.

MEMBER GREENWOOD: No.

MEMBER DE LIMA: No.

MEMBER SCHWARTZ: No.

MEMBER ROMERO-BRIONES: No.

CHAIRMAN CHAPMAN: Chair votes no.

SECRETARY RICE: That's 0 yes; 15 no; 0 absent.

CHAIRMAN CHAPMAN: Motion fails.

Ashley?

MEMBER SWAFFAR: Moving onto sucrose octanoate esters or from here on out SOEs.

Clarissa?

DR. MATHEWS: At Section 205.603(b) the listing is sucrose octanoate esters, CAS No's.

42922-74-7 and 58064-47-4, in accordance with approved labeling.

MEMBER SWAFFAR: Thank you.

Moving to Sue.

MEMBER BAIRD: Yes, SOEs are -- belong to the organic chemical family bonding sucrose fatty acid esters and they're manufactured from sucrose, table sugar, and octanoic acid esters. They're registered as a biopesticide, but in this particular -- because we are addressing it as livestock, it's addressed for varroa mite control in honeybees. It has been listed -- and it is listed by EPA a such.

There were seven public comments, but the two that were most pertinent, in my mind at least, was Beyond Pesticides said because they had supported continuing to keep it on the list and they said they're disappointed that they haven't seen any comments from beekeepers regarding the efficacy and hazard of SOEs in controlling varroa mites. And they made the comment they'd heard informally that beekeepers

don't use it because it's too hard to use.

And then NOC, National Organic Consumers, made the point that the Environmental Protection Agency, even though it's approved for use, they don't have any currently listed or approved products that are to be used. So they thought that -- both of those thought that it should be removed.

MEMBER SWAFFAR: Open it up for discussion.

Harriet?

VICE CHAIR BEHAR: So I was one of the people who voted yes to remove this product. I'm pretty sure I might be the only beekeeper on the Board. I have used this product myself. And when we were voting on it we did not have certain information. In the oxalic acid technical review there was a notation that the other product -- one of the other products on the National List for control of varroa mites, SOEs, was no longer registered by the EPA. There was no product registered by the EPA for use and that the

product itself was ineffective in controlling varroa mite.

And so we could possibly deduce from that that the reason why there's no products registered is because nobody was buying it because it was ineffective. So there's a question of even if the product could be considered somewhat benign, if no one can actually use it in the United States, if there are no products -- because the EPA doesn't have anything registered, and if there are no products available and it's ineffective, why is it taking up space on the National List?

Because during our deliberations for new products to put on the National List we always look to see if there are other products available. And so having a product that's actually not available and that nobody would actually want to use and having used it myself once, I would tell you I don't want to use it again. It is very hard on the bees. It's very, very difficult to use. It makes a total mess.

And it kills bees, so we don't want to be doing that. So I would -- I'm planning on voting yes for removal for this product for those reasons.

In addition, we spoke during the Subcommittee calls about use in other countries. And so I'm not sure if Sue did any work, but I reached out to various certifiers, and I know Ashley also asked a certifier during the public -- you asked Sam Welsch of OneCert. He was one of the people I also reached out to. I spoke to organic inspectors, or emailed, and asked them if they had seen any use in other countries. And I also spoke with a seller of organic honey coming from Brazil and he said he didn't know of his suppliers using it.

So by taking it off the National List I don't believe we're doing any harm or removing anything essential from the National List for either domestic or international honeybee production.

MEMBER SWAFFAR: Tom?

CHAIRMAN CHAPMAN: So look at ERS

import data, the vast majority of honey appears to come from Brazil. I don't see any comments from certifiers in Brazil about honey. Did you -- which -- I mean, are you able to share the specific certifiers that spoke to its non-usage?

VICE CHAIR BEHAR: I talked with company called Suranda.

CHAIRMAN CHAPMAN: Okay.

VICE CHAIR BEHAR: And they -- he's actually a Brazilian and then he then asked around.

CHAIRMAN CHAPMAN: Okay.

VICE CHAIR BEHAR: They import organic honey from Brazil.

CHAIRMAN CHAPMAN: Yes, Suranda is an American company, but in pulling data off of the OID, I mean 85 percent of the honey producers in Brazil are certified by IBD. I was unable to reach IBD, so I just haven't been able to verify that it's not used in Brazil.

MEMBER SWAFFAR: Harriet?

VICE CHAIR BEHAR: SOEs are not on the

European Union approved list of products.

CHAIRMAN CHAPMAN: Is Brazil in the European Union?

VICE CHAIR BEHAR: I don't know, but if anyone's selling into the EU, they would not be able to use it for organic production either.

I think really more than whether or not it would be allowed there to me is if it's ineffective, I just think that eventually, even if some people are using it, they'll probably stop using it, which again was my experience. And there are much better products for the control of varroa mite that I'd rather see those be on the National List rather than saying, well, we already formic acid and sucrose octanoate esters, so why do we need oxalic, for instance?

So, and I think too with consistency with the rest of the -- of the U.S. regulatory agencies if our EPA doesn't have anything registered, again why would we have something on our list, similar to what we just discussed with mineral oil.

MEMBER BAIRD: And I don't -- I'm sorry, did you say yes? Did you call me or not?

MEMBER SWAFFAR: Dave was on the list, but I just want to remind board members to please talk into the mics.

Dave was next.

MEMBER MORTENSEN: Yes, I just was doing some Googling last night, nursing my cold and reading about these compounds. Marla Spivak at the University of Minnesota is like a nationally renowned beehive manager, bee community ecologist, and she pretty much echoes what Harriet just said about it being hard on bees and that there are other things that are more effective and less hard on bees. And so with that in mind I was left with the impression that this is not something that we keep on the list.

MEMBER SWAFFAR: Thank you.

Sue?

MEMBER BAIRD: Well, perhaps I've just changed my mind. I was -- my point was that it did -- the review said that it was relatively

benign. In fact really benign on bees. You're saying that science says that's not true, so I'm not sure.

I've thought about this a lot and the point is made that it's hard to use. I always hesitate -- and I also understand Harriet's argument that we could have other things on there if we take this off. I don't think that's ever been a criteria. We can put another thing on without taking something off. I'm always afraid to take something out of the toolbox. There are so few products out there. It is registered by EPA. There's no specific product that has been listed by EPA, but it is registered by EPA, and I think that's a point that might be taken. I just hate to take things off when someday -- maybe we're not using it now, but maybe someday we need it. I don't know.

MEMBER SWAFFAR: Emily?

MEMBER OAKLEY: I know that we can't necessarily quantify its use in Brazil, Tom, but I think in the absence of use here or in the

absence of comments from producers there I think this is actually great example of the sunset process and our ability to review materials for their effectiveness and their use. And I think should it become more widespread or used at all, to our knowledge in the future, it can always be re-petitioned for use. But I think this is an example of a compelling reason to remove something.

MEMBER SWAFFAR: Thank you.

Scott?

SECRETARY RICE: I just was -- is there any reason to think efficacy would be different on -- in the environment in Brazil than here in the U.S.? I don't know if anybody has -- sounds like we just don't have that data. That was something that occurred to me.

I just had a thought on any -- is there any reason to believe that efficacy would be different on bees in Brazil? If -- I know that we've heard efficacy is limited here, but that would just be a concern of mine in terms of

removing a tool if it's working elsewhere.

MEMBER SWAFFAR: Tom?

CHAIRMAN CHAPMAN: Yes, I mean, so from what I've read on this and what -- from the Subcommittee, I mean, it seems there's two arguments here: There's the efficacy argument, which seems to be a very valid argument for potentially delisting this material. And then there's the use argument. I guess I just want to point out that several members of this Board have pointed out the fact that it's difficult for us to get feedback from members of the community, small farmers here in the U.S., small farmers abroad.

We saw the organization that went in to get the Costa Rican contingent here from Costa Rica. And this isn't -- the honey produced in Brazil is not being produced in Sao Paulo. It's not being produced in Rio de Janeiro. It's produced far out in the Amazon so it can comply with the large non-production areas, non-conventional production areas for the bees to

forage. And so you're talking about very rural, very small, very far out apiary production to get the majority of honey that comes here.

So I wouldn't -- I just warn us against using -- weighing that reason too heavily given I don't know how effective our 16-day comment period was to get out to those folks in that rural area.

MEMBER SWAFFAR: Harriet?

VICE CHAIR BEHAR: To respond to Scott about the efficacy, would it be different in another region, having again used the product, I would say no. A big part of the reason it's so hard to use it's extremely sticky. I don't really believe it would be less sticky in a tropical climate.

And in our deliberations we do look at items on the National List. Just in Livestock we have looked at a whole variety of various teat dips and the fact that there's four or five already on the list, and then we try to compare is this one needed? We do look at if something is

already on the list. So there could be two, three more materials that come forward for varroa mite control. And again, if it's not effective and there's nothing -- and I believe that there's nothing registered is because nobody was buying it, and so they didn't choose to relist or re-register with the EPA. I think just -- I don't think it necessarily belongs.

And then lastly there are also systems-based approaches to control a varroa mite. My husband just walked in and he helps me. We work together on various types of varroa mite control which in conjunction with materials have kept our bees fairly healthy. So there isn't just only reliance on materials for control of this insect pest.

MEMBER SWAFFAR: Dave?

MEMBER MORTENSEN: Yes, I guess just to Tom's point and -- which I think is an excellent one, but -- and I realize ethylene is an extraordinary exception. I mean, we had 10 or so people coming from another country to speak to us

about it. It seems to be that we should have at least one comment from a beekeeper or someone, or a company that sells honey from the beekeepers that they've purchased from on behalf of those growers. Yes, because even in our debate about paper pots and all of that, we got lots and lots of comments on that, I think. Did it rise to the level of a letter to the Secretary of Agriculture? No, but the comment are there.

So I think the absence of comments left me thinking this certainly can't be a very compelling product to have on the market for beekeepers.

MEMBER SWAFFAR: I'm going to call on myself and then I'll call on Harriet.

So I'm a little torn on this material. I was a vote on the Subcommittee to relist, but I think there are several things of why we're not getting comments that we're hearing from and that is because we don't produce that much honey in the U.S., organic, because we don't have apiculture standards. And that is my biggest pet

peeve about this material and the new petition material is we do not have standards, but people are petitioning us items to use for those standards.

I fought on Livestock to even accept the petition for oxalic acid because we don't have bee standards. So a little pet peeve of mine. But so I think that's why we're not hearing any comments from producers is because we don't really have that much bee production in the U.S. Most of it comes from Brazil. And to Tom's point, those folks aren't involved in our process.

But I am torn on this material because it's not registered with the EPA. It doesn't sound like it works for bee producers that do use it here in the U.S. And I think we have some other options that they could be using, so I feel like I'm going to -- I will be switching my vote. I voted to relist, but I will be voting to delist this material.

Sorry. Harriet?

VICE CHAIR BEHAR: Just to remind us

all that we did have a previous review comment period in the spring and we didn't hear anything. We do have a fairly active organic honey industry in Hawaii, which is part of the United States, and they have brought petitions forward and are paying attention, and yet we did not see any support for this product from the organic honey producers in Hawaii.

MEMBER SWAFFAR: Steve?

MEMBER ELA: A question maybe for Tom, I don't know. I mean, if -- those Brazilian growers, are they certifying to the U.S. standards?

CHAIRMAN CHAPMAN: Yes. I mean, that data I cited with the certifiers was from the Organic Integrity Database.

MEMBER ELA: Okay.

MEMBER SWAFFAR: Great. Any further discussion?

(No audible response.)

MEMBER SWAFFAR: Tom?

CHAIRMAN CHAPMAN: Okay. We have a

motion to remove sucrose octanoate esters from the National List. It's a seconded motion from the Subcommittee. The motion was made by Sue and seconded by Jesse. A yes vote is to remove; a no vote is to retain, and the voting will start with Sue.

MEMBER BAIRD: This is a hard one, but I'll still going to say no.

MEMBER BUIE: Also, but no

MEMBER SWAFFAR: Yes.

SECRETARY RICE: Yes.

VICE CHAIR BEHAR: Yes.

MEMBER SEITZ: Yes.

MEMBER MORTENSEN: Yes.

MEMBER ELA: Yes.

MEMBER BRADMAN: Yes.

MEMBER GREENWOOD: Yes.

MEMBER DE LIMA: No.

MEMBER SCHWARTZ: No.

MEMBER ROMERO-BRIONES: Yes.

MEMBER OAKLEY: Yes.

CHAIRMAN CHAPMAN: Chair votes no.

SECRETARY RICE: That was 9 yes; 5 no -- no -- technical difficulties here. That was 10 yes; 5 no; 0 absent.

CHAIRMAN CHAPMAN: The motion passes. Ashley?

MEMBER SWAFFAR: Moving onto our petitioned material. No introduction, so we'll just go right into Harriet.

VICE CHAIR BEHAR: Okay. Oxalic acid. Let's stay in the beekeeping world.

So this is actually the first time any subcommittee has done this, so just so the public knows that we decided that if we receive a petition but we cannot move through our entire process of a technical review and then a vote from Subcommittee to the full Board, we thought we would then just bring forward a discussion document so people could see the materials that are under review and get yet one more shot at giving us input. So there will be probably a petition proposal coming forward in the spring on this item. We actually did just receive the

technical review for this material.

But we -- as far as -- the only comments that were received I saw were that we need apiculture standards, which I wholeheartedly agree. And I have tried to speak to the program about whether -- why this is not moving forward, but it really is not a priority I think partially because of what Ashley said, that there is not a clamoring for them within the borders of the United States. However, there are beekeepers who would like organic standards. There are certifiers who have standards. And so therefore having a material on the National List would be useful to beekeepers within our borders and of course those who sell into our market.

Oxalic acid is an acid similar to formic acid which is on our National List. It can be applied to the hive in two ways: in a sugar syrup that then trickles down between the frames and as a vapor treatment.

There are tools that beekeepers can either make or purchase that vaporize the oxalic

acid. And if you've ever seen a beehive, there's a small entrance in the bottom. You put the vaporizer in and then that vapor moves up and that causes the mites to fall off the bees. Typically the beekeeper has a screened bottom board where those mites fall through and underneath the hive. And they don't crawl back up, which is kind of a nice thing. We just don't want to have mites that can crawl around.

The other use for it which I found to be quite interesting and that there is no other product available is that it could also be put in a sugar syrup and sprayed on packaged bees. So when beekeepers need to replace bees at times, they can purchase a queen and a package of bees usually in a screened box. And many times they will arrive from infested hives and be full of mites. And so the person buying those packages -- basically that package will die and they've spent $120 or whatever for that package. So this is a way for people who are selling packages to be able to then remove the mites and sell a cleaner

product to those buying those replacement bees.

There is a concern that the material is categorized as very hazardous by the EPA because it is an acid. It also used for bleaching wood, although it's somewhat of a different formulation than what is being requested for use for control of varroa mites in organic honeybee hives.

And we did ask a couple of questions for the public and we did not get any response to those questions, I think because there were no beekeepers.

As the lead for this product I'm going to reach out, and once we get the TR and ask maybe some more specific questions, just on my own just to see what the demand is for it. And I will reach out to Brazil as well.

You can even help me, Tom, with some contacts. I would appreciate that.

However, I do know that in my little bee club in Southwest Wisconsin we have discussed this material extensively. We've seen vaporizing

equipment and we've talked to beekeepers that feel it's very effective and have used it continuously for a few years. So it is effective. It can be used. It's accessible. And I think that was a homemade vaporizer, so fairly inexpensive.

MEMBER SWAFFAR: Thanks, Harriet. That was -- you told me it would be short and sweet. I'd hate to see long.

So just to remind everyone, we are not voting on this. We're just discussing it and we'll come back after we receive a TR, maybe not spring, maybe fall.

Dave?

MEMBER MORTENSEN: Yes, in the reading that I've done on this; and I did talk to a beekeeper before I left the East, this compound is much more useful for varroa mite management in a hive. It's a little worrying to be thinking about the protective gear that you're wearing, and I was just imagining also you're working with bees. I guess this maybe happens when you're not

worried about also being protected from working with the bees themselves. It sounds clunky from a management point of view, but it's apparently much more effective in an integrated pest management program for hive management.

MEMBER SWAFFAR: Anyone else?

(No audible response.)

MEMBER SWAFFAR: I just want to echo what I said earlier about SOEs. I'm very hesitant to be working on items for apicultures when we do not have standards from the program. So I'd like to ask the program to please move forward because there are people certifying and selling organic honey without standards.

Okay. And that's it on that discussion. The Livestock Committee will now move onto other business that we have.

If I could have the next slide? So we've talked to and we've heard lots of comments from the public at this meeting and prior meetings about origin of livestock and how it's a problem that the program is not moving forward to

that.

So we've talked internally and we'd like to put forward a resolution, and that resolution states that it has come to the attention of the National Organic Standards Board that the continued state of varying interruptions -- interpretations of practices around the origin of livestock standards is creating market instability for organic producers. The 2015 USDA origin of livestock proposed rule was based on six recommendations from the NOSB between 1994 and 2006.

The proposed rule responds to findings from the July 2013 USDA Office of Inspector General audit report on organic milk operations stating that certifying agents were interpreting the origin of livestock requirements differently.

Rulemaking is necessary to ensure consistent interpretation and enforcement of the standards for origin of livestock and provide industry with additional clarity of application of the organic dairy standards.

In early 2017 the origin of livestock proposed rule was removed from the Government's Unified Agenda Regulatory and Deregulatory actions. Support for this rule has been expressed through public comment by the majority of organic stakeholders. Strong federal oversight is essential for fair consistent certification and for creating a level playing field for all certified operations.

So therefore be it resolved by unanimous vote the National Organic Standards Board as USDA's Federal Advisory Board on Organic Issues and representing organic farmers, ranchers, processors, retailers and consumers urges the Secretary to directly issue a final rule for origin of livestock that incorporates public comments submitted in response to the proposed rule.

So that is other business.

Harriet?

VICE CHAIR BEHAR: I enthusiastically second this motion.

MEMBER SWAFFAR: Great. Open it up for discussion.

Emily?

MEMBER OAKLEY: I also enthusiastically support this resolution. And I have a question about the possibility of its delivery to the Secretary and how that takes place.

MEMBER SWAFFAR: Jenny?

DR. TUCKER: So after every NOSB meeting we go back and brief our leadership on what happened during the meeting, what they key issues were. Clearly two of those coming out of this meeting will be paper pots and origin of livestock. And so this will be communicated up the chain through our standard briefing process, so this will be shown to first the administrator. And then it will go up the ladder from there.

MEMBER SWAFFAR: Emily?

MEMBER OAKLEY: Just a follow-up. I don't know about precedents or effectiveness, but would it be effective for this to be delivered or

is it even appropriate for it to be delivered directly from the NOSB to the Secretary?

DR. TUCKER: In the past it has been more effective to communicate through the program so that we can sort of present the work of the Board in context and so within the framework of the advisory board, the chain of command and operations.

MEMBER SWAFFAR: Harriet?

VICE CHAIR BEHAR: I would like also for the Secretary to know that the NOP's slogan is "Consumers Trust the Organic Label," and it's through consistency that that trust is imbedded. And so we're asking for consistency here, and the way it comes is through rulemaking and enforcement. And so we really would like to see this happen.

Yes, it's true that there is great hardship out in the organic dairy farms, having -- I inspect them, I live with them, they're my neighbors. But also to me it's that protection of our label, that we have that integrity and

that consistency. So I encourage you to enthusiastically bring it forward.

DR. TUCKER: And so let me also sort of continue with what the next step would be. So we'd brief it up the chain. It is -- we're -- it's the end of October here. The next window for the Unified Regulatory Agenda is the administration will start to consider items that are elevated from the programs or proposed from the programs sometime in January. And so that's when those conversations will begin to occur.

Now the regulatory approach, there is -- remains the two for one regulations or set of principles related to regulation. So this rule would be evaluated against other rules being considered at -- across the agency and department in developing their regulatory agenda for the spring.

MEMBER SWAFFAR: So I had Tom next.

CHAIRMAN CHAPMAN: So it's a good thing we voted sucrose octanoate esters off the list. That's one. We just need to get to one

more.

(Laughter.)

CHAIRMAN CHAPMAN: Jenny is not laughing at that comment.

I do want to echo my support for this as well as point that -- point out that OFPA does in its purpose lay out that one of the purposes of OFPA is to assure that the organic products are produced, meet a consistent standard. And from the feedback that we've heard from the public, that just does not seem to be the case when it comes to the origin of livestock.

The NOSB has kind of done its work here in the past and I would hope that the USDA hears the community, the industry, the retailers, the processors, the ranchers about the need for this to go forward so that clarity can be brought to this section of the standard

MEMBER SWAFFAR: Dan?

MEMBER SEITZ: So this is a question for Jenny. First I want to say I also support this.

Jenny, I understand, though I don't agree with the philosophic idea of the removing two regulations for every new regulation that you might add, but this is -- the NOSB and NOP are in a unique situation in that these regulations don't apply to everyone. They just apply to the people who want to play this game, so to speak, the organic game. And the other thing is this is a regulations-based process.

So what I wondering is whether the leadership within the USDA can -- sees this sort of structurally different, because it really does approach regulation from an entirely different standpoint from then regulations that apply to an entire industry say.

DR. TUCKER: So a couple of comments on this. So there are -- especially within the agricultural marketing service there are actually a lot of different sectors that want to be regulated. So the organic folks aren't the only folks who want to be regulated. And so I think that -- it is -- while it is certainly special

about organic, there are a lot of special sectors that would actually really like regulation. And so I think that is a consistent tension.

I think, yes, things to keep in mind that will come up with respect to origin of livestock, so putting it out on the table is that the regulations need to be linked directly with the act, the Organic Foods Production Act. And so the administration will take a careful look at what OFPA actually says about origin of livestock and that may also weigh into its willingness to pursue regulations around this that this administration is very focused on reading what thee act actually says, so what Congress has actually authorized. I think you've seen that in rulemaking that has occurred over the last period of time. And so that is something that needs to be taken into account is what OFPA actually says about origin of livestock. So that is a bit of a challenge here.

So I think that the administration, third, has also made it clear; Mr. Ibach made

this sort of clear the last time he visited this group is that there -- the primary focus and prioritization is enforcing the standards we have and not moving the goal post. That's a metaphor that the Undersecretary used the last time he was here. So I think those are all variables that will play into the administration's consideration of this item.

quality

MEMBER SWAFFAR: Emily?

MEMBER OAKLEY: I just want to ask a question and reiterate that stakeholders can definitely help us in this endeavor because the NOSB has essentially done what we can do. So as we discussed previously throughout this meeting, if people who care deeply about this issue can write about it and encourage farmers to write about it -- in other work that I do I know letters really do matter and a letter to the Secretary of the Agriculture is not insignificant. And five letters from producers is a lot of letters to the Secretary, but not

necessarily a hard ask for stakeholders to achieve. So just want to put that out there.

And when you mentioned January as the time frame, I wondering would that be a strategic time to submit letters or is any time appropriate?

DR. TUCKER: Any time is appropriate to submit letters. January will be the time where we will be actively briefing this issue.

MEMBER SWAFFAR: I'm going to call on myself, which Emily just hit on everything I was going to say, but reiterate those groups: industry trade organizations, dairy trade organizations, please get meetings with the Secretary. We are doing what we can. Obviously resolutions from us aren't huge steps in the world, but we want to help you as best we can. And so wholeheartedly support this.

Very quickly, Harriet.

VICE CHAIR BEHAR: I also encourage certifiers that may have lost operations to also write and say -- so if there's certifier shopping

going on due to inconsistent implementation.

MEMBER MORTENSEN: Quickly.

MEMBER SWAFFAR: Really quick.

MEMBER MORTENSEN: Quickly on the letter writing, when we heard from the farmers about grain problem integrity in La Crosse, Wisconsin last winter, I was watching the reaction of the politicians in room and it was clear that the most moving information were case studies where their own operation was affected in what way -- what was the economic hit on their operation so that people could actually see what -- how this translates on the ground.

MEMBER SWAFFAR: Okay, guys. I think we'll cut discussion off. So we have a motion and a second on the floor.

CHAIRMAN CHAPMAN: Could you remind me on who made the motion and the second?

MEMBER SWAFFAR: I made the motion; Harriet seconded that motion.

CHAIRMAN CHAPMAN: Thank you.

So we have a motion and a second to

adopt this resolution. I am just going to read the resolved portion of it. "Therefore, be it resolved by unanimous vote," if that occurs, "the National Organic Standards Board as the USDA's Federal Advisory Board on Organic Issues and representing organic farmers, ranchers, processors, retailers and consumers urges the Secretary to directly issue a final rule for the origin of livestock that incorporates public comments submitted in response to the proposed rule, Docket No. AMS-NOP-11-0009."

A yes vote is to adopt this resolution; a no vote is to reject it. The voting will start with Jesse.

MEMBER BUIE: Yes.

MEMBER SWAFFAR: Yes.

SECRETARY RICE: Yes.

VICE CHAIR BEHAR: Yes.

MEMBER SEITZ: Yes.

MEMBER MORTENSEN: Yes.

MEMBER ELA: Yes.

MEMBER BRADMAN: Yes.

MEMBER GREENWOOD: Yes.

MEMBER DE LIMA: Yes.

MEMBER SCHWARTZ: Yes.

MEMBER ROMERO-BRIONES: Yes.

MEMBER OAKLEY: Yes.

MEMBER BAIRD: Yes.

CHAIRMAN CHAPMAN: Chair votes yes.

SECRETARY RICE: That's 15 yes; 0 no.

CHAIRMAN CHAPMAN: The motion passes.

Ashley?

MEMBER SWAFFAR: That concludes everything that the Livestock Committee has. We were hoping to be done a little quicker yesterday, but Scott and his beard kept talking.

(Laughter.)

CHAIRMAN CHAPMAN: That beard always gets in the way.

Okay. We're going to move onto the Handling Subcommittee. It's about 10:00. We'll start with the sunsets, I think, Lisa, and then at some point -- maybe we can get through the sunsets. If not, we'll take a break at some

point in there.

So at this time handing it over to Lisa, Chair of the Handling Committee.

MEMBER DE LIMA: All right. We're going to start off with sunsets. First up calcium carbonate.

Clarissa?

DR. MATHEWS: At Section 205.605, Non-Agricultural, Non-Organic Substances Allowed as Ingredients in or on Processed Products Labeled as Organic or Made with Organic-Specified Ingredients or Food Groups. Paragraph (a), Non-Synthetics Allowed. The listing is calcium carbonate.

MEMBER DE LIMA: Scott?

SECRETARY RICE: Thank you. Calcium carbonate is widely used as a dietary supplement, an antacid, dough conditioner, acidity regulator in wines, a stabilizer, anti-caking agent, gelling agent. There's quite a number of uses.

And it is widely supported in public comments. And I wanted to highlight we had two

comments from certifiers expressing concern regarding the TR's reference to the purified version of this, which is precipitated calcium carbonate, or PCC. The TR referenced that as synthetic.

As we heard during the discussion in public comments that reference does not align with the use of NOP guidance 5033-1, the decision tree for classification of materials as synthetic or non-synthetic, which finds PCC to be a non-synthetic substance.

The TR, as we also heard, serves as just one aid to the Subcommittee in its review of a material and should not be looked to as the definitive voice when making a determination a material status as synthetic or non-synthetic. And again, just reiterating widespread support of this across the community. Thank you.

MEMBER DE LIMA: Any discussion?

Tom?

CHAIRMAN CHAPMAN: Yes, I just want to echo Scott's comments there, and I think we can

even potentially clarify that on the cover sheet for this item. Oftentimes we get comments in the technical reviews or submissions by those reviewers that still don't align with the findings that are made by the NOSB, and so the NOSB findings should definitely take precedence on that and not -- and the TR is just not -- it's a source of information just like public comment.

MEMBER DE LIMA: All right. I guess we're ready for a vote. Tom?

CHAIRMAN CHAPMAN: All right. This is a seconded motion from the Subcommittee. It's a motion to remove calcium carbonate from the National List. The motion was made by Lisa and seconded by Scott. And the voting will start with Ashley. A yes vote is to remove; a no vote is to remain.

MEMBER SWAFFAR: No.

SECRETARY RICE: No.

VICE CHAIR BEHAR: No.

MEMBER SEITZ: No.

MEMBER MORTENSEN: No.

MEMBER ELA: No.

MEMBER BRADMAN: No.

MEMBER GREENWOOD: No.

MEMBER DE LIMA: No.

MEMBER SCHWARTZ: No.

MEMBER ROMERO-BRIONES: No.

MEMBER OAKLEY: No.

MEMBER BAIRD: No.

MEMBER BUIE: No.

CHAIRMAN CHAPMAN: Chair votes no.

SECRETARY RICE: That's 0 yes; 15 no; 0 absent.

CHAIRMAN CHAPMAN: The motion fails.

Lisa?

MEMBER DE LIMA: Next up is flavors.

DR. MATHEWS: At Section 205.605(a) the listing is flavors, non-synthetic sources only and must not be produced using synthetic solvents in carrier systems or any artificial preservative.

MEMBER DE LIMA: Tom?

CHAIRMAN CHAPMAN: Natural flavors are

compound substances derived from natural sources including plants, herbs, spices, botanicals and other substances. They're typically used in small amounts in food products. Some were from a 0.05 to 0.4 percent of ingredients typically. And they're used in products that generally contain less than the optimal amount of flavor necessary to give finished products their desired flavor profile. Widely used throughout the industry and there are virtually all applications of any sort of processed products including baked goods, dairy products, jams, jellies, snack foods, juice products, dry-pack good products, cereals, anything that's not fresh. Natural flavors are often proprietary formulations developed specifically for intended purposes and functionalities as well as to withstand the manufacturing process of which they're subjected to.

We received a large amount of support for flavors from trade associations, industry and interest groups, many speaking to their

criticality in product formulations. Certifiers reported about hundreds of their operations that utilize these materials. Several commenters also supported the 2015 NOSB recommendation to add commercial availability to this listing. I should note that this recommendation was part of a proposed rule that was published earlier this year and that we heard earlier from Dr. Paul Lewis was still in the process and being actively being worked by the program.

A few commenters objected to the categorical listing of flavors and rather that individual -- that this item be removed and individual flavors be specifically listed in their place.

Other commenters had concerns around the use of excluded methods in flavoring constituents, however, it should be noted that the big three exclusions do apply to natural flavors. This was even reiterated in the written comments by FEMA, who is recognized by the FDA to establish the GRAS status of flavoring

constituents.

MEMBER DE LIMA: Any discussion?

Emily?

MEMBER OAKLEY: Just want to reiterate support for the 2015 annotation and hope that proceeds quickly.

MEMBER DE LIMA: Harriet?

VICE CHAIR BEHAR: Flavors are another area where fermentation occurs in the manufacture of some of these non-synthetic flavors. And so if the Handling Subcommittee was thinking -- I know that that was brought up by the public -- by numerous public commenter about a review of fermentation process.

MEMBER DE LIMA: Any other discussion?

(No audible response.)

MEMBER DE LIMA: All right. Tom?

CHAIRMAN CHAPMAN: Okay. This is a seconded motion from the Subcommittee. The motion was made by Tom Chapman and seconded by Scott Rice. The motion is to remove flavors from the National List. A yes vote is to retain; a no

is to remove and the voting will start with -- a yes vote is to remove; a no vote is to retain, and the voting will start with Scott.

SECRETARY RICE: No.

VICE CHAIR BEHAR: No.

MEMBER SEITZ: No.

MEMBER MORTENSEN: No.

MEMBER ELA: No.

MEMBER BRADMAN: No.

MEMBER GREENWOOD: No.

MEMBER DE LIMA: No.

MEMBER SCHWARTZ: No.

MEMBER ROMERO-BRIONES: No.

MEMBER OAKLEY: No.

MEMBER BAIRD: No.

MEMBER BUIE: No.

MEMBER SWAFFAR: No.

CHAIRMAN CHAPMAN: Chair votes no.

SECRETARY RICE: That's 0 yes; 15 no; 0 absent.

CHAIRMAN CHAPMAN: Motion fails.

Lisa?

MEMBER DE LIMA: Next up is gellan gum.

DR. MATHEWS: At Section 205.605(a) the listing is gellan gum, CAS No. 71010-52-1, high acyl form only.

MEMBER DE LIMA: Gellan gum is useful as a thickening and gelling agent in food production. Uses include bakery fillings, confections, dairy products, personal care items. Typically use of gellan gum is at less than 0.5 percent of a finished product. And some of the unique properties of gellan gum are that it has a high viscosity at low concentrations and forms a thermal reversible gel.

So public comments. There were a number of manufacturers who wrote in in support of the material with multiple of them stating that they're using gellan gum as a carrageenan replacement due to customer concerns. Also one that said they were using it as a vegetarian option instead of gelatin. A couple different public commenters requested that the CBI from the

original petition be disclosed and requested that the material be delisted until that happens.

There were also requests to take measures to ensure that handlers are verifying that the gums are produced without excluded methods. And one retailer that commented on reports from consumers of negative reactions and generally consumers wanting to avoid carrageenan and other stabilizers and emulsifiers.

Discussion? Emily?

MEMBER OAKLEY: I just had a question about the abstention. Was that a new member who didn't have information or was there concern among Subcommittee members?

MEMBER DE LIMA: Who abstained? I don't know. Oh, it was a new member that just didn't -- wasn't up to speed yet.

Ashley?

MEMBER SWAFFAR: So this one -- obviously you could tell through public comment that it got me going a little bit because I was a member that voted to remove carrageenan. And the

dairy industry worked very hard to find a replacement for carrageenan and listening to their customers. And gellan gum is that replacement.

And I said when I voted to remove I'm concerned that next people will go after these gums. And here's the new sunset process, and we are seeing people say they don't want these gums relisted. And I think that is a real disservice to that industry because they tried to remove an item that many consumers had an issue with and a lot of consumers don't have as much of as a reaction to this item.

So I really want to say that we should protect this material because the dairy industry reformulated, and it takes a long time to do that and change labels and do all that. So I really support this item for relisting.

MEMBER DE LIMA: Dave?

MEMBER MORTENSEN: Yes, I have a concern about some of the comments that I read and things that I read in the report about the

fermentation process and what we know about what's being fermented.

And so when I was reading through these that was a recurring concern of mine, where the content of the process that gives rise to the gum is clear, Lisa, just so that you understand my logic, I was very comfortable with it, but in this case and in one or two other cases that -- at least as far as I can tell, that's not clear. Is it arising from GMO sources, for example? There's one of these where sugar beets is the source. Well, no, sorry. That's another subject.

Yes. So anyway, if anyone on the Committee could speak to that or what your thoughts are about that potential conflict of us not really wanting to be doing things with GMO crops, and on the other hand not being consistent throughout our food system.

MEMBER DE LIMA: Tom?

CHAIRMAN CHAPMAN: I mean, I guess I have a question back to you on that one, Dave,

around why this product as a product of fermentation rises above other products. We just voted on ethanol alcohol used in crop production and ethanol could come -- is a product of fermentation at some point, which also could have source materials from any sorts of original product. And so that concern applies to potentially every material that could be a product of fermentation on this list. What I can say is --

MEMBER MORTENSEN: Maybe to that point, just so that we get this out on the table, we don't eat the alcohol. So we're eating this thing and the drink that we're drinking. And so knowing what's in the ingredient I think is important when we consume it as opposed to when we use it to wash tables or some other process.

CHAIRMAN CHAPMAN: So that concern is going to still extend to every single product of fermentation that's on the National List, even on the handling side. And so just to make sure that you're going to raise that objection everywhere,

and we have dozens of those materials that are on the list. Generally the exclusion has been applied to the excluded methods. It's still applied to these substances and the -- and is generally applied to the microorganisms used to actually convert whatever carbohydrate substance is being turned into the finished good product that is then put in as a food ingredient. And I don't know, I guess I'll look to the certifier to tell me if I'm correct or incorrect in that interpretation.

SECRETARY RICE: That -- yes.

(Laughter.)

MEMBER MORTENSEN: Well, just -- I mean, so anyway, just to -- so that folks know when we vote on things, that's one of the criteria that's in my mind. The other criteria that's in my mind is that it's important to know the source of whatever it is that we're fermenting. I am not personally convinced that we have a pure system so that when we ferment something, we know for example that every

characteristic of wheat that someone might be allergic to is no longer in the resulting fermented product. And so that's a concern of mine.

MEMBER DE LIMA: Harriet and then Tom?

VICE CHAIR BEHAR: So this -- I understand that there are some issues in consumers, on retailers. Steve is stating why can't people just shake things if they want to keep them in suspension and why do we need these gums, but as we've seen with carrageenan the marketplace has done the work. This would be on the label. If consumers choose not to buy it, the manufacturers of the materials, of the finished product will take note that their sales are dropping and decide to change.

But the reality of the marketplace is that -- at this time is that things move around. And they are in storage. And they're sitting on trucks and they're -- that basically you don't want your chocolate milk with all the chocolate in the bottom and that sort of thing.

So I will be voting for this material and I see it very much as more benign than the carrageenan and allow the processors to put it out there and see what the market says.

MEMBER DE LIMA: Tom and then Sue?

CHAIRMAN CHAPMAN: Yes, I just want to point out that allergens are strictly regulated in the U.S. under the Food Allergen Labeling Consumer Protection Act of 2004 under the authority of the FDA, and if folks do have concerns around allergen, that would probably be the appropriate location to lodge those concerns.

MEMBER DE LIMA: Sue?

MEMBER BAIRD: I know a majority, and I would say all certifiers send out if it's a non-agricultural, non-organic substance they send out a manufacturer's affidavit that the manufacturer has to state that the non-organic, non-agricultural substance is not produced with genetic-modified organisms, genetic engineering and/or using solvents that are not allowed.

So I think unless we've got blatant

liars, you can put your mind to rest that there's no GMs in the fermented products.

MEMBER DE LIMA: Ashley?

MEMBER SWAFFAR: And I just want to point out that question was asked of a commenter yesterday or the day before, a predominant manufacturer of the gellan gum, and they confirmed they did not use GMOs. So just want to remind folks of that comment.

MEMBER DE LIMA: All right. Tom?

CHAIRMAN CHAPMAN: Okay. We have a motion to remove gellan gum from the National List. The motion was made by Lisa and seconded by Steve. A yes vote is to remove; a no vote is to retain, and the voting will start with Harriet.

VICE CHAIR BEHAR: No.

MEMBER SEITZ: No.

MEMBER MORTENSEN: Yes.

MEMBER ELA: No.

MEMBER BRADMAN: No.

MEMBER GREENWOOD: No.

MEMBER DE LIMA: No.

MEMBER SCHWARTZ: No.

MEMBER ROMERO-BRIONES: No.

MEMBER OAKLEY: No.

MEMBER BAIRD: No.

MEMBER BUIE: No.

MEMBER SWAFFAR: No.

SECRETARY RICE: No.

CHAIRMAN CHAPMAN: Chair votes no.

SECRETARY RICE: That's 1 yes; 14 no, 0 absent.

CHAIRMAN CHAPMAN: Motion fails.

Lisa?

MEMBER DE LIMA: Next up is oxygen.

Clarissa?

DR. MATHEWS: At Section 205.605(a) the listing is oxygen, oil-free grades.

MEMBER DE LIMA: So according to public comment oxygen is used by wineries, breweries and manufacturers of carbonated beverages. Certifiers reported that it's listed on 17 OSPs. One winery commented that they use

it for micro-oxygenation, a process where oxygen is added into red wine at a controlled rate and flow to stabilize color, improve astringencies and aromatic components of the final wine.

Any discussion about this controversial material?

Harriet?

VICE CHAIR BEHAR: I consider oxygen essential.

(Laughter.)

MEMBER DE LIMA: Ashley?

MEMBER SWAFFAR: In previous meetings there was the discussion of that. One board member may or may not have considered it essential in the past, so thanks for clarifying that, Harriet.

MEMBER DE LIMA: No, and I would say it was great to have folks writing in public comment because this is one of those materials we've done; when was that, in Stowe two or three years ago, and looking at it again as part of the reorganization. And that first time around I

think people just thought, oh, well, it's oxygen. We don't need to write in and give any support. And it was good to see this time around specific uses and how producers are using it. It's helpful for us and for that to be on the record.

All right. Tom?

CHAIRMAN CHAPMAN: Yes, and I think Scott's beard is taking up all the oxygen in this room.

(Laughter.)

SECRETARY RICE: Second.

(Laughter.)

CHAIRMAN CHAPMAN: All right. We have a motion to remove oxygen from 205.605. The motion was made by Lisa and seconded and Scott. A yes vote is to remove; a no vote is to retain, and the voting will start with Dan.

MEMBER SEITZ: No.

MEMBER MORTENSEN: Yes.

MEMBER ELA: No.

MEMBER BRADMAN: No.

MEMBER GREENWOOD: No.

MEMBER DE LIMA: No.

MEMBER SCHWARTZ: No.

MEMBER ROMERO-BRIONES: No.

MEMBER OAKLEY: No.

MEMBER BAIRD: No.

MEMBER BUIE: No.

MEMBER SWAFFAR: No.

SECRETARY RICE: No.

VICE CHAIR BEHAR: No.

CHAIRMAN CHAPMAN: Chair votes no.

SECRETARY RICE: That's 0 yes; 15 no; 0 absent.

CHAIRMAN CHAPMAN: Motion fails.

Lisa?

MEMBER DE LIMA: Next up potassium chloride.

DR. MATHEWS: At Section 205.605(a) the listing is potassium chloride.

MEMBER DE LIMA: A-dae?

MEMBER ROMERO-BRIONES: So affirmed uses of potassium chloride are in foods as a flavor enhancer, flavoring agent, nutrient

supplement, pH control agent and a stabilizer or thickener. It is also a salt substitute.

Public comment was overwhelmingly in favor of relisting. Some commenters commented that it is used in infant and toddler formula and snacks. One commenter listed it as assisting in gelling of pectin as a sodium replacer and it's also used to stabilize yogurts.

MEMBER DE LIMA: Discussion from the Board?

(No audible response.)

MEMBER DE LIMA: All right. Tom?

CHAIRMAN CHAPMAN: Okay. The motion is to remove potassium chloride from the National List. The motion was made by A-dae and seconded by Steve. A yes vote is to relist; a no vote is to -- a yes vote is to remove; a no vote is to relist, and the voting will start with Dave.

MEMBER MORTENSEN: No.

MEMBER ELA: No.

MEMBER BRADMAN: No.

MEMBER GREENWOOD: No.

MEMBER DE LIMA: No.

MEMBER SCHWARTZ: No.

MEMBER ROMERO-BRIONES: No.

MEMBER OAKLEY: No.

MEMBER BAIRD: No.

MEMBER BUIE: No.

MEMBER SWAFFAR: No.

SECRETARY RICE: No.

VICE CHAIR BEHAR: No.

MEMBER SEITZ: No.

CHAIRMAN CHAPMAN: Chair votes no.

SECRETARY RICE: That's 0 yes; 15 no; 0 absent.

CHAIRMAN CHAPMAN: Motion fails.

MEMBER DE LIMA: Next up is alginates.

DR. MATHEWS: At Section 205.605, paragraph (b), Synthetics Allowed. The listing is alginates.

MEMBER DE LIMA: Steve?

MEMBER ELA: Public comments received on this material for this meeting were essentially similar to the comments received in

the spring. Alginates are generally regarded as grass. They're used as thickening and gelling agents similar to some of the gums but with some significantly different properties.

Basically manufacturers in the comments on this ranked them around an 8 out of 10 on essentiality saying they're critical to the formulations of some of their products. And really the main objections to alginates comes back to the marine materials issue of sustainable harvesting of seaweeds or macroalgae; as I'm learning that describe them now, and listing of specific species that are used in the manufacturer of them.

MEMBER DE LIMA: Any discussion?

Emily?

MEMBER OAKLEY: This is really a question about the feasibility of listing specific alginates, and I don't know how this -- I didn't do research to determine how this group has originally categorized and added to the list, but just in response to those public comments is

there any feasibility of that? Because I know this was part of the original discussion document and review in handling from the 2016 TR. Does anybody have more information about that?

MEMBER ELA: I'm certainly not qualified to answer that. In public comments and things it was really just that general we should list them, but there really wasn't any further detail of how we would go about that.

MEMBER DE LIMA: Tom?

CHAIRMAN CHAPMAN: Did you see any specific alginates that were objected to in the public comments?

MEMBER OAKLEY: No, and that's why I'm asking this question. I guess I would just put it back out there to stakeholders if there are any specific examples or criteria for ways that we might be able to do that. I think we would need that first before we could explore that issue in any more detail, and it would be helpful to get that from the stakeholder community if they have that information.

MEMBER DE LIMA: Harriet?

VICE CHAIR BEHAR: Yes, I did see that public commenters wanted a breakdown, and perhaps we can work on that somewhat in the marine materials. And the other issue public comments had was about the environmental impact. The other side of it is that it is a very healthful food for humans and that it has all of these extra processing functionalities. So I see it as an important product and/or material on the National List. And we are dealing with some of the issues that the public has brought forward.

MEMBER DE LIMA: Tom? Oh, Dave?

MEMBER MORTENSEN: Yes, I had some of the same questions about -- it seems like we're going into more detail for harvesting maybe algae for fertilizer, which I'm guessing is a larger quantity than the amount that we would be using in alginates. So the question to Emily is us acting on this now without having our more fully-scoped thing that we voted on yesterday in place sensible or --

MEMBER DE LIMA: Okay. Emily?

MEMBER OAKLEY: Yes. No, I mean, I don't think we -- that's what I was trying to say is I think this is something we should explore. And this is -- the topic of marine materials is now in the now in the Materials Subcommittee, so that allows for cross-pollination of these topics. And I think as Harriet just illustrated we will take this up in Materials. And just putting it out there to stakeholders, if you want to use the open docket to help us figure out to address this, that would be very helpful.

MEMBER DE LIMA: Tom?

CHAIRMAN CHAPMAN: All right. We have a motion to remove alginates, a seconded motion from the Subcommittee. The motion was made by Steve and seconded by Lisa. A yes vote is to remove; a no vote to relist and the voting will start with Steve.

MEMBER ELA: No.

MEMBER BRADMAN: No.

MEMBER GREENWOOD: No.

MEMBER DE LIMA: No.

MEMBER SCHWARTZ: No.

MEMBER ROMERO-BRIONES: No.

MEMBER OAKLEY: No.

MEMBER BAIRD: No.

MEMBER BUIE: No.

MEMBER SWAFFAR: No.

SECRETARY RICE: No.

VICE CHAIR BEHAR: No.

MEMBER SEITZ: No.

MEMBER MORTENSEN: No.

CHAIRMAN CHAPMAN: Chair notes no.

SECRETARY RICE: That's 0 yes; 15 no; 0 absent.

CHAIRMAN CHAPMAN: Motion fails.

Lisa?

MEMBER DE LIMA: Next up, calcium hydroxide.

DR. MATHEWS: At Section 205.605(b) the listing is calcium hydroxide.

MEMBER DE LIMA: A-dae?

MEMBER ROMERO-BRIONES: Calcium

hydroxide is used as a component of aluminum-free baking powder, to clarify sugar from molasses and as a condition for corn tortillas. It's used as a pH buffer. It's also used to fortify foods with calcium, clarify sugarcane or beet juice, for making hominy and masa as a firming agent.

Comments. The few comments suggested relisting. On commenter mentioned that it has been used for centuries to dissolve the outer coating of corn so that it's like a thick -- like it can stick together. And another comment said that we should clarify whether that's an acceptable use.

MEMBER DE LIMA: Any discussion?

Harriet?

VICE CHAIR BEHAR: In the written proposal there's discussion about whether or not it's allowed as a firming agent. Did we ever receive any comment from the program, because obviously there's a manufacturer that wants to know.

DR. MATHEWS: Regarding the uses of

firming agent?

VICE CHAIR BEHAR: Using calcium hydroxide as a firming agent. I would think that since it's not annotated that it would be allowed, but there was a commenter who wanted to know. So maybe on the public record we could help them out.

DR. MATHEWS: I think we probably need to take that back for consideration.

CHAIRMAN CHAPMAN: Or that's something they can address to their certifier.

MEMBER DE LIMA: Harriet?

VICE CHAIR BEHAR: Just to point out that hydrated lime is on all three lists: Crops, Livestock and Handling.

MEMBER DE LIMA: All right. Tom?

CHAIRMAN CHAPMAN: And just to point out it's listed differently on all three lists.

(Laughter.)

CHAIRMAN CHAPMAN: Hydrated lime; Lime, hydrated; calcium hydroxide.

Okay. We have a motion to remove

calcium hydroxide from the National List. The motion was made by A-dae and seconded by Lisa. A yes vote is to remove; a no vote is to retain, and the voting will start with Asa.

MEMBER BRADMAN: No.

MEMBER GREENWOOD: No.

MEMBER DE LIMA: No.

MEMBER SCHWARTZ: No.

MEMBER ROMERO-BRIONES: No.

MEMBER OAKLEY: No.

MEMBER BAIRD: No.

MEMBER BUIE: No.

MEMBER SWAFFAR: No.

SECRETARY RICE: No.

VICE CHAIR BEHAR: No.

MEMBER SEITZ: No.

MEMBER MORTENSEN: No.

MEMBER ELA: No.

CHAIRMAN CHAPMAN: Chair votes no.

SECRETARY RICE: That's 0 yes; 15 no; 0 absent.

CHAIRMAN CHAPMAN: Motion fails.

Lisa?

MEMBER DE LIMA: Next up is ethylene.

DR. MATHEWS: At Section 205.605(b) the listing is ethylene, allowed for post-harvest ripening of tropical fruit and degreening of citrus.

MEMBER DE LIMA: Asa?

MEMBER BRADMAN: Thank you. So ethylene -- we've had a number of discussions about this. Ethylene is a commonly-used material, a hormone essentially, growth regulator and it facilitates ripening in stored products. We've heard a lot about bananas. Also citrus fruit. Often the citrus fruit matures internally earlier than the outer color and so ethylene is used for greening, to bring the rind to an orange color, which is better for sales.

There's a lot of support for ethylene across the board, both in terms of -- for tropical fruits, but also for citrus. I think one of the key comments that had an impact on me was the notion that it would -- you would -- we

would reduce the season for citrus if it wasn't available for organic citrus because it -- color is some important for sales during periods and we would -- there would be a loss of market. So I think there's a lot of support about this.

There's been some concerns about the use of this as a growth regulator. That's not specifically necessary for production and processing. On a personal basis I think this is one of those materials where allowing it allows a broader market for organically produced materials. It helps enhance and grow the share of organic.

Any discussion?

MEMBER DE LIMA: Harriet?

VICE CHAIR BEHAR: In review of distribution houses and produce handlers it appears that the infrastructure for handling this material is well maintained and there is really very little damage to human health or the environment.

MEMBER DE LIMA: Steve?

MEMBER ELA: Well, and I'll just iterate that in the apple industry we actively remove ethylene from our storage houses, so it's ironic to be adding it. But it is -- I mean, it is a naturally -- I mean, even though this is a synthetic, it's naturally occurring in many fruits and so I don't see any big problem with this.

MEMBER DE LIMA: Dave?

MEMBER MORTENSEN: And I support this. I'll preface my statements by saying that, but I also -- as we go along the concern about the use of growth regulators continues to be something that's very much on my mind when we look at things like this and the decision that we made not to allow the compound for suppressing suckering in tobacco.

In some ways to me that was a similar decision. We were thinking about growth regulators and how it affects the synchrony of plant development in the field. I thought the benefits that were laid about by the Costa Rican

farmers about the pest management benefits of synchrony of fruiting of pineapple was compelling.

On the other hand it was also a large monoculture cropping practice that has its own set of pest problems. But all and all on the balance I think this -- the strengths of this outweigh some of these concerns.

MEMBER DE LIMA: Tom?

CHAIRMAN CHAPMAN: So this is for ethylene use in processing. We'll talk about it again and it's crop applications.

I do want to say as one of the people who voted down the free fatty acids ethylene usage both here and on the Crop listing is quite constrained to a specific application. And on that free fatty acid petition when we voted it down, it was not constrained to a specific application for a need in a specific crop.

MEMBER DE LIMA: All right. Tom?

CHAIRMAN CHAPMAN: Motion is to remove ethylene from the National List. And I should I

guess specify on this one; I probably should have specified on the other one, because calcium hydroxide is in multiple spots, that it's for 205-605(b) of the National List. The motion is made by Asa and seconded by Tom. A yes vote is to remove; a no vote is to retain, and the voting will start with Rick.

MEMBER GREENWOOD: No.

MEMBER DE LIMA: No.

MEMBER SCHWARTZ: No.

MEMBER ROMERO-BRIONES: No.

MEMBER OAKLEY: No.

MEMBER BAIRD: No.

MEMBER BUIE: No.

MEMBER SWAFFAR: No.

SECRETARY RICE: No.

VICE CHAIR BEHAR: No.

MEMBER SEITZ: No.

MEMBER MORTENSEN: No.

MEMBER ELA: No.

MEMBER BRADMAN: No.

CHAIRMAN CHAPMAN: Chair votes no.

SECRETARY RICE: That's 0 yes; 15 no; 0 absent.

CHAIRMAN CHAPMAN: Motion fails.

Lisa?

MEMBER DE LIMA: Next is glycerides, mono and di.

DR. MATHEWS: At Section 205.605(b) the listing is glycerides, mono and di for use only in drum drying of food.

MEMBER DE LIMA: So glycerides, mono and di in drum drying. They act as an emulsifier and release agent. When mixed with food they help prevent sticking during processing and help to strip food from the cylinder walls once dried.

As far as public comment there was support from two manufacturers. There was also a certifier and an organization that supported removal because of possible non-synthetic and organic alternatives that were suggested in the TR.

It was also pointed out by an organization that in the 2015 review one

commenter stated that mono and diglycerides are important emulsifiers used in organic products to ensure there's no fat separation and the organization would like certifiers to be alerted to this possible misuse.

Any discussion from the Board?

(No audible response.)

MEMBER DE LIMA: Tom?

CHAIRMAN CHAPMAN: Motion is to remove mono and diglycerides from the National List. The motion was made by Lisa and seconded by Steve. A yes vote is to remove; a no vote is retain, and the voting will start with Lisa.

MEMBER DE LIMA: No.

MEMBER SCHWARTZ: No.

MEMBER ROMERO-BRIONES: No.

MEMBER OAKLEY: No.

MEMBER BAIRD: No.

MEMBER BUIE: No.

MEMBER SWAFFAR: No.

SECRETARY RICE: No.

VICE CHAIR BEHAR: No.

MEMBER SEITZ: No.

MEMBER MORTENSEN: No.

MEMBER ELA: No.

MEMBER BRADMAN: No.

MEMBER GREENWOOD: No.

CHAIRMAN CHAPMAN: Chair votes no.

SECRETARY RICE: That's 0 yes; 15 no; 0 absent.

CHAIRMAN CHAPMAN: Motion fails.

Lisa?

MEMBER DE LIMA: Next is magnesium stearate.

DR. MATHEWS: At Section 205.605(b) the listing is magnesium stearate for use only in agricultural products labeled made with organic-specified ingredients or food groups prohibited in agricultural products labeled organic.

MEMBER DE LIMA: Asa?

MEMBER BRADMAN: So magnesium stearate is a -- is used as an anti-caking agent salts. Also a flow agent for processing machines. And probably it seems like its dominant use based on

comments was as a binding material for nutritional supplements and things like that. It's --

PARTICIPANT: You might want to speak --

MEMBER BRADMAN: Okay. Should I repeat what I said? Everyone got it?

Anyways, so magnesium stearate is a -- probably the dominant use that I've seen in the comments and users is that it's a binding agent for nutritional supplements. There's not really any big indications of significant human health concerns, although there were a few comments submitted a few references about some concerns of the material as a salt and possible impacts on renal health.

It's -- because of its use as a -- and made with organic materials it's -- many -- there's actually relatively little concern with this material and its presence on the list. And among producers of nutritional supplements related materials -- related products they

thought this was a relatively important material, although it varied. Some people considered it very important. Others felt that there were alternatives, but it would add some costs.

There was also one comment in -- well, a couple of comments that we should prohibit animal sources of material to manufacture this, that it should be limited to non-animal oils and other materials to produce it partly out of concerns of -- with the animals, GMO-related, but also to provide a source for vegan or other non -- vegetarian consumers.

So any discussion?

MEMBER DE LIMA: So I will say that there are supplemental companies that specifically call out that they're using vegetarian magnesium stearate on the label.

MEMBER BRADMAN: And just to clarify, people were requesting that we actually limit the approval. too. I assume if we went that route, that would be done in an annotation.

MEMBER DE LIMA: Tom?

CHAIRMAN CHAPMAN: And also kosher certification is generally used as an information shortcut to determine if it was from an animal product or not.

MEMBER MORTENSEN: Tom, I didn't hear that. Could you repeat that?

CHAIRMAN CHAPMAN: Kosher certification is often used as an information shortcut to determine whether or not the origin product was from an animal or not.

MEMBER MORTENSEN: Thanks.

MEMBER DE LIMA: Harriet?

VICE CHAIR BEHAR: Well, as Lisa mentioned, it could be mentioned in the marketplace if it's a vegetarian source or not, so the manufacturers can choose. I don't see any reason to constrain it on our National List.

MEMBER BRADMAN: Right. One --

VICE CHAIR BEHAR: Unless the Subcommittee wants to look at it as a work agenda item.

MEMBER BRADMAN: One producer actually

indicated they derived it from organic rice materials, so there's actually even an organic source for it.

MEMBER DE LIMA: Tom?

CHAIRMAN CHAPMAN: The motion is to remove magnesium stearate from the National List The motion was made by Asa and seconded by Tom Chapman. A yes vote is to remove; a no vote is to retain, and the voting will start with Eric.

MEMBER SCHWARTZ: No.

MEMBER ROMERO-BRIONES: No.

MEMBER OAKLEY: No.

MEMBER BAIRD: No.

MEMBER BUIE: No.

MEMBER SWAFFAR: No.

SECRETARY RICE: No.

VICE CHAIR BEHAR: No.

MEMBER SEITZ: No.

MEMBER MORTENSEN: No.

MEMBER ELA: No.

MEMBER BRADMAN: No.

MEMBER GREENWOOD: No.

MEMBER DE LIMA: No.

CHAIRMAN CHAPMAN: Chair votes no.

SECRETARY RICE: That's 0 yes; 15 no; 0 absent.

CHAIRMAN CHAPMAN: Motion fails.

Lisa?

MEMBER DE LIMA: Next is phosphoric acid.

DR. MATHEWS: At Section 205.605(b) the listing is phosphoric acid, cleaning of food contact surfaces and equipment only.

MEMBER DE LIMA: A-dae?

MEMBER ROMERO-BRIONES: Phosphoric acid is used in cleaning and removing encrusted surface matter and mineral scale found on metal equipment such as boilers and steam-producing equipment. We discussed this as part -- and including phosphoric acid in our larger discussion about sanitizers.

We had quite a few comments. The majority was not -- if not all, suggested relisting. There was one comment that suggested

seeking safer alternatives because it may have some -- it does pose some environmental health hazards, but right now it is probably one of the most effective sanitizers for removing calcium and mineral deposits.

MEMBER DE LIMA: Discussion from the Board?

Harriet?

VICE CHAIR BEHAR: One of the reasons why it's listed above as allowed as ingredients is it's one of the few sanitizers that we have that don't need a rinse off, which many process sees as an important aspect.

MEMBER DE LIMA: Tom?

CHAIRMAN CHAPMAN: We have a motion to remove phosphoric acid from the National List. The motion was made by A-dae and seconded by Scott. A yes vote is to remove; a no vote is to retain, and the voting will start with A-dae.

MEMBER ROMERO-BRIONES: No.

MEMBER OAKLEY: No.

MEMBER BAIRD: No.

MEMBER BUIE: No.

MEMBER SWAFFAR: No.

SECRETARY RICE: No.

VICE CHAIR BEHAR: No.

MEMBER SEITZ: No.

MEMBER MORTENSEN: No.

MEMBER ELA: No.

MEMBER BRADMAN: I'm voting no. Can I have a slight signing statement about -- that we should recognize there may be concerns with phosphates and waterways and that's something to consider. We went to the resolution a bit before I had a chance to mention that comment in discussion. Thanks. So I'm voting no.

MEMBER GREENWOOD: No.

MEMBER DE LIMA: No.

MEMBER SCHWARTZ: No.

SECRETARY RICE: It's -- oh, Chair?

CHAIRMAN CHAPMAN: Oh, Chair votes no.

SECRETARY RICE: That's 0 yes; 15 no; 0 absent.

CHAIRMAN CHAPMAN: Motion fails.

Lisa?

MEMBER DE LIMA: Next is potassium carbonate.

DR. MATHEWS: At Section 205.605(b) the listing is potassium carbonate.

MEMBER DE LIMA: Scott?

SECRETARY RICE: Thank you. Sorry. One moment.

(Pause.)

SECRETARY RICE: Just getting my voting in order.

Potassium carbonate is commonly used in the Dutch alkali process for processing cocoa and chocolate to reduce the acidity. It's also used as a pH control. It's a leavening agent, boiler water additive and a number of other uses. Also notable, used in -- as a buffering agent in making wine and mead to reduce acidity.

There was widespread support for the relisting of this material. And that's the summary.

MEMBER DE LIMA: Any discussion?

Harriet?

VICE CHAIR BEHAR: Chocolate is essential.

MEMBER DE LIMA: All right. Tom?

CHAIRMAN CHAPMAN: Motion is to remove potassium carbonate from the National List. The motion was made by Lisa and seconded by Scott. A yes vote is to remove; a no vote is to retain, and the voting will start with Emily.

MEMBER OAKLEY: No.

MEMBER BAIRD: No.

MEMBER BUIE: No.

MEMBER SWAFFAR: No.

SECRETARY RICE: No.

VICE CHAIR BEHAR: No.

MEMBER SEITZ: No.

MEMBER MORTENSEN: No.

MEMBER ELA: No.

MEMBER BRADMAN: No.

MEMBER GREENWOOD: No.

MEMBER DE LIMA: No.

MEMBER SCHWARTZ: No.

MEMBER ROMERO-BRIONES: No.

CHAIRMAN CHAPMAN: Chair votes no.

SECRETARY RICE: That's 0 yes; 15 no; 0 absent.

CHAIRMAN CHAPMAN: Motion fails.

Lisa?

MEMBER DE LIMA: Next is sulfur dioxide.

DR. MATHEWS: At Section 205.605(b) the listing is sulfur dioxide for use only in wine labeled made with organic grapes provided that total sulfite concentration does not exceed 100 ppm.

MEMBER DE LIMA: Steve?

MEMBER ELA: I think we should note the essentiality of wine, similar to chocolate; often used together, I've noticed.

(Laughter.)

MEMBER ELA: Again similar comments this fall as compared to the spring about the essentiality of this material for the use in wine making, especially to prevent spoilage and to

protect flavor and longstanding quality.

Basically really no negative comments. I mean, we recognize people have sulfite allergies, but they're labeled. I think the only other comment from a couple people were that the 100 parts per million was excessive and could be limited to a lower amount which would require an annotation change and a different work agenda item.

And there was; I know it's come up in the past that it's currently for use only in wine made with organic grapes, but there are -- is the cider industry and the berry industry and such. So one commenter said it should be -- that should be loosened to be made with organic fruit rather than just organic grapes. But that's really out of our purview in the sunset review. So no negative comments and essential to the wine industry.

MEMBER DE LIMA: Any discussion?

Harriet?

VICE CHAIR BEHAR: I remember, I think

it was two sunsets ago this was quite a controversial material. There were wine makers that wanted it to come off the list because you could make wine without it. I don't see them here clamoring for that because I believe in the marketplace they've been able to distinguish themselves as no sulfites, and so therefore -- and then declare their wine as organic wine. So I think that the annotation and listing as stands is working for everyone.

MEMBER DE LIMA: Any other discussion?

(No audible response.)

MEMBER DE LIMA: Tom?

CHAIRMAN CHAPMAN: Okay. We have a motion to remove sulfur dioxide from the National List. The motion was made by Steve and seconded by Eric. A yes vote is to remove; a no vote is to retain, and the voting will start with Sue.

MEMBER BAIRD: Concur wine is essential. No.

MEMBER BUIE: No.

MEMBER SWAFFAR: No.

SECRETARY RICE: No.

VICE CHAIR BEHAR: No.

MEMBER SEITZ: No.

MEMBER MORTENSEN: No.

MEMBER ELA: No.

MEMBER BRADMAN: No.

MEMBER GREENWOOD: No.

MEMBER DE LIMA: No.

MEMBER SCHWARTZ: No.

MEMBER ROMERO-BRIONES: No.

MEMBER OAKLEY: No.

CHAIRMAN CHAPMAN: Chair votes no.

SECRETARY RICE: That's 0 yes; 15 no; 0 absent.

CHAIRMAN CHAPMAN: Motion fails.

Lisa?

MEMBER DE LIMA: Next is xanthan gum.

DR. MATHEWS: At Section 205.605(b) the listing is xanthan gum.

MEMBER DE LIMA: All right. So xanthan gum is used in numerous food products some of which include baked goods, beverages,

dairy products, dressings, nutritional supplements, frozen foods. Gum is used in small percentages of the finished product, usually less than 0.5 percent by weight. It disperses water giving a thickening and gelling effect.

It's also often used with other gums to achieve desired viscosities and product structure. It's particularly effective in frozen and chilled products where it can impart thickness, freeze-thaw protection and stability during processing. Common gums that it's used along with are locust, guar and carrageenan.

It's allowed for use in organics internationally in Canada, the EU, Japan and by IFOAM. And it's also commercially available to consumers to buy, often used in gluten-free baking and other recipes.

As far as public comment a number of organizations, certifiers and manufacturers expressed support for the material with one large certifier stating that of the gums xanthan is the most commonly found in their OSPs. One

manufacturer stated that organic gums didn't have the same functionality in their organic baked goods as xanthan did. One organization commented that it should be removed from the National List unless it's listed for essential uses. And we heard from a retailer that thought it should be delisted as well due to consumer concerns.

There were also comments around classification. The petitioner and an organization want to see it reclassified as a non-synthetic. And then others wrote in requesting that the NOSB come up with a policy that can be applied when evaluating products of fermentation as far as classification and compatibility with organics.

I do want to point out that in 2016 the Handling Subcommittee decided after reviewing an updated TR that xanthan gum could be produced by various methods that could result in both a non-synthetic or a synthetic and that we decided to not move forward with a reclassification.

Any discussion?

Dave?

MEMBER MORTENSEN: So I have the same concerns here, and I will just raise one point and then be quiet. There is a possibility that a reason why the EU would see this differently is that they don't grow GM crops for the most part. So that concern would be less severe there since virtually no GM crops are grown in Europe, or at least not the ones that are used in the fermentation process. Thanks.

MEMBER DE LIMA: All right. Tom?

CHAIRMAN CHAPMAN: All right. We have a seconded motion from the Subcommittee. The motion is to remove xanthan gum. Motion was made by Lisa and seconded by Scott. A yes vote is to remove; a no vote is to retain the listing, and the voting will start with Jesse.

MEMBER BUIE: No.

MEMBER SWAFFAR: No.

SECRETARY RICE: No.

VICE CHAIR BEHAR: No.

MEMBER SEITZ: No.

MEMBER MORTENSEN: Yes.

MEMBER ELA: No.

MEMBER BRADMAN: No.

MEMBER GREENWOOD: No.

MEMBER DE LIMA: No.

MEMBER SCHWARTZ: No.

MEMBER ROMERO-BRIONES: No.

MEMBER OAKLEY: No.

MEMBER BAIRD: No.

CHAIRMAN CHAPMAN: Chair votes no.

SECRETARY RICE: That's 1 yes; 14 no; 0 absent.

CHAIRMAN CHAPMAN: Motion fails.

So it's now 10:55. That's the end of the 205.605 listings. I think we can break here. We'll come back to order at 11:10 and continue with sunset and then move onto the rest of the Handling Subcommittee meeting. Please be back promptly at 11:10 or we will have a late lunch. We're in recess.

(Whereupon, the above-entitled matter went off the record at 10:55 a.m. and resumed at

11:10 a.m.)

MR. CHAPMAN: If board members could take their seats, we're about to get started.

(Pause.)

MR. CHAPMAN: All right. If the board members could take their seat we'll come back into order. All right, we'll come back into order. And a quorum of members is present. We will turn back to the Handling Subcommittee, Lisa.

MR. RICE: All right. Next up is fructooligosaccarhides, FOS from here on out.

MS. DE LIMA: Okay. We're moving into Section 205.606 on the National List, nonorganically produced agriculture products allowed as ingredients in or on processed products labeled as organic.

At paragraph (e) we have the listing fructooligosaccarhides CAS No. 308066-66.2.

MR. CHAPMAN: Fructooligosaccarhides is on the list as a nonorganically produced agricultural product allowed in organic products,

boxes, and nondigestible carbohydrate that's used a soluble prebiotic fiber, sweetening agent, flavor enhancer, bulking agent, and is used in many foods, including yogurts, infant foods, medical foods, baked goods, candies, soups, beverages, and other dairy products.

Public comment from interest groups objected to its listing saying that it's highly processed and is not a necessary component of organic foods. Concerns were also raised around fermentation.

Other commenters, particularly organic industry and some trade associations, as well as nutrition councils commented on its use as a prebiotic. It's widely used as an essential prebiotic in infant formulas in place of human milk oligosaccharides that would be found in breast milk.

Historically -- this was not in public comment -- historically this was widely used in the, in the yogurt industry and in infant foods. The yogurt industry use seems to have declined,

but it is still an additive in almost every infant formula out there on the market.

MS. DE LIMA: Discussion from the board? Harriet?

MS. BEHAR: Usually I don't like voting to put something on the National List that's more than 15 to 20 letters but, or difficult to pronounce, but I realize we shouldn't be prejudiced and read the documentation. And so, I think this is a useful product, even though it might look to consumers who are looking for a clean label as something that they might not like.

So we might need a little more education on it, but I think it's acceptable.

MS. DE LIMA: And then I will say as a retailer, it's not a question I've seen come up as far as clean label and asking what it is.

Emily and then Dave.

MS. OAKLEY: Okay. Question for Harriet then. In terms of the public comment addressing this as a highly processed product,

so, and nonessential, I guess the one area of concern might be in infant formula, primarily for me. Could someone address that?

MR. CHAPMAN: I heard, I heard that -- I didn't hear the connection to the question. Could you repeat that?

MS. OAKLEY: Definitely wasn't very clear.

MR. CHAPMAN: I just heard infant formula and highly processed, but.

MS. OAKLEY: Yes. So that wasn't a clear question. You're right.

Are there alternatives in infant formula? And I do have concerns and felt that the argument laid out by some of the public commenters about its highly processed nature were compelling.

MR. CHAPMAN: From the public comment that I read, this is the accepted use material from American Medical Association and the American Pediatric Association for infant formulas. So, I am unaware of an alternative for

infant formulas.

There is some mention of glucosuria saccharides, which is a similar compound, but it's extremely similar. So it's a, what's the saying, six of one, half dozen of the other. And I'm unaware of that product being available in an organic formula.

MS. DE LIMA: Dan.

MR. MORTENSEN: Could someone on the subcommittee give us a sense for there are two forms, inulin-derived and sucrose-derived. The sucrose-derived -- and I don't want to sound like a broken record, but sugar beets in the United States are almost entirely genetically modified these days. So if, if it's derived from sugar beets versus the proportion from inulin, I don't know anything about that.

MR. CHAPMAN: So this is a 606 item. It's an agricultural item. And the exclusion on excluded methods would be fully applicable to this material.

MR. MORTENSEN: Meaning that they

would source organic sugar beets some or non, or conventional non-transformed if that's the source?

MR. CHAPMAN: I would believe -- I don't believe they would source organic sugar beets. I'm unaware of any of those in the U.S. But I do believe they would source convention non-genetically engineering sugar beets. But I don't know of the certifier on the board could speak more to that.

MR. RICE: Yes. Like any agricultural product you would have an ingredient affidavit that would verify the non-GMO status of this product.

MR. MORTENSEN: I'm having a hard time hearing some of this. Could you repeat that, please?

MR. RICE: As an agricultural ingredient you would have an affidavit that the certifier would verify that is the suppli -- or, excuse me, the certified operation would submit verifying the source form a non-GMO source.

MR. MORTENSEN: Thank you.

MS. DE LIMA: Dan.

DR. SEITZ: So, several commenters said that this had just been more of a fad at some point and that there were certain health claims that could be made by virtue of having this. And that use had dropped off substantially and that, you know, there was some question around these various claims.

So I'm curious to know from those of you who work with products that have this, what seems to be still essential about this in terms of processed foods? And can you speak up, Tom?

MR. CHAPMAN: Yes. Can you hear me, Dan?

DR. SEITZ: Yes.

MR. CHAPMAN: Okay. So it's a prebiotic. And prebiotics have, you know, been around. We've seen them come and go as fads, prebiotics and probiotics. And as I mentioned in my opening comments, it was very common for a while to have prebiotics in yogurts because

you're also getting active cultures. And so you get both of those at the same time to promote health.

That activity has seemed to have waned to some extent. But it's usage in infant formulas, and I was remiss in mentioning also medical foods so folks are fed intrally. It's use a prebiotic is still fairly essential in that application since there are not -- it doesn't come through the normal pathways that you would get that, so, human breast milk, for example.

I understand people's concerns with infant formula. And I'm not here to debate them. But they are, you know, infant formulas strive to match a natural product and the constituents therein. And sometimes to get it to match you need to refer -- you need to use some highly processed products to get it as close to human breast milk as possible.

Did that, did that answer your -- yeah.

DR. SEITZ: Thanks.

MS. DE LIMA: All right, I don't see any other discussion. Tom.

MR. CHAPMAN: All right. We have a motion to remove fructooligosaccharides from 205.606. The motion as made by Tom. It was seconded by Lisa. A yes vote is to remove, a no vote is to retain.

And someone's mike is giving us feedback.

The voting will start with Ashley.

MR. SWAFFAR: No.

MR. RICE: No.

MS. BEHAR: No.

DR. SEITZ: No.

MR. MORTENSEN: No.

MR. ELA: No.

MR. BRADMAN: No.

DR. GREENWOOD: No.

MS. DE LIMA: No.

MR. SCHWARTZ: No.

MS. ROMERO-BRIONES: No.

MS. OAKLEY: Yes.

MS. BAIRD: No.

MR. BUIE: No.

MR. CHAPMAN: Chair votes no.

MR. RICE: There was one yes, 14 no, 0 absent.

MR. CHAPMAN: The motion fails.

Lisa.

MS. DE LIMA: Next up gums, arabic, guar, locust, and carob. It's Section 205.606(g). The listing is gums -- water extracted only (Arabic, Guar, Locust bean, and Carob bean.)

DR. MATHEWS: So all these gums are extracted from the endosperm of plants via water processing and then dried and milled. They are used in various food applications due to their ability to modify the viscosity of products through the binding of water and the generation of jelling effects, and also used as thickening agents.

And due to the structure of the gums, each gum behaves slightly differently at

different temperatures, pH ranges, physical agitation, and so on.

These gums are allowed for use in organics internationally, in Canada, the EU, Japan, and by IFOAM.

During public comment I think all but one public comment was in support of relisting these gums.

There were questions around the availability of organic versions. One manufacturer noted that they source organic guar and locust, but are in favor of retaining on the list because they don't know if the organic supply is adequate.

Another said they were able to source organic arabic for the last two years, but due to weather extremes and political situations where the substance is grown there's been a long history of supply interruptions.

One organization thought we should investigate whether there is gum arabic that could be certified as wild crafted organic, as

well as the availability of organic carob and locust bean gum.

So we did -- I just want to update everyone -- we did discuss in subcommittee after the spring meeting where similar requests were made in public comment to list the gums separately so that individual gums could be delisted in the future. And we discussed it. And we discussed it with the program.

He let us know that we could do that, but it's not really necessary because even though they're listed as a single line on 606(j), any one of them could be recommended for removal. An example of this was the board did something similar on the Crops Subcommittee last year. We delisted vitamins B, C and E. And they had two different motions which allowed them to remove one of the gums.

So when we got to that point where we see that there is availability of one of these gums, organic commercially available, we can still go ahead and do that without having to go

through the process of listing them separately on the national list. Tom.

MR. CHAPMAN: So in my role I do source organic gum arabic. We are not a large producer of the product, but we are able to successfully source it organically today. However, I also support the retaining of this listing. And I think the commercial availability exceptions are working out well here because I think a lot of folks are sourcing organic versions of these gums, where available.

The big concern with a lot of these gums is they come from Sub-Saharan African from some countries that have a history of political instability. And so while they might be available for four years in a row, they will suddenly potentially dry up from time to time, depending on the political climate and what's going on in that region, or also weather events in that region as well.

And so at that point, knowing the length of time it takes to get a product back on

the list, you know, you're looking at 18, 24, 36 months, or even longer before you could do that. That's going to impact all those processed products and that soft serve ice cream you like so much, which is also essential. You know, just going to have to do something in the interim here.

So in that regard, and knowing that there's a commercial availability here that's forcing folks to go out and source these products, there's not that many different forms of these products so it's quite clear cut, I think, from the certifier's perspective if someone truly tried to source this organic or not. I think it's important to retain the listings.

MS. DE LIMA: Harriet.

MS. BEHAR: So, I'm just wondering in the discussion with anyone who is already sourcing it, have they looked at trying to work in other areas of the world for production or not? I don't know if Tom wants to speak to that.

Because, you know, I would think that there would not only be one tiny place where it could grow. And there are many countries that would like to benefit from organic production.

MR. CHAPMAN: We haven't tried to source from other regions because we're successfully sourcing organic at this time. I also, I don't know, I don't particularly want to pull a cash crop out of a developing country if I don't need to do that either.

That being said, I mean, these aren't all created equally. And there's probably a greater availability for some than others. I'm aware of guar being successfully grown in a couple different climates. It's not a product I source, so I'm not actively involved in it. But there are some.

I'm not close enough to these trees, but gum arabic's been a valuable commodity for an extremely long time. If it was newly grown in other areas other than Sudan, I think, I think people would have economically taken advantage of

it at this point.

MS. DE LIMA: The only public comment I saw as far as domestic grown gums was guar gum. And that was not organic.

MS. BEHAR: If it could be done in another developing country also.

But I'm not necessarily saying that that's what we want to see is just for organic production to damage someone else, but especially when it's in a region where the production could be, you know, scarce or, you know, kind of up and down, that trying to have something more stable would also be to the benefit not just of the growers, because these are perennial crops, but also for the manufacturers that then want to work with those for the long term.

MS. DE LIMA: All right, seeing no more discussion, Tom.

MR. CHAPMAN: All right. So, we have a motion to remove gum arabic, locus bean gum, carob gum, and guar gum from the National List. The motion was made by Lisa and seconded by

Scott.

A yes vote is to remove. A no vote is to retain. And the voting will start with Scott.

MR. RICE: No.

MS. BEHAR: No.

DR. SEITZ: No.

MR. MORTENSEN: No.

MR. ELA: No.

MR. BRADMAN: No.

DR. GREENWOOD: No.

MS. DE LIMA: No.

MR. SCHWARTZ: No.

MS. ROMERO-BRIONES: No.

MS. OAKLEY: No.

MS. BAIRD: No.

MR. BUIE: No.

MR. SWAFFAR: No.

MR. CHAPMAN: Chair votes no.

MR. RICE: That's 0 yes, 15 no, 0 absent.

MR. CHAPMAN: The motion fails. Lisa.

MS. DE LIMA: Next up, lecithin, de-

oiled.

DR. MATHEWS: At Section 205.606(k). The listing is lecithin, de-oiled.

MS. DE LIMA: A-dae.

MS. ROMERO-BRIONES: So, lecithin is a substance isolated as a gum following hydration of solvent extracted soy, safflower or corn oils. We also noted in the comments that it's also derived from sunflower oil.

It has a wide range of applications, including emulsification, or these properties: wetting, dispersing, and texturization. It's included in a wide variety of products, from chocolates to margarines to powders to release sprays to baked goods.

The comments were pretty split on whether to relist. The question is whether there is a commercial availability of non-soy lecithin. And based on conversations with certifiers in the stakeholder community here, there is some non-soy organic forms of lecithin de-oiled available.

Organic soy lecithin is available.

One of the comments, or several of the commenters said that delisting this would allow the organic non-soy lecithin de-oiled products to become -- the market to expand. Keeping it on the list would chill the market.

And the comments on the other side of the table said that non-soy lecithin de-oiled organic products are unstable and not in a consistent supply. And based on conversations with some of the stakeholders there are -- there's an increase in the availability of lecithin de-oiled products, both soy and non-soy, generally.

MS. DE LIMA: Discussion? Emily.

MS. OAKLEY: So, A-dae, what does that lead you to conclude?

MS. ROMERO-BRIONES: That there is lecithin de-oiled organic products available, both soy and sunflower.

MS. OAKLEY: So would you vote to remove, to increase the market? I know one commenter said the rulemaking process is lengthy

enough that within several years that market is very likely to have fully caught up. I mean, of course that's speculation. But what are your thoughts?

MS. ROMERO-BRIONES: Absolutely. So it is speculation. I am going to vote to remove it just based on the conversations I have had with several certifiers that are in the room today. So I am going to vote to remove it.

MS. DE LIMA: Sue, then Tom, then Ashley, then Harriet.

MS. BAIRD: Given that there are other sources now available have the commenters submitted documentation that each of those types of lecithins would work the same in the products? Because sometimes that's an issue.

MS. ROMERO-BRIONES: So currently -- so, some of the commenters mentioned that products are using both non-organic lecithin de-oiled and organic lecithin de-oiled, depending on the supply and the consistency. So I think it's a question of supply as opposed to, like,

alternative products or differentiation of the lecithin. It's a matter of supply.

MS. DE LIMA: Tom.

MR. CHAPMAN: So, years ago fluid lecithin was also listed. It got delisted through a petition process by which, even with the product showing on the National List, someone was able to develop an organic market for fluid soy lecithin and petitioned the NOSB to remove it.

It was a successful case of industry finding a market despite the material being on 606, one that we've heard heralded several times, including with hops, the process right now in glycerin. And at the last meeting -- sorry, at the last 2017 sunset, which was what, 2015, in the 2014 sunset there were several agricultural items removed from 606, or recommended for removal from 606 that demonstrates that it is possible to build a market for this material when it's listed here.

I would also say that soy de-oiled

lecithin is widely available now, and can also be sourced.

The issue comes to non-allergenic forms of lecithin. And that's the area that is not as readily available, particularly in the fluid side but also in the de-oiled side. Generally you have a fluid market, and the de-oiled market kind of falls behind it and requires a bit more processing.

Sunflower is the primary non-allergenic form of lecithin on the market, although there is a couple others, canola, grape seed. So far we have not found sunflower oil lecithin to be readily available on a consistent basis. There's no manufacturers in the U.S. It's a derivative product of oil manufacturing. All these are deriv -- all lecithins are derivative products of oil manufacturing.

And so, organic sunflower oil by and large comes out of the Ukraine. The Ukraine has been a semi-politically unstable country for the last three or four years given their conflicts

with Russia. And it hasn't always been available. It's developing. It is close.

And I am aware of domestic manufacturers are putting in capabilities to be able to product this from the amount of sunflower oil that's -- organic sunflower oil that's refined here domestically. But that being said, it's not there right now. And a lot of things can change between now and then.

You know, my vote and my recommendation here is going to be to relist it at this time. But, again, this market is developing with the 606 listing. Certifiers are able to go out and enforce 606 commercial availability quite, quite clearly on this material. And but I do encourage future if this does get relisted, I encourage future NOSBs to really take a critical eye to it because we're at the precipice of this becoming a standard available organic item. It's just not there right now.

MS. DE LIMA: Ashley.

MR. SWAFFAR: Yes. So I just want to point out though, it's a comment. This spring that said our consumers avoid soy, so we primarily use sunflower lecithin. Most is organic, but we have had to use the non-organic at times due the supply availability. And that sunflower crop I know in the U.S., because chickens do use sunflower in seed also sometimes, is pretty unstable getting a harvest out of that crop every year.

So that's why you can see supply come and go in an organic form. Some years it's there, some years it's not.

And I just want to point 606 listing, for everybody that may not understand that language 100 percent, there if someone is going to use sunflower de-oiled lecithin they have to use organic if it's available. The certifier will make them do that. So, if that is available, they have to use that. If not, then they can drop down to the non-organic form.

So I like retaining this material on

606 for those years that those sunflower crops do fail. I think that's critical because there may, there may be availability this year but not next year, depending on how the harvest is. So I think it's critical to keep this on the list.

MS. DE LIMA: Harriet.

MS. BEHAR: Two things. One is, when the certifier is asking if it is available, then you must use it. I have seen some manufacturers talk about the unstable production, so they say, well, I can't, I don't want to have -- I'd love to write "organic" on my label but I'm not going to. And then, therefore, I want to use the non-organic. And some certifiers still mandate maybe the organic but others do not.

And that does seem like a reasonable request from the processor.

So I'm wondering if on the work agenda we could split out the various lecithins in the future because we can't annotate now. But if we had different lecithins then it would pave the way at the next sunset, or even before if

somebody petitioned, to take off the soybean lecithin de-oiled and retain the sunflower.

And I'm not sure, I guess it would take a little bit more review because I think it could come from eggs and, I mean, there's other sources of lecithin. Do, just do a little bit of research on what is commercially used of lecithin de-oiled, and then split that out and then we would then be able to take the soybean oil off and encourage the growth of that industry and reward them for their activity in organic production, and keep the ones that we feel we strongly need.

MS. DE LIMA: Steve.

MR. ELA: It's fascinating to hear this debate because this is a world that I don't live in. And so, but I'm a little hesitant to, while I want to see the organic market expand I'm a little hesitant to delist it on the thought that by the time it gets through rulemaking it will ready, partly because we know, I mean we've seen from other substances that when it goes to

public comment for rulemaking some manufacturers are going to say this is going to cause me economic hardship, and then it's going to get derailed.

And so I guess before we send it to the NOP for rulemaking to delist it, I'd like to have our case pretty solid and not speculative that, you know, this is, this is real.

So I tend to fall on Tom's side that I'm leaning towards relisting it now, but the next go-round really giving it a, you know, really giving it a crucial eye and saying, okay, we should be there.

MS. DE LIMA: Yes, I echo what Steve said. I'm definitely not at a place where I'm comfortable delisting. Scott.

MR. RICE: Yeah, I'd just reiterate what's been said and reiterate again. But also just emphasize that, you know, part of the process in reviewing any product formulation would be around the material would be looking for some sort of evidence that that manufacturer made

an effort to source an organic source where an organic source would likely be found.

MS. DE LIMA: Any other discussion?

(No audible response.)

MS. DE LIMA: All right. Tom.

MR. CHAPMAN: Okay. We have a motion.

MS. DE LIMA: Dave?

MR. MORTENSEN: If we could, just for another two minutes.

MS. DE LIMA: Yes.

MR. MORTENSEN: So I'm just slightly confused exactly what we're voting on here. We're voting to keep this on. If this wasn't on, or even if it is on, on the list as written, would we, are we saying that there could be an organic soybean-derived only lecithin de-oiled that would be added to the list later?

Is that what we're saying or not? I'm confused.

MS. DE LIMA: So, right now we're simply voting on whether we're going to relist or not relist de-oiled lecithin. That includes all

forms: soy, sunflower, whatever.

Later on the subcommittee could decide if they want to explore Harriet's suggestion of splitting the listing out into -- and we have to talk to the program, too -- into different sources so that it might be easier to take the soy off and leave the other forms that are unstable, availability-wise unstable on the list.

MR. MORTENSEN: Thank you, Lisa.

MS. DE LIMA: Ashley.

MR. SWAFFAR: Yes. Dave, just to follow up on that, the 606 listing where it's at, they have to use an organic form if it's available. So they have to use organic soy if it's available.

MR. CHAPMAN: Okay. So, we have a motion to remove lecithin de-oiled from the National List. The motion was made by A-dae and seconded by Eric.

A yes vote is to remove. A no vote is to relist. And the voting will start with Harriet.

MS. BEHAR: No.

DR. SEITZ: Yes.

MR. MORTENSEN: No.

MR. ELA: No.

MR. BRADMAN: No.

DR. GREENWOOD: No.

MS. DE LIMA: No.

MR. SCHWARTZ: No.

MS. ROMERO-BRIONES: Yes.

MS. OAKLEY: Yes.

MS. BAIRD: No.

MR. BUIE: No.

MR. SWAFFAR: No.

MR. RICE: No.

MR. CHAPMAN: Chair votes no.

MR. RICE: There's 3 yes, 12 no, 0 absent.

MR. CHAPMAN: Motion fails. Lisa.

MS. DE LIMA: Emily.

MS. OAKLEY: Sorry. Just a point of clarification. I think this vote will be helpful to future NOSB reviews and might augment the

level of scrutiny.

MR. CHAPMAN: If I could add on that. I mean, it went through a high level of scrutiny, so I'm not sure if augmentation of that is necessary. But, you know, I'd really encourage future NOSBs to take a hard look at this and see if the market has developed further.

MS. DE LIMA: Harriet.

MS. BEHAR: I just want to encourage the subcommittee to consider a work agenda item to split this into numerous forms of lecithin de-oiled.

MS. DE LIMA: All right. Moving on to tragacanth gum.

DR. MATHEWS: At Section 205.606(q) the listing is tragacanth gum, CAS No. 9000-65-1.

MS. DE LIMA: All right. So, this gum is prepared from the sap of various species of legumes. It can form jells and be used as a thickener and emulsifier. It's effective at low pH and at many temperatures. And it's stability at low pH is one of its distinguishing

characteristics.

Percentage used in the final product is usually low, below 1 percent. And this gum is allowed for use in organics internationally.

So, this is one of those ones we reviewed a couple years ago in Stowe. And at that time we had one producer come forward in favor because they were using it. This time around, did not have any manufacturers come forward saying they were using it. And we had one organization point out there could be potential health effects and according to the Center for Public Science that people were having allergic reactions, and thought that needed to be taken into consideration.

I will say that one manufacturer that came forward last time is still using it. So I'm not sure why they didn't come forward. But, again, an example of people sort of losing track or not paying attention necessarily to what we're doing because I do see it's still in that one product. Harriet.

MS. BEHAR: It's noted here -- does somebody remember, I don't remember what the mitigation steps are to reduce the microbial load?

MS. DE LIMA: Where are you reading that?

MS. BEHAR: In the manufacture, in the powder. Just somebody could look at the TR.

And then also was there any discussion about growing it organically? Astragalus is actually a native to North America. It's growing on my farm.

MS. DE LIMA: There was no public comment about that being grown and processed organically. Dan.

DR. SEITZ: On a couple of the substances that are under review commenters have made the point that when they were first approved information was withheld on the manufacturer based on, what is that, CBI --

MS. DE LIMA: Yes, CBI.

DR. SEITZ: -- yeah, CBI, you know, of

proprietary information.

And I just would like to suggest to us that if something has been approved in the past without the full information, that we may routinely want to get a TR the next time it comes up just so that when it comes to relisting we do have full information. I'm not saying, we don't have time to do that here, but I think it's just a good practice on our part.

MS. DE LIMA: So I just want to clarify that that was not -- there was no public comment received about that for this particular gum because this gum is not a product of fermentation. This is on 606. So that was in reference to the gums that are on 605(b).

DR. SEITZ: Great. So then I'll just apply my comment to those.

MS. DE LIMA: Okay.

DR. SEITZ: Okay.

MR. CHAPMAN: If I can also note, we did get a TR on gums this round.

MS. DE LIMA: Yes.

MR. CHAPMAN: So if that's what you asked.

DR. SEITZ: Sure. Okay, but just in general I've seen that point made, and I think that would be a good practice.

MS. DE LIMA: Any other discussion?

(No audible response.)

MS. DE LIMA: All right, Tom.

MR. CHAPMAN: Okay. We have a motion to remove tragacanth gum from the National List. The motion was made by Lisa and seconded by Steve, that motion to remove.

So, a yes vote is to remove. A no vote is to retain. And the voting will start with Dan.

DR. SEITZ: No.

MR. MORTENSEN: No.

MR. ELA: No.

MR. BRADMAN: No.

DR. GREENWOOD: No.

MS. DE LIMA: No.

MR. SCHWARTZ: No.

MS. ROMERO-BRIONES: No.

MS. OAKLEY: No.

MS. BAIRD: No.

MR. BUIE: No.

MR. SWAFFAR: No.

MR. RICE: No.

MS. BEHAR: No.

MR. CHAPMAN: Chair votes no.

MR. RICE: That's 15 -- 0 yes, 15 no, 0 absent.

MR. CHAPMAN: The motion fails. Lisa.

MS. DE LIMA: All right. I think that's it for sunset materials. The next step, we're moving into the proposals. And first up is sodium chlorite for the generation of chlorine dioxide gas. And Scott's gotten his beard.

MR. RICE: Thank you.

This is material petition in 2015 initially. Petition for use as an antimicrobial, pesticide, sanitizer, or disinfectant for fruits and veggies.

Chlorine dioxide, or CDO gas, is used

in post-harvest handling for the direct treatment of fruits, vegetables, and nuts during storage, transportation, and food preparation applications to reduce spoilage and pathogenic organisms. Chlorine dioxide acts as a killing agent of pathogenic organisms.

It is, the chlorine dioxide gas is produced onsite at the handling facility by impregnating zeolite with a sodium chlorite and then activating the zeolite, which is then treated with a solid or liquid acid such as citric acid.

If liquid acid is used, as in the product manufactured by the petition, a buffer is used to control the formation and release of the gas.

In organic production, chlorine dioxide is currently allowed for use in liquid solution in crop production as a preharvest algaecide, disinfectant, and sanitizer, including in irrigation systems, cleaning systems, in organic livestock production for use in

disinfecting and sanitizing facilities and equipment, and in organic handling for disinfecting and sanitizing food contact surfaces.

For these uses, the residual chlorine levels in the water cannot exceed the maximum residual disinfectant limit under the Safe Water Drinking Act. This petition is seeking to extend the use of chlorine dioxide in gaseous form for antimicrobial treatment.

The proposed use is similar to acidified sodium chlorite. That's already listed at 605(b) for secondary direct antimicrobial food treatment and indirect food contact, sanitizing. That substance was petitioned and added as a solution, whereas this would be used as a fumigant gas for direct food contact.

The subcommittee initially favorably viewed this. The petitioners claim that no post-treatment water rinse is necessary, and concerns regarding wastewater in other treatments were somewhat addressed because of that lack of use of

the water.

Through the course of the review and comments from the public, that claim didn't seem quite as clear as we initially thought, the comments about which I'll touch in a moment.

The subcommittee also initially saw this as having a potential for reduced exposure to those using chlorine dioxide as the substances reacted, and its use takes place in an enclosed space. However, the exposure at even lower levels presents some concerns.

Had a number of comments on this both in this round and in previous rounds. Several commenters noted the material should be petitioned or listed as chlorine dioxide gas with an annotation restricting the form to generated from sodium chlorite.

Commenters noted it was unclear how other precursors and activators other than sodium chlorite would be reviewed. I think it's important to note that the initial petition was submitted in this way. However, at the time,

there was a clarification from the program that the subcommittee, that the subcommittee followed it in making a determination since the material would not be sold or distributed as a finished product of chlorine dioxide gas, it be petitioned as stated.

Comments from certifiers, material review organizations, and others again noted that for clarity and consistency in review, the alternative language was preferable.

While the petitioner states the gas can be used without a subsequent potable water rinse, several comments noted the EPA requires that for chlorine dioxide fruit and vegetable treatment the label include a statement: "fruits and vegetables treated with chlorine dioxide must be blanched, cooked, or canned before consumption or distribution in commerce." That was based on a need to reduce residues below 3 parts per million.

Several commenters pointed to the EPA conditional registration as cause for concern

given that with such registration not all essential environmental toxicity data is available.

Some commenters noted the current limited label use of the petitioner's product for -- and I should say the only product that we're aware of for potatoes in storage. There does not appear to be a product in the market for which the label use allows a wider application at this time.

Commenters pointed also to alternatives that are available. As in -- as we see in organic operations, preventative practices are the first line of defense and cornerstone of both field and post-harvest practices. There is a gaseous form for disinfectant for ozone gas with peracetic acid, and as well as other chlorine materials.

Two commenters attested to successful results in non-organic facilities, but again limited to use on potatoes.

We did not hear any comments from

organic processors or handlers to add this material to their practices.

So I think while it appears this could be an effective tool, the concerns over potential impacts on human health and environment, the present limited availability or label use of this and availability of alternative materials and practices, and the lack of necessity in food safety compliance does not, you know, shifted thoughts on this in terms of adding it to the National List.

I know that there was, again, support in the initial vote from the subcommittee. And wanted to go through that to explain what our thinking is at this point. Asa.

MR. BRADMAN: I just want to make a few comments about this material as well.

I think in the general category of chlorine compounds that there's a lot of -- boy, I seem to be mumbling today -- that the whole issue of chlorine compounds is challenging and something that does need a broader review.

Bleach also is a harsh material.

I just want to kind of summarize, though, some of the health effects that are associated with chlorine dioxide. I actually reviewed this material and bleach earlier this year. And if we just look at, say, the NIOSH and ATSDR documents, there's been some other association of clinicians, environmental occupational commissions. Exposure to chlorine dioxide can produce irritation of the eyes, nose, throat, cough, wheezing, bronchitis, pulmonary edema, and chronic bronchitis and asthma.

Under the global harmonization system for signaling materials it has a number of signals, including it's an oxidizer. It's corrosive. It's an acute poison. It's an irritant and has aquatic toxicity. So there's -- it's also considered an asthmogen, as is bleach. An asthmogen is basically a material that can cause asthma as opposed to triggering an asthmatic response in somebody who already has it. So this is a quite harsh material.

But though I look forward to discussion around this because of, you know, the notion if using -- I mean, I have problems with this material. I would vote this petition down.

But if there is, you know, if there's ways of using it or other materials or, you know, a whole range of materials needed for sanitizing, then it could possibly reduce other exposures. And I think that's where there are some challenges and that's where we need to look at the big picture. And perhaps other people on the board can comment to that.

But this is a powerful material, as are many of the chlorine compounds. And they're harsh, and there's a tradeoff with the environmental and human health effects and the food safety issues.

One last thing I want to, point I want to make related to the human health effects is that there, I don't feel like there's been adequate monitoring for chlorine compounds in food processing environments. When I was

reviewing materials related to seafood processing, poultry processing, I could find very few studies just where somebody went into an occupational environment and just measured, you know, chlorine in the air, different forms of chlorine and interviewed workers.

I know when we went into the Salinas area, workers, particularly in processing facilities, complained bitterly about exposures to bleach. In fact, they were more concerned about that in many cases than the more conventional pesticides being used in the fields.

MS. DE LIMA: Emily.

MS. OAKLEY: Dave, if you want to go first, I can go after you.

MR. MORTENSEN: Yeah. I guess I would, I'd just echo Asa's concerns and the idea that it's -- that field workers, and greenhouse workers, and food processing folks in storage facilities would be potentially exposed to, to a gaseous form of this is really worrying to me.

So my reaction to this is that it is

not a good thing for us to be thinking we would approve.

MS. DE LIMA: Emily.

MS. OAKLEY: I also think this really speaks to the question of how petitioners come to us and they express need for a material. And I don't feel like we received popular comment at all from industry and in support or in request of this material.

So, weighing that with the concerns, I also don't support this.

MS. DE LIMA: Harriet.

MS. BEHAR: Not only did it not receive support, but the Organic Produce Wholesalers Coalition spoke very strongly against it. And I think they represent perhaps not every distributor of organic produce, but they do represent a significant portion of it.

I think, too, that we are looking at sanitizers, and so if we vote this down it doesn't mean that in that review we might find a specific need for this or, you know, that there

could be a gap. And this is one of the reasons why we have the sanitizer review on our work agenda to look at these unique sanitizers and try to understand better where they fit.

Because when we look at them in this way we see the human health and the environmental impact and all these things. And we see alternatives and yet we -- and we don't see a specific needs.

So I'm hoping that I'm going to vote against this material and but keep my mind open when we are doing the sanitizer review. And include review of this material and materials like this that are in gaseous form for possible inclusion. And maybe we'll find a different one, whatever.

But I'm sure that there are places where this type of sanitizer might be unique. But without that specific information or clamoring from our organic community for the material, and so I'm speaking very strongly against it. I think it doesn't look too good, at

least for my vote.

MS. DE LIMA: Ashley.

MR. SWAFFAR: Yes. So, on this team from the subcommittee unanimously suggesting to list this material. And it sounds like several on that subcommittee may have changed their mind. And I would just encourage those members to please tell us that for the public record and to be critical, to state your opinion. I am not on the subcommittee anymore.

MS. DE LIMA: Steve.

MR. ELA: I'll stick my neck out. So, although for a chicken producer, if I stick my neck out I don't want to --

MR. SWAFFAR: That's not humane, Steve.

MR. ELA: Okay, fair enough.

This is one I've really wrestled with. And I certainly voted for it in subcommittee. I personally react to chlorine pretty strongly so I have no love of it. But I also, since we run a farm and a processing facility, that is our, our

go-to sanitizer of choice as a very small facility.

Certainly as we look at packing lines and fruit, and things that are not flat and easily sanitizable, and with FSMA compliance especially for very small processors that don't have large budgets for equipment, the attractiveness of a gas is strong, in the sense of being able to shroud something, fumigate it.

You know, for example, we can shroud our packing line on Saturday evening, fumigate. Crews gone. Monday morning come back, get back to work and have a kill step in that, in that process. So that's very attractive without the having to spray everything down and trying to get in bearings and nooks and crannies.

So I honestly am leaning towards it even though I totally agree with all the comments, you know, from Asa and the others. I have no love of chlorine materials. But that's my -- I think it's another tool in the toolbox that is different than the other chlorine

materials.

So I'm torn with how I'll vote but I do want to put that 2 cents in as why I voted in favor of it originally.

MS. DE LIMA: I voted in favor originally but I'll be changing my vote.

MR. SCHWARTZ: I'm calling on myself and then I'll call on them.

I'm changing my vote, you know, for all the reasons that Scott summarized: the lack of, lack of support in public comments, the health concerns. There were some folks that wrote in that I want to take their public comment into consideration.

MS. ROMERO-BRIONES: So I voted to keep it. I certainly empathize with all the comments. I've spent a lot of time for the last ten years or so working with various sanitizers on the processed vegetable side, and there are so few tears available, I think it's very dangerous to start taking tools off until we've really vetted that.

Most folks are aware that we can't use caustic, we can't use heat, so the few tools that are out there, to start taking those away, I think that's, that's the challenge.

MS. DE LIMA: A-dae.

MS. ROMERO-BRIONES: So, I voted to, I voted for it partly because it's used by one of the only certified tribal operations, a potato farmer in Arizona owned by the Maricopa Indian Community. And they actually used this in their processing line.

I do, I hear the concerns of Asa, so I'm reconsidering my vote. But I originally voted for it.

MS. DE LIMA: Scott.

MR. RICH: Just clarification on a couple things. This is not a material that's currently on the National List, so we would not be removing something that is presently available to an operation. And it may be -- and A-dae might clarify for me if it's maybe the operation is using it in the conventional side --

MS. ROMERO-BRIONES: Yes. Yes.

MR. RICH: -- and seen the success.

MS. ROMERO-BRIONES: Yes.

MR. RICH: So I just wanted to make sure that was clear for everyone.

MS. ROMERO-BRIONES: Thank you. I misspoke. Yes, thank you for your clarification.

MS. DE LIMA: Sue.

MS. BAIRD: This is a question. And I appreciate everybody's input. It's been very helpful to me.

I'm taken by Steve's comment that it would help small processing, maybe on-farm processing facilities. And small farms is where my heart's at. I'm wondering if, if we voted to add this to the list, perhaps based on Steve's comment that he would do it in the evening and then come back the next morning, gases would be dissipated, maybe we could put that kind of a time lapse annotation on it.

I know there are on some other products or materials.

MS. DE LIMA: Tom.

MR. CHAPMAN: Just to answer the question about how people voted, I was the absent member. I was at camp with my daughter. So I'm going to have to keep you guessing on that one.

MS. DE LIMA: Harriet.

MS. BEHAR: I just want to say again that we will be doing this review of sanitizers. And that might help us identify other gaseous sanitizers that perhaps would be less problematic than this one.

And so we put this one on. I just, I think it's a little bit of a rush. Do we absolutely need this right this minute? Or could we wait a year and have some better information available to us as far as the unique uses of this and what other uses there could be? So, just kind of a caution.

MS. DE LIMA: I have a question for Steve. Put you on the spot.

So, what do you do currently?

MR. ELA: That's a hard one. I mean,

we're, we're really wrapped in a quandary around that in our operation. I mean, it's chlorine. It's a wash. But with FSMA and the requirement for swabs and everything, I mean, really where you're getting down to a whole different level of sanitation than small growers used to do. It's a new, it's a new thing.

And we have spent a lot of hours scratching our heads of what the proper way to approach this is. So, and I'm not saying we would necessarily fumigate, but it puts in my head, well, here's an option.

And I guess we keep as a committee, I totally -- I mean, it's so funny because I'm usually really conservative on these kind of things and vote against them. But the fact this intrigues me kind of worries me a little bit.

But I see us kind of continuously mixing some of these post-harvest compounds because of rod spectrum. I mean, for good reasons. But at some point I think we do have to offer growers a choice for post-harvest

sanitation, both of equipment and of the fruit. And I'm not saying this is the right one for that necessarily, but I think we do need to be aware that there isn't some need out there.

We do lose, you know, processors, people lose fruit to rot. We do have to sanitize lines. FSMA is a whole different ballgame than what it used to be, you know, where we're really going for complete sterility from, you know, from just good practices. And it's a challenge.

So I don't know if that answers your question, but right now it's basically chlorine and water for us.

MS. DE LIMA: Scott.

MR. RICH: Just a follow up for you, Steve. Sorry to continue to put you on the spot.

Have you considered or explored the idea of using ozone?

MR. ELA: We are. I mean, it's a work in progress. I mean, that is, that is in the back of my head as well, so. And that may be the preferable way to go.

I guess it's one of those things that it's got us flummoxed for a while. And we don't have the capability. I mean, like many small farms we don't have a food safety officer. You know, my spouse is that.

But, you know, and it's really hard -- and I think this is not related to this compound -- but it's really hard for small processors or growers to get that information. I mean, we're in touch, we're in close contact with CSU and the folks there. And they're great. But they don't actually have a lot of these answers either.

You know, the big processors that have a Ph.D. on staff, it's a whole different story because they have somebody that can vouch for that. But for those of us that don't have a background in microbiology -- and I think many small growers are with that -- it's a challenge to figure out how to meet these regulations with due diligence. And, you know, none of us want a food safety incident, we want to do it right. But, you know, the information isn't readily

available.

MS. DE LIMA: Dave, then Tom, then Rick.

MR. MORTENSEN: I guess just a thought that, you know, farmer behavior in terms of stewardship of practices is a distribution curve. I think we have some super dooper careful folks that are working with their staff, and we have folks that are less careful. And when we're talking about something like chlorine gas, it just continues to concern me that it's not a static farm community, it's a distribution of behavior. Some pay more attention to some things than others.

And this is a sort of use that's unforgiving with respect to human exposure.

MS. DE LIMA: Tom.

MR. CHAPMAN: I just want to note that the sanitizers work agenda item that was approved by the program is limited to -- and I'm going to read from it -- the goal of this initiative is to develop questions to examine the essentiality of

these materials, and to build upon criteria to evaluate substances on the Nation List per Sections 205.600 of the U.S.C. regulations.

It's not a holistic review of all the sanitizers. And I don't know if some of the comments made about that work agenda item would yield gaps or knowledge gaps of where the sanitizer code could not provide some, some assistance in the needs of organic producers.

So, if we, if that larger work agenda item were needed it would need to be asked from the program.

The other thing, now that I have my opportunity to speak, of course I'm going to just but in here that we are running late on the Handling Subcommittee and we'll need to do Crops at some point. At some point we will need to wrap this conversation up and move to other items.

MS. DE LIMA: Rick, go ahead.

DR. GREENWOOD: Just a quick comment. I think most of you know there's about 900 major

food outbreaks a year in this country with 3,000 deaths. And one of the best ways to prevent them is sanitation within a packing house or in the field. And to actually sanitize things, gases work very well because they can get into places that liquids can't.

So I see this, again, as something that's very useful in an era where there's a lot of scrutiny. And I also get comments from people, well, aren't organics more susceptible to transmission of disease because of natural products and things like that? And people mention that.

So I think it's important to have something that can be useful and really get into the cracks and crevices of these places. So I'm going to vote for it.

MS. DE LIMA: Harriet, make it quick and then we'll go to vote.

MS. BEHAR: Yes. There was a lot of public comment that the actual listing should be chlorine dioxide gas instead of sodium chlorite.

Was there any discussion within the subcommittee about possibly changing that? Because the actual material is chlorine dioxide gas, not sodium chlorite.

MS. DE LIMA: Scott, you want to take that?

MR. RICH: Yeah. I think if we were going to consider this I would want to have the -- take into consideration that public commenters have given to have a listing that is more workable from a verification side. And if that is significant enough that it needs to go back to subcommittee, then I would prefer that than to have a listing that is not as workable.

MS. DE LIMA: Jennie, can you comment on that, or can the program?

DR. TUCKER: I'm sorry, can you repeat the question?

MR. RICH: If we were to continue voting on this would changing the listing to -- let me get my language up in front of me -- changing the listing to, as commenters have

preferred, chlorine dioxide gas with an orientation generated from sodium chlorite. Is that something that would need to come back to subcommittee versus making that change here?

DR. MATHEWS: The change would consist of the annotation? Just a point of clarification there.

MR. RICH: It's not really an annotation.

MR. CHAPMAN: Yeah, it's not.

MR. RICH: It's the material as it was passed was the sodium chlorite for the generation of chlorine dioxide gas. And I think there was some comment about flip-flopping that kind of.

And I'm going to also ask for a third alternative which is do we need to change it and send it back, or can this also just be handled by the program in the regulatory process here on out, given the clarity of the current motion?

DR. MATHEWS: Certainly if it came through in the board's recommendations, the program would take those recommendations into

consideration if it got to the regulatory writing phase.

MR. RICH: Thank you.

MS. DE LIMA: Really quick from Steve.

MR. ELA: I recall that you came on the board with us, Joelle. I wish she was here for this. But I remember her comments on the whole chlorine issue of it's like the gums, every chlorine product has a specific use and a specific place and is, you know, a specific thing.

And so her comment really in reviewing all the chlorine products was it's so variable, depending on the manufacturer and the situation, that she was really hesitant to say that any of us or anybody could adequately say limiting the toolbox, because she really felt, like the gums, each one has a specific use.

So, I just want to echo her, her thoughts before she went off the board.

MS. DE LIMA: We have to move to a vote. I'm sorry, Emily.

Tom.

MR. CHAPMAN: Okay. So we have two votes here. One is a classification motion. So this is a determination --

MR. RICH: Point of order.

MR. CHAPMAN: Yes. Sorry.

MR. RICH: That clarification --- the classification has already been completed.

MR. CHAPMAN: Oh yes. That would also explain why the vote numbers are different.

Okay, so this item does not need to be classified. It's already been classified by a previous NOSB who classified this material as non-agricultural synthetic in April of 2016.

So the motion here is just the listing motion, the motion to add sodium chlorite for the generation of chlorine dioxide gas at 205.605(b). The motion was made by Scott and seconded by Lisa.

A yes vote is to recommend this material for listing. So, different from the sunset. A yes vote is to recommend listing. A

no vote is to reject this petition, not recommend it for listing. The voting will start with Dave.

MR. MORTENSEN: No.

MR. ELA: Yes.

MR. BRADMAN: No.

DR. GREENWOOD: Yes.

MS. DE LIMA: No.

MR. SCHWARTZ: Yes.

MS. ROMERO-BRIONES: No.

MS. OAKLEY: No.

MS. BAIRD: Yes.

MR. BUIE: No.

MS. SWAFFAR: Yes.

MR. RICH: No.

MS. BEHAR: No.

DR. SEITZ: No.

MR. CHAPMAN: Chair votes yes.

MR. RICH: That's 6 yes, 9 no, 0 absent.

MR. CHAPMAN: Six yes, 9 no, 0 absent. The motion fails.

MS. DE LIMA: All right. Next we have

silver dihydrogen citrate. Tom.

MR. CHAPMAN: All right. Silver dihydrogen citrate is a petition that was brought forward to the NOSB, brought forward by Pure Bioscience, it's petitioned as a antimicrobial processing aid for poultry carcasses, and fruit and vegetables, excluding citrus for grapes -- citrus and grapes for wine making, and for use as a disinfectant or sanitizer for food contact surfaces and food processing equipment.

As petitioned it was petitioned to be listed on 205.605(b) as a synthetic non-agricultural substance allowed in processed products labeled as organic or made with organics.

The petition received in January of 2017; amended in August of '17; and again an addenda was submitted in June of 2018.

Technical review was requested and found sufficient by the subcommittee. It was found sufficient in May of 2018.

The subcommittee also recommended

amending the petition to add an annotation that read "limited to particle size greater than 300 nanometers."

Based on information provided, SDC appeared to be a low risk to the environment and human health. The subcommittee found that it appeared to be a low risk to the environment and human health, both in use and in disposal. Alternative materials, natural and synthetic, are available. However, those substances have limited application and/or utilize a similar oxidated mode of action.

There was a growing concern about the development of bacterial resistance by oxidated bacterial agents. And I do want to note that those oxidated agents were efficacious, are also used in hospitals and medical applications.

This is the first time that the NOSB has brought this petition forward on our polished agenda, although we have received comment on it in previous meetings.

The subcommittee, again, had interest

in this material given its alternative mode of action, limited toxicity in application, and a thought that we could mitigate the nanomaterial concern.

We received a sizable amount of public comment on this material at this meeting and at some past meetings, some encouraging that we pass this item without the limitation. Some encouraging that we send it back to subcommittee for further review and consideration. And some asking that we fail this item.

We did not receive any support for listing it the way we had proposed to list it.

And we had questions raised and really I'm going to summarize them briefly in, I guess, four main areas.

So, the first area was the use of nanotechnology. There's a debate around whether this material is a nanomaterial. I want to note that in the fall of 2010 the NOSB unanimously voted to prohibit engineered nanomaterials of sizes 1 to 300 nanometers in organic production

and handling.

And that the NOP responded to the NOSB recommendation in a policy memorandum dated March of 2015, letting it be noted that nanomaterials are generally the size of 1 to 100 nanometers and that to be used in organic production they would need to be petitioned to the National List. To address the public concerns and to stay consistent with previous NOSB action, the NOSB did recommend limiting the use of this item to particle sizes less than 300 nanometers. But we failed to place the minimum size on that, the 1 to 300 nanometer range.

The petition also noted that this was ionic silver and, therefore, was less than the size of 1 nanometer, and in their arguments concluded that it was not a nanomaterial because it was not specifically engineered for that size and was below the lower threshold.

Another area of concern was the use of an antimicrobial in food applications that was also used in medical applications.

There were some concerns around studies that were showing a level of resistance to silver compounds, bacterial resistance to silver compounds, and that their usage should be reserved for the medical environment, and that further usage of silver in organic applications could potentially speed up the development of microbial resistance to silver.

The third area of concern was around our assessment on the toxicity of this substance, particular around environmental toxicity of silver and the water effluence. The petition, the petitioner, and the subcommittee noted as, as well as the technical re3view, that at the low levels of application the results of the spent water being much below background levels of silver in the environment and in waterways.

However, we also received comments from the public directing our concern to toxicity of silver in general, as well as the use of this materials and restrictions of the use of this material already from the FDA or EPA, and

concerns of notifying municipal water sources, and how that would be handled if it was used in field applications or in applications of which the water did not result in being disposed of through a municipal setting.

Another area was around the necessity of another sanitizing substance and the fact that there is the presence of other sanitizers, and the general request for a holistic review of sanitizers.

We did hear support from industry. We heard support from a numerous number of antimicrobial distributors; some food safety scientists, including a former USDA undersecretary for food safety; and then also from industry, particularly to a --- one being a large organic leafy green processor located in California who uses this on their conventional leafy greens and noted the risks to food borne pathogens in that industry and the need for effective sanitizing substances to mitigate those concerns.

Those were the major areas. There's definitely other concerns as well, including the residuals on food. And the other one I want to note is the use of sodium lauryl sulfate, and whether or not that material needs to be reviewed or excluded, and if the way it was petitioned to us in usage was consistent with the way it was noted in the patent for this material.

All summed in, I do want to open this up for public discussion here. But also note that no matter what our opinion here is, we probably deserve to send this back for the sense that we did not accurately describe the nanomaterial issues in our summation. And it definitely needs some revision to take into account some of these concerns that were raised here.

And so we will be recommending, or I will be making a motion at some point to refer this back to the subcommittee for further review. But would also like to open it up here for some kind of brief comments on the use of this

material.

MS. DE LIMA: Harriet.

MS. BEHAR: there was also one commenter Richard Theuer who discussed the use of sodium lauryl sulfate. And will that be reviewed then in subcommittee as well?

MR. CHAPMAN: Yeah, that was my -- on the more minor concerns, or not minor by any means, but the other concerns of note that not all the people noted was the residuals in food, on food services, as well as sodium lauryl sulfate and what source is used. What's the reason behind the presence of that material?

MS. DE LIMA: Dave.

MR. MORTENSEN: You know, I don't know if it goes back to committee or not, but I would just say that I have some concerns about this that, you know, that were raised in some of the public comment and just some concerns that I had when I initially read the proposal.

I think there's pretty ample evidence that the silver, you know, when in solution will

likely precipitate to form larger size molecules that definitely approach, you know, the sort of size frames that we're concerned about in the legislation, Tom, that you, that you were citing.

I also have concerns about introducing silver into the water stream in the way that this practice would. And I thought that the questioning that Steve Ela was pursuing with the speaker yesterday revealed that there's, in my opinion, not a lot of thought's been given to what is the fate of the silver in the wastewater, and particularly under conditions on the farmstead scale that would be maybe moderate size to smaller.

Those are my two big concerns.

MS. DE LIMA: Emily.

MS. OAKLEY: I echo that.

MS. DE LIMA: Tom, I don't see any other discussion.

MR. CHAPMAN: Yeah. I do want to note that the nano subject is, it's a bit, it's a bit complex. I'm going to read the working

definition that the NOSB had proposed. Although, if you read that proposal, it also notes the need for further refinement and understanding of nanotechnology.

But the working definition that the NOSB had tried to put in place was:

Engineered nanomaterials: substances deliberately designed, engineered, and produced by human activity to be in the nanoscale range, approximately 1 to 300 nanometers because of very specific properties or compositions. For example, shape, surface properties or chemistry that result only in that nanoscale. Incidental particles in the nanoscale range created during traditional food processing such a homogenization, milling, churning, freezing, and naturally occurring particles in the nanoscale range are not to be included in this definition. All nanomaterials, without exception, containing capping agents and synthetic components are intended to be included in this definition.

It's not clear to me if the only

concern is it reforming -- and I mean there might be other concerns -- but if the only concern was that reforming nanoparticles in solution, I don't know if that meets this definition that was put forward by previous NOSBs.

MR. MORTENSEN: Yes. Not by the words that I was hearing you read. But certainly I think the concern is nanoparticles or just precipitated metal ions that we're introducing into cells and into the water stream just really concerns me.

And during one of the public commenters' presentations about this where the person was advocating for this product I asked several questions about the fate in water, and the answers were just nonsensical. That, you know, silver would be, the concentration would be below the background level in the waste stream. I mean this, that just doesn't make sense. Or releasing silver ions into the water stream it's certainly going to be elevated. And I really am concerned about the state of that, you know.

And it's my, in my thinking this is not consistent with organic systems or organic management that we would be adding metal-based compounds to our management scheme.

MR. CHAPMAN: So it's my understanding that that fate was from EPA and FDA's studies about background levels of contamination and not that you're releasing something in a lower level, lower than the background level that's already there. Do you have, like, studies or sources of information that you could refer to us about the background contaminations of silver to support?

MR. MORTENSEN: Yeah, some has been exchanged through the course of all this discussion over the last month or two. I'd be happy to share it.

But I mean, just on the face of it, for someone to say that we're going to be introducing a waste stream of water where the product that's being used contains silver, and that that waste stream won't have an elevated silver level, that just can't make sense to me.

MR. CHAPMAN: I don't think that's what's being said.

MR. MORTENSEN: Well, that was said because I asked the speaker specifically on the phone when we had the public comments and he said, yes, it would be below the levels, the levels that the water was before the waste stream had been introduced.

MR. CHAPMAN: So I think it, I think it depends on what -- how you're evaluating this at. If you're looking at water that did not contain silver being put into environmental water that's generally available out there versus water that had this material going to environmental places with some sort of silver background level, yes, it clearly is going to increase the amount of silver in the application potentially.

MR. MORTENSEN: Yeah.

MR. CHAPMAN: Because there's more silver on an absolute level going in there. However, if the concentration of that water going into the environmental water is at a lower

concentration level than what is already there, it would be diluting the environmental background levels.

MR. MORTENSEN: If the waste stream going into the rest of the water body is?

MR. CHAPMAN: Had less silver than --

MR. MORTENSEN: Has a lower concentration?

MR. CHAPMAN: -- the silver that was already naturally present.

MR. MORTENSEN: If that was the case, you would be current, Tom, and I just can't imagine that that's the case.

MR. CHAPMAN: Okay, but that was the finding of the EPA and the FDA. So I'd be interested in seeing the scientific research that refuted that statement --

MR. MORTENSEN: Okay.

MR. CHAPMAN: -- if you have it.

MR. MORTENSEN: Does that make sense to you? I mean, we could -- I'll look for some data on that. But, I mean, I think we also have

to use some common sense here about introducing a waste stream that's high in concentration of something and into a surface body of water, into a septic tank that has a leach field with groundwater underlying it that we would think that the silver concentration would be lower after we introduced the waste stream that's high in silver. I just can't see how that could be. Unless we're at, like, you know, unless it's a very badly contaminated source of water or site.

MR. CHAPMAN: Yeah. I mean there's, I think I can find a couple issues there. There's the issue around the waste streams and which applicable waste stream we're looking at. Are we looking at a septic system versus a municipal system?

But the dilution issue is a question of math, it's not really a question of anything else. It's the math of the dilution levels and whether or not the effluent has a lower level of silver than the water it's being mixed into.

MR. MORTENSEN: Yeah, I know it's

math. I just would say that it seems so improbable that I can't imagine that being the outcome. So I'll line it up.

MS. DE LIMA: Emily.

MS. OAKLEY: Just listening to you both, I mean I think there are two issues here with this use: one when it's used in the place where the water will divert to a municipal setting versus in cases where it will divert on farm, in ponds, in septic systems.

And so I think we should analyze this material based on the knowledge that there will be times in which it is filtered through a municipal system, and times in which it will not be.

MR. CHAPMAN: Definitely. I agree.

MS. DE LIMA: Asa.

MR. BRADMAN: I just want to say I thought that Steve's questioning yesterday and the concerns that you raised about the septic systems and on your own farm were really kind of revealing to me. And I know that it helped kind

of guide my thinking about this material.

MR. CHAPMAN: And if I could just note, that, that was a discussion -- Steve's on the subcommittee with us -- this was new news that we received at this meeting, which is why we feel it needs to go back to the subcommittee -- I feel it needs to go back to the subcommittee for further review because that was not an area that we had considered when we were looking at this. And it wasn't until we received the public comment, the wonderful public comment from the Organic Wholesalers Produce Group -- I just butchered their name -- about concerns on this substance.

MS. DE LIMA: Emily.

MS. OAKLEY: Is it time to make a motion to send it back to subcommittee?

MR. CHAPMAN: Yeah, probably.

Okay. So, I will, as the lead on this material, take the lead on making a motion to refer back to the handling subcommittee for further review of the petition on silver

dihydrogen citrate.

MS. BEHAR: I'll second.

MR. CHAPMAN: And I have a second from Harriet. So I have a motion and a second. And we will lead to voting. The voting will start with Steve.

A yes vote is to refer back to the subcommittee. A no vote is to fail. And this only requires a simple majority.

Steve.

MR. ELA: Yes.

DR. TUCKER: Yes.

DR. GREENWOOD: Yes.

MR. SCHWARTZ: Yes.

MS. ROMERO-BRIONES: Yes.

MS. DE LIMA: Yes.

MR. BRADMAN: Yes.

MR. MORTENSEN: Yes.

DR. SEITZ: Yes.

MS. BEHAR: Yes.

MR. RICH: Yes.

MS. SWAFFAR: Yes.

MR. BUIE: Yes.

MS. BAIRD: Yes.

MS. OAKLEY: Yes.

DR. MATHEWS: Yes.

MR. PATTILLO: Yes.

MR. CHAPMAN: Chair votes yes.

MR. RICH: It's 15 yes, 0 noes, 0 absent.

MR. CHAPMAN: The motion passes. This is referred back to the Handling Subcommittee.

Lisa.

MS. DE LIMA: Next up is japones peppers. A-dae.

MS. ROMERO-BRIONES: So japones peppers is a small pointed chile, very small, 2 inches. It's a similar appearance to de arbol.

It was petitioned by a producer of chile hot sauce. There were several -- this had been on our docket for quite a while because we, we were going back and forth with the petitioner with several questions about alternatives to the japones pepper.

A TR was not requested for this because this was --- the real, the only question that was really left to be answered was whether there was an organic supplier of japones peppers. The petitioner said that there wasn't enough organic quantity to fulfill their need. And there wasn't a suitable alternative because of the units that make this pepper hot.

We had several commenters comment and really focus on the 606 category because really the question is about supply. And so the TR doesn't answer that so we're kind of back to our devices to figure out whether this can be supplied organically.

Several board members did mention that there is a possibility that organic suppliers can be contracted to grow this pepper. All commenters suggested not listing it.

MS. DE LIMA: Discussion, starting with Emily.

MS. OAKLEY: Yes. I'm one of those board members that thought this is definitely

something that can be grown domestically.

And to Tom's point as to whether or not it can be processed in the way that's needed, I mean there are USDA value added producer grants that people can apply for. I know that may not satisfy the situation, but I feel that the threshold for a product like this, especially on that is so easily grown domestically, should be very high.

And I think that this is a unique category. I understand many of the products that are on 606, especially from historical reference, but I think adding materials especially in such a particular use needs a lot of scrutiny.

I have more thoughts but I'll share them after others do.

MS. DE LIMA: Tom.

MR. CHAPMAN: Yes. On this one, I mean, I don't think the petitioner did the due diligence for me to support the listing of this material. I have seen some other items in response to our sunset petitions that show the

due diligence to prove to me that a product cannot be sourced organically.

I do, I guess, want to emphasize, though, that sourcing small agricultural products is a lot more complex than finding a farmer or finding a farmer who's willing to get a small producer grant, I mean just to get qualified to produce a safe food product.

You know, you'd need to get GFSI certified. You'd need to get compliant with FSMA. You would need to be able to scientifically back up that you can make a ready to eat statement on that. You would need a PCQI on site. You'd need a HACCP plan for critical control points. You'd need a foreign material program, potentially a five log, a validated five log production program. And all those things cost money and are hard to get.

On top of all that you'd need to be able to work with someone who's out there, a small producer who is trying to get their product out in the marketplace and sell it and will not

know the quantity of product they need.

So, I have a question whether that small farmer would be willing to produce 5,000 pounds when they would potentially only be able to sell 5 pounds, depending on the market demand for this material. And if that wasn't there, then the manufacturer of this wouldn't be able to go out and sell it. And so there's this chicken and egg when you start launching new products.

So, is this available in organic and is there a market for the product I'm trying to put it in?

So, 606 is valuable and there's a lot of use for it but there is also a burden of proof to show that you need to go through those steps. And I wasn't fully satisfied with them going through those steps. There is a lot of processors of pepper products out there, some organic, and I would have liked to have seen this petitioner, you know, getting letters from those folks saying this was not available. Rather I saw stuff like an Amazon search.

And I understand that that's, you know, I'm looking for maybe a sophisticated level of sourcing. It is what I do for a living. But I just wasn't satisfied with the amount of sourcing that happened here to try to find an organic version of this, so I won't be supporting this.

MS. DE LIMA: Emily.

MS. OAKLEY: Yeah, I want to say that I went back and looked at all of the posted NOP materials about this material and thought that the search for Amazon is not sufficient. I don't think that this petition is adequate. And I think if you go back and look at it that, again, the threshold for these materials should be high. I think something like locust bean gum is used by many people.

And I'm not saying that this material wouldn't be used by many people if it were added, but the USDA seal is a very important seal. And we also have to protect it. And that means doing due diligence when something is added. They can

live with the need, with organic category until they do more diligence to show that this really isn't possible.

MS. DE LIMA: Ashley and then Scott.

MS. SWAFFAR: Just want to thank Tom for a thorough explanation of why a whole lot of people in this room have a job with food safety. But I do have a question.

Did the petitioners say how many pounds of processed product that they actually would be needing? Or was it that incomplete?

MS. ROMERO-BRIONES: So I want to say no, they didn't give us an exact quantity. I think their references say things like there's not sufficient quantity. And when we asked more specific questions, the petitioner responded with simple one-sentence answers in the letters.

MS. DE LIMA: Scott.

MR. RICH: Yeah. I appreciated Tom's detail there to help everybody understand. And just to reiterate, we gave the petitioner an opportunity to come back to us with some of the

questions that we had. And it was very unenthusiastic and not -- didn't, didn't appear that there was a whole lot of effort.

And then we did not hear from them in the public comment process.

MS. DE LIMA: Dan.

DR. SEITZ: My comment's just a little more general. Given the change in how we handle sunsets now, I think there should always be a high threshold for approving a new substance just because it's that much harder to remove the substance in a subsequent vote.

MS. DE LIMA: I just want to add that I voted in favor of adding it but I'm going to change that vote to a no. And after going through public comment and seeing what some other petitioners of 606 items came forward with, but yeah, this is insufficient on their part.

All right, Tom.

MR. CHAPMAN: All right. So this time we do have the two motions. So the first motion is just the classification motion. It's a motion

to classify japones peppers as agricultural. The motion was made by Lisa and seconded by A-dae.

A yes vote is to declare this material agricultural. A no vote is to make it something else. The voting will start with Asa.

MR. BRADMAN: Yes, it is agricultural.

DR. GREENWOOD: Yes.

MS. DE LIMA: Yes.

MR. SCHWARTZ: Yes.

MS. ROMERO-BRIONES: Yes.

MS. OAKLEY: Yes.

MS. BAIRD: Yes.

MR. BUIE: Yes.

MS. SWAFFAR: Yes.

MR. RICH: Yes.

MS. BEHAR: Yes.

DR. SEITZ: Yes.

MR. MORTENSEN: Yes.

MR. ELA: Yes.

MR. CHAPMAN: Chair votes yes. That's 15 yes, 0 no, 0 absent.

All right. The next motion is a

listing motion. This is a motion to add japones peppers to 205.606. The motion was made by Lisa and seconded by Steve.

A yes vote is to recommend this material for listing. A no vote is to not recommend this material for listing. The voting will start with Rick.

DR. GREENWOOD: No.

MS. DE LIMA: No.

MR. SCHWARTZ: No.

MS. ROMERO-BRIONES: No.

MS. OAKLEY: No.

MS. BAIRD: No. I actually do grow these. They're pretty cool to grow.

MR. BUIE: No.

MS. SWAFFAR: No.

MR. RICH: No.

MS. BEHAR: No.

DR. SEITZ: No.

MR. MORTENSEN: No.

MR. ELA: No.

MR. BRADMAN: No.

MR. CHAPMAN: Chair votes no.

MR. RICH: That's fif -- excuse me, 0 yes, 15 no, 0 absent.

MR. CHAPMAN: Motion fails.

Lisa.

MS. DE LIMA: Next up, Ethiopian peppers. A-dae.

MS. ROMERO-BRIONES: So this was petitioned by the same petitioner of japones peppers. The conversations were very similar.

Ethiopian pepper differs from japones peppers because it is grown on a tree. So it's much harder to contract for those because it's a tree; it takes longer to grow.

So, the tree grows in zones in Africa. We had several commenters suggest not listing this. And they honed in on the same issues that we discussed in the subcommittee, which is one of the statements made in the petition was that it was by nature de facto organic. And through that statement some of the subcommittee were questioning why it's not certified organic or

petitioned to be certified organic under the wild crop standard.

When posed to, when this question was posed to the petitioner, the petition responded. The petitioner again just reiterated that it's de facto organic. So the subcommittee discussion around that issue was whether they understood what that meant.

Or and then one commenter did actually say that the Handling Subcommittee should identify the methods by which it was grown.

And so part of the discussion whether that was the Handling Subcommittee's responsibility or the petitioner's.

MS. DE LIMA: Emily.

MS. OAKLEY: I share a lot of the comments that I said earlier. Although I note that this is a very different product. And what that means to organic farming was actually international agriculture. And I still do that in my off season.

And this is a very different type of

pepper and it's not something I could grow. And I understand that it is difficult to work with smaller scale producers to get things wild crop certified in terms of costs and organization of farmer groups. Nevertheless, I don't see that they need any efforts to do that, or contact anyone about doing that, or finding out if there was a supply to that regard.

So I would like to see them go through that due diligence for this product as well.

MS. DE LIMA: Tom.

MR. CHAPMAN: Yeah, I mean I had similar concerns on this petition like I did on the last one. I think it would be a lower bar to prove that this was not available. But then again I still don't think that that occurred. And so without that being present in the petition and public comment I'm not convinced that this is an item we should list.

I'm also not particularly a fan of hearing that it's de facto organic. I like living in the U.S. where we have the term

definitely rigorously defined and enforced under the National Organic Program. And I also like living in the state of California where when I used to go the farmer's market and someone who wasn't certified organic would tell me, Eh, it's basically the same thing but now I can put a CDFA agent on them, because that is not the case in my opinion.

So absent that and the due diligence to truly prove that this item is not available in an organic form, I can't support it at this time.

MS. DE LIMA: Steve.

MR. ELA: I tend to agree with that. I guess to add things to the list I think it's more than submitting a petition and giving one word answers. I mean, public comment, I mean, the petition should comment. They should, you know, probably not necessarily appear, but this was pretty poorly supported. And it's pretty clearly for one product at this point.

And I'm just hesitant. I mean, we don't certify products but we're, you know, we're

being asked to certify a pepper for a product versus a water use. So it, I mean, even though the criteria are the same, and if the petitioner had really come in and stated that said they could wild craft it, or this was critical to their business, or anything, I mean, I think there are alternatives. And made with organic is one. Another -- it's just hard to say it's essential.

MS. DE LIMA: Tom.

MR. CHAPMAN: I'm going to vote this down. I guess I will say, you know, there are small processors out there like there are small farmers that have various levels of sophistication. And, you know, I'm making an assumption from the responses and the communication we got from these people and the fact that I haven't seen a wide distribution of their products around that they're probably a fairly small producer that's focusing on just getting market share and potentially trying to make a product that might have some cultural or

ethnic significance to them or, you know, a passed down recipe to differentiate themselves.

And there's a minimum bar and I don't think we -- we did not hit that here.

MS. DE LIMA: Emily. And then we're going to wrap it up.

MS. OAKLEY: I think that's a really important point, Tom, about the size of this producer. And I did consider that. But I agree with you, there is still a minimum bar, and that needs to be met. And it wasn't here, in my view.

MS. DE LIMA: All right, we're going to move to a vote.

MR. CHAPMAN: All right. So, we have two motions here again. A motion to classify. We have a second to the motion to classify Ethiopian peppers as agricultural.

The motion was made by Lisa and seconded by A-dae. A yes vote is to say -- is to declare this is agricultural. And a no vote is to make no declaration. The voting will start with Lisa.

MS. DE LIMA: Yes.
MR. SCHWARTZ: Yes.
MS. ROMERO-BRIONES: Yes.
MS. OAKLEY: Yes.
MS. BAIRD: Yes.
MR. BUIE: Yes.
MS. SWAFFAR: Yes.
MR. RICH: Yes.
MS. BEHAR: Yes.
DR. SEITZ: Yes.
MR. MORTENSEN: Yes.
MR. ELA: Yes.
MR. BRADMAN: Yes.
DR. GREENWOOD: Yes.
MR. CHAPMAN: Chair votes yes.
MR. RICH: That's 15 yes, 0 no, 0 absents.
MR. CHAPMAN: The motion passes.
The next motion is to add Ethiopian peppers to 205.606. The motion was made by Lisa and seconded by A-dae.
A yes vote is to recommend this item

be listed. A no vote is to not make that recommendation. And the voting will start with Eric.

MR. SCHWARTZ: No.

MS. ROMERO-BRIONES: No.

MS. OAKLEY: No.

MS. BAIRD: No.

MR. BUIE: No.

MS. SWAFFAR: No.

MR. RICH: No.

MS. BEHAR: No.

DR. SEITZ: No.

MR. MORTENSEN: No.

MR. ELA: No.

MR. BRADMAN: No.

DR. GREENWOOD: No.

MS. DE LIMA: No.

MR. CHAPMAN: Chair votes no.

MR. RICH: That's 0 yes, 15 no, 0 absent.

MR. CHAPMAN: The motion fails. Lisa.

MS. DE LIMA: Next up, tamarind seed gum. Steve.

MR. ELA: I'm going to be an expert in gums by the end of this whether I want to be or not.

But tamarind seed gum is being petitioned as a non-organic agricultural ingredient allowed in processed products labeled as organic. It's a water soluble, high molecular weight polysaccharide. And the petition claims it has uses beyond what our current slate of gums has.

One thing they say is that tamarind seed gum imparts a viscosity similar to that of starch, but it's viscosity does not deteriorate in the presence of acids, bases, salts, and heat like starch does.

And while they note that other hydrocolloids may be used in products, they have different textures and mouth feels, very similar to what we heard about all the other gums, as each one has a special, special use.

Included in the write-up on it is a chart showing the comparisons between the various gums. And while we can't project that, it is in the meeting materials.

One of the claims in terms of organic supply is that they said they have checked out various tamarind powder and the various tamarind fruit products but the tamarind seeds are not available in sufficient supply to then go through the processing process to make the tamarind seed gum.

And they also note that many of the tamarind trees are wild, kind of similar to the previous petition, but there's not a sufficient system in place to certify those.

So I think in this petition it really comes down to the question of is this a unique gum? Does it give properties to the National List that other gums do not?

And then, also, in terms of the supply chain, the petitioner is basically just saying that small farmers collect the seeds, and the

preparation from the seed is completed in one location. But their research for this petition through the Organic Agricultural Certification Program in Thailand they were unable to find organic certified tamarind seeds.

And on the NOP organic integrity database there is no source of organic tamarind seed gum or tamarind kernel powder. And so it does become a supply chain issue potentially for this.

Conversely, we received public comments from other stakeholders, including, well, various stakeholders that is similar to these other things, that the hours spent submitting a petition and years spent for the petition to go through and potentially go through rulemaking, they could be spending that same amount of time and effort in developing an organic supply chain.

So those are kind of the two sides of the coin. I'll leave it at that and open it up for discussion.

MS. DE LIMA: Emily.

MS. OAKLEY: Thailand has a comparatively robust organic farming community. Farmers of various different sizes, including some of the smaller producers that we were referring to in the previous material that very conceivably could be engaged and allow costing of this product. And I'm not convinced even by their webinar testimony that they went to sufficient means to determine the feasibility of that.

But if others have other thoughts I'd like to hear them.

MS. DE LIMA: Tom.

MR. CHAPMAN: I don't have a thought on that one off the top of my head.

I did want to comment on the comment made about they could invest their time in developing an organic supply chain because that would take less time than petitioning the material. I would say those comments probably came from someone who doesn't do this for a

living.

I can speak personally that it took myself at a previous company more than five years to source a simple Arabic dried black lime organically, single ingredient from small producers in a small quantity, to get that through, to get someone to make that product, to get it certified, to get it processed in an appropriate way, and then to bring it to market here in the U.S.

And that was just for my own usage. That's before I tried to market it into other processed products. And I was so tired by them I quit that company and went to go to work for Clif Bar. So that statement is entirely overly simplistic for the difficulty in managing a supply chain as complex as the one described by the petition on this one.

MS. DE LIMA: Steve.

MR. ELA: You know, I try and read, you know, through all this and understand it. But it also sounds like a case I'm going to say

similar to casings where there's sourcing from a number of small suppliers, it's pretty distributed. By the time you start accumulating things and then processing it, you know, the minimum quantities are a little difficult to amass.

I see this as potentially one where we put it on 606 and it encourages, again, if organic production is available they have to use it. So it gives another natural gum, even though it -- well, it's non-synthetic, puts something else on the list that then creates a market for it and then hopefully helps create a demand for an organic supply chain.

We know there's organic tamarind pulp available so, you know, maybe, I tend to agree with Tom, I think those are very complex issues but maybe this is actually encouraging another natural gum supply.

MS. DE LIMA: Tom.

MR. CHAPMAN: I mean, at some level this gum is an alternative to some of the more

processed non-agricultural gums, like, gel and xanthan, clearly from a non-GMO source for folks who had those concerns. This would potentially create an alternative if formulators wanted to put the effort into the products.

We also heard from a retailer speaking about supposedly the consumer reaction or lack of preference for a xanthan gum. Again, this would present a different alternative for those consumers if manufacturers were able to formulate products with it.

MS. DE LIMA: Emily.

MS. OAKLEY: I hear all of those points but I just really want to stress that the petitioner said that this comes from wild crafted tamarind in Thailand. And I really can't stress enough that there is a robust, a very comparatively robust organic farmer community in Thailand of different sizes. And so I really want to them first reach out in a more explicit way to the certifiers in Thailand and certified organic farm groups to see if there is a

possibility. Because it would just augment an already burgeoning organic farming community and supply chain in Thailand.

I'm not going to say I'm an expert on this because I'm not, but I still will not be voting to list this material until I would see more evidence that it wasn't going to be possible to certify it wild craft organic in Thailand more robustly.

MS. DE LIMA: Ashley and then Harriet.

MS. SWAFFAR: So, back to my earlier comment before about 606 materials. You know, if these guys get certified then they have to use them as a supplier, and their quantities are sufficient. So, you know, and that's why look out on 606 materials, maybe the market's not there right now for an organic supply, but it could in a few years, and then they have to buy organic.

So that on 606 materials I kind of lean that way on that. That's why I'll be voting to list.

MS. DE LIMA: Harriet.

MS. BEHAR: So, we did have someone speak to this on the webinar. And I asked about, you know, how they were working at it. And they first said, well, we can't find tamarind seed in Thailand. And then I went on the integrity database, so I found tamarind seeds in Thailand.

And he is getting now conventional tamarind seed from Thailand and somehow making it into a gum. I don't know in what country he's making it into a gum. But I think that if you could get organic tamarind seed in Thailand and -- or non-organic and make it into a gum, had there is organic tamarind seed available in Thailand, there's not extra, perhaps it's too small an amount that he needs to justify an organic grown, I don't know.

All of the -- you know, or maybe it doesn't keep very long so you can't make it. But that was not clear to me in the petition. But it just seems that they're so close that there is organic tamarind seed in Thailand. They're

making the conventional tamarind seed gum from a Thai source. And so it seems that putting it on 606, right now if they want to use tamarind seed gum they have to get it organically.

So I think it's a matter of do we want to encourage them more strongly and not put it on the list? Or put it on the list and do more of a nudge rather than a push?

MS. DE LIMA: Sue.

MS. BAIRD: I think I echo Ashley's. If there is organic and if it's on 606, they must obtain it. They have to do their due diligence.

I've seen -- and I hear what you're saying, Harriet -- I've seen sometimes perhaps the opposite. If there's organic and if -- and their neighbors see it, wow, they're getting $20 more per pound for organic than I'm getting from my conventional, sometimes that's a push for them to go organic.

So, sometimes having it available and being able to put it on their not available in sufficient quantity now, but they see that

they're getting, their neighbors are getting good premiums, it pushes them, more people, to go organic.

MS. DE LIMA: Tom.

MR. CHAPMAN: Just for the sake of time, unless further debate is going to change someone's opinion or someone's un-made up and would want for the debate, I'm hoping we can wrap this up shortly.

MR. BRADMAN: I just have one question for Harriet.

In the letter from the petition they said that they were unable to find organic certified seed, no source of organic tamarind seed or organic tamarind kernel powder on the NOP Organic Integrity Database. Sounds like you found otherwise?

MS. BEHAR: I did not actually try to buy it. But it was on the database. So perhaps that's an old listing or I don't know. I did not contact the manufacturer and say -- not tamarind seed gum but just tamarind seed.

MR. CHAPMAN: There's three crop entries for tamarind on the Organic Integrity Database for the country of Thailand. They also have what I would look at hundreds of other crops on their certificate. So it's really hard to quantify if they're truly a -- when I see that when I'm sourcing stuff, it generally means it's a smaller producer or background producer, but it could also be a grow group. So it's a little hard to quantify.

I do want to note back, though, to the comments made by the petitioner on the phone that there's different applications for types of tamarind and that they're not looking for the entire tamarind product, the pulp, which is a common food ingredient. They're looking for the seeds, to make the seeds, the gum out of. And they also need a specific variety of tamarind that has white seeds. And none of that detail at all is apparent in the Organic Integrity Database.

MR. ELA: Yeah, and I was going to say

the same thing. I think when you read the actual petition, and I didn't put it in the full write-up because it gets down in the weeds but, yeah, there were dark kernels and white kernels. And they're buying them at farmers' markets and accumulating.

So I think there are some -- it's not quite as easy as just backing up the truck to the processing plant and loading all the seeds in it. So I did want to give them -- they did explain that fairly clearly in the petition and I, I mean, I think we can argue over due diligence, but at least compared to previous petitions this one felt like they actually did go through in fairly good detail and they did respond to our questions.

MS. DE LIMA: All right. We're going to move to a vote.

MR. CHAPMAN: Okay. So we have two motions again, a classification motion and then a listing motion.

The first one is to classify tamarind

seed gum as agricultural non-synthetic. The motion was made by Steve and seconded by Lisa.

And in the voting a yes vote is to classify as agricultural. A no vote's to not classify. And the voting will start with A-dae.

MS. ROMERO-BRIONES: Yes.

MS. OAKLEY: Yes.

MS. BAIRD: Yes.

MR. BUIE: Yes.

MS. SWAFFAR: Yes.

MR. RICH: Yes.

MS. BEHAR: Yes.

DR. SEITZ: Yes.

MR. MORTENSEN: Yes.

MR. ELA: Yes.

MR. BRADMAN: Yes.

DR. GREENWOOD: Yes.

MS. DE LIMA: Yes.

MR. SCHWARTZ: Yes.

MR. CHAPMAN: Chair votes yes.

MR. RICH: That's 15 yes, 0 no, 0 absent.

MR. CHAPMAN: The motion passes.

The next motion is to recommend the addition of tamarind seed gum, limited to non-acid hydrolysis forms, at 205.606.

The motion was made by Steve and seconded by Lisa. A yes vote is to recommend this listing. A no vote is to not recommend listing. And the voting will start with Emily.

MS. OAKLEY: No.

MS. BAIRD: Yes.

MR. BUIE: Yes.

MS. SWAFFAR: Yes.

MR. RICH: Yes.

MS. BEHAR: Yes, with a nudge.

DR. SEITZ: No.

MR. MORTENSEN: No.

MR. ELA: Yes.

MR. BRADMAN: Yes.

DR. GREENWOOD: Yes.

MS. DE LIMA: Yes.

MR. SCHWARTZ: Yes.

MS. ROMERO-BRIONES: No.

MR. CHAPMAN: Chair votes yes.

MR. RICH: Eleven and 4 here. Excuse me. 11 yes and 4 no, 0 absent.

MR. CHAPMAN: The motion passes.

Lisa.

MS. DE LIMA: Do we want to --

MR. CHAPMAN: No, we're going.

MS. DE LIMA: You don't want to defer it to the end since it's not a -- it's a discussion document?

MR. CHAPMAN: No. I just say we keep the discussion short.

MS. DE LIMA: Okay. All right, so next, last item on the agenda is pullulan, pullulan.

Let's see. So, this is a discussion document. We just got the TR back about a month ago so we didn't have time to bring this forward. We'll be bringing it forward at the spring meeting. So this is an opportunity to get additional -- to get a first round of public comment in and the board to get familiar with the

material.

All right. So, this petition was submitted, and it was to add pullulan into the National List at 205.605(a) as an allowed agricultural non-synthetic ingredient for use in tablets and capsules for dietary supplements only allowed in the made with organic category.

The petition was submitted by the OTA on behalf of its Nationalist Innovation Working Group. And they stated that the petition was twofold:

One, it was to protect the continued production and availability of USDA NOP certified dietary supplements; and to continue to support the commercial development of organic pullulan.

For dietary supplements the capsule is considered to be an ingredient, and must either be certified organic or made up of ingredients compliant with the NOP, with the National List.

And since the early 2000s, certifying agents have been classifying pullulan as agricultural and allowing it in the dietary

supplements in the made with organic category.

And then after the NOP's classification materials guidance came out in 2016, there was a little bit of disagreement in the certifier world on whether pullulan should be classified as non-ag and a non-synthetic substance. So, under the classification of non-ag and non-synthetic, pullulan would need to appear on the National List in order for it to be used in those dietary supplements in the made with organic category.

Right now there are no other NOP compliant vegetarian options available for producing organic encapsulated supplements. Organic pullulan is currently not commercially available in the U.S. And according to the petition, the owner of the U.S. patents which cover the pullulan capsules are in the process of developing an organic pullulan.

The only other alternative practice for supplement manufacturers would be to use gelatin capsules listed on 205.606, but this

would be problematic for those consumers looking for vegetarian product.

The economic estimate is current manufacturers lost their organic certification because they wanted to continue to use pullulan was estimated at 825 million.

So, like I said, we have got a TR. We just didn't deem it sufficient and will be bringing forward our proposal in the spring.

With that -- oh, I will add we got a fair amount of public comment in favor of listing pullulan. And that came from manufacturers, as well as some certifiers.

So, with that I want to open it up for a brief discussion from the board if folks have questions, comments.

MR. CHAPMAN: I would just like to thank folks for the public comment. It's meant to help streamline these petition discussion documents, help streamline these processes. And if we had this for some of the petitions we had today I think we would have been probably in a

better spot to vote on them. So, thank you for helping us with the information earlier on in the process.

MS. DE LIMA: Steve.

MR. ELA: I would echo that. I think this discussion makes it much easier for the subcommittee then to go back and discuss it. And I also think that on controversial materials it gives a heads-up to the petition of what issues they might need to address before the subcommittee goes to a vote, which would make something like silver maybe hopefully clearer.

So I think it's a good process. Thanks, Lisa.

MS. DE LIMA: All right. I think that concludes the Handling Subcommittee.

MR. CHAPMAN: Collagen? Collagen?

MS. DE LIMA: Oh no, there's one more.

(Laughter.)

MR. CHAPMAN: Slim Jims, organic Slim Jims. Come on.

MS. DE LIMA: But it's not mine. So,

Asa, collagen gel.

MR. BRADMAN: This is a similar discussion document as the previous one to get the questions out there in the community. Collagen gel, I think it's a pretty interesting case here, is basically a material that's extracted from animal skins to produce a coextruded coating for sausage production. It seems like it's primarily for the fully cooked sausages.

To kind of summarize some of the comments related to it from the manufacturer and one contract producer, there is a lot of, you know, clearly favorable support. Some of the benefits considered was that it provides more opportunity for single species sausages, so you don't have the use of mixed species, in particular hard casings being used on other sausage projects -- products.

And according to their market, their understanding of the market, there's definitely some preference to avoid, to have less -- to have

more choice in that matter, particularly for chicken sausage, and materials that people don't want non-bird sources of sausage.

You know, I think the issue with this material is that it's like the casings which we've already approved, it would be coming from animals that were not raised organically. And just to quote one comment from, I think this was from Alan Lewis, "this is one of the most dangerous petitions I can imagine for the integrity of the National Organic Program and the survival of organic livestock producers," kind of reflecting that concern about the use of non-organic livestock as the source.

And according to the petitioners there are not -- the scale of the market is such that there's not available organic source material to produce the coextruded collagen gels.

In terms of materials that are already on the National List where there's some similarities, of course there's the casings that we've approved in the last year. And then also

gelatin, which is essentially a similar material. Chemically it's almost identical. But it's perhaps a little more processed than the collagen gel itself.

I think that's kind of an introduction, overview of the issues. I don't know if you want to have any discussion or bring that forward in another study.

MS. DE LIMA: Tom.

MR. CHAPMAN: I mean, it seems to me that this material suffers from the same supply chain constraints that other similar materials suffer from.

MS. DE LIMA: All right. I mean, I will add since there was that retailer comment, I don't share that view. I don't -- there's not a lot of certified organic meat products on the market. I mean, it's growing. It's grown over the last 20 years. But I don't see this being very different than the casings that are already on the market. And to me this just expands the consumer base for buying certified organic meat

products, which I would like to see more of, you know.

MR. CHAPMAN: Yeah. And I guess, I don't know, the more you can build a market for that finished organic product, the more meat products that goes through those processing plants, and the higher likelihood you're going to be able to generate enough business to make an economic model to then turn these byproducts into value add organic products.

MS. DE LIMA: All right. I think we're done.

MR. CHAPMAN: All right. Thank you, Lisa, for that. I think we're just going to keep going. And I'm going to cancel -- No, I'm joking.

(Laughter.)

MR. CHAPMAN: We're going to take lunch and see how we get progressively more aggressive as we get more and more "hangry."

All right. It's 1:15, 1:20 by my clock, but we're still coming back at 2:15. So

55 minutes for lunch. We'll start off with the Crop Subcommittee.

Board members, don't run away, we're going to take a photo and then you can go get lunch. So, quickly, quickly take a photo. Quickly gather by the USDA logo.

We're in recess until 2:15.

(Whereupon, the above-entitled matter went off the record at 1:20 p.m. and resumed at 2:15 p.m.)

MR. CHAPMAN: Okay, we're going to come to order. It looks like all Board members are present and we'll be moving into the crops section of the agenda and I'll hand the meeting over to the Crops Chair, Steve.

MR. ELA: All right, we're about a half hour behind, so I'm going to encourage the Crops Committee when we present sunsets, just like we did before, you know, the materials were in the book, so present the controversial side of it or things that came up in public comment that were new so we can -- and I'll try and keep

things fairly tight so we can stay on schedule or gain a little time back since I'm one of the ones that has to leave tonight.

So, we'll start with sunsets and the first on, Clarissa, we'll start with alcohols.

DR. MATHEWS: Section 205.601 Synthetic Substances Allowed for Use in Organic Crop Production.

Paragraph A, as algaecide disinfectants and sanitizer including irrigation system cleaning systems, alcohols, the listing is ethanol.

MR. ELA: Jesse?

MR. BUIE: The NOP has allowed ethanol in organic crop production for over 20 years. Public comments were largely in favor of relisting ethanol because the material is a good example where there are several sanitizers and disinfectants listed for organic use in rotation to reduce disease resistance.

The public comments were overwhelmingly for relisting.

Are there any questions?

MR. ELA: Discussion?

Tom?

MR. CHAPMAN: Yikes. Okay, so we have a motion to remove ethanol from the national list. This is a sunset item, so just remember a no vote is to retain the listing, a yes vote is to remove it.

The motion was made by Jesse and seconded by Harriet.

And the voting will start with Sue.

MS. BAIRD: No.

MR. BUIE: No.

MS. SWAFFAR: No.

MR. RICE: No.

MS. BEHAR: No.

DR. SEITZ: No.

MR. MORTENSEN: No.

MR. ELA: No.

MR. BRADMAN: No.

DR. GREENWOOD: No.

MR. SCHWARTZ: No.

MS. ROMERO-BRIONES: No.

MR. CHAPMAN: Chair votes no.

MR. RICE: That's zero yes, 15 no's, zero absent.

MR. CHAPMAN: Motion fails.

Steve?

MR. ELA: Sorry, alcohols?

DR. MATHEWS: At Section 205.601(a)(1), the listing is isopropanol.

MR. BUIE: The NOP has allowed isopropanol alcohol use in crops for over 20 years. The new -- there was no new scientific or significant information was presented to warrant removal of the material.

Again, public comments were overwhelmingly in favor of relisting isopropanol.

Are there any questions?

MR. ELA: Tom?

MR. CHAPMAN: We have a motion to remove isopropanol from the national list.

The motion is made by Jesse and seconded by Emily.

A yes vote is to remove, a no vote is to retain and the voting will start with Jesse.

MR. BUIE: No.

MS. SWAFFAR: No.

MR. RICE: No.

MS. BEHAR: No.

DR. SEITZ: No.

MR. MORTENSEN: No.

MR. ELA: No.

MR. BRADMAN: No.

DR. GREENWOOD: No.

MS. DE LIMA: No.

MR. SCHWARTZ: No.

MS. ROMERO-BRIONES: No.

MS. OAKLEY: No.

MS. BAIRD: No.

MR. CHAPMAN: The Chair votes no.

MR. RICE: That's zero yes, 15 no, zero absent.

MR. CHAPMAN: Motion fails.

Steve?

MR. ELA: Okay, we'll move on to

sodium carbonate peroxyhydrate.

DR. MATHEWS: At Section 205.601(a)(8), sodium carbonate peroxyhydrate CAS Number 15630-89-4, federal law restricts the use of this substance in food crop production to approved food uses identified on the product label.

MR. ELA: I actually don't know if Emily or Dave is doing this, it was split.

MS. OAKLEY: It is actually me.

MR. ELA: Okay.

MS. OAKLEY: Yes.

MR. ELA: Emily?

MS. OAKLEY: So, this is used an algaecide in rice fields, ponds, ditches and irrigation lines. It was originally added to the national list in the hopes that it would be used as an alternative to copper sulfate in rice.

It is highly toxic to bees which should be noted and was noted by a public commenter.

And, we received some comments in the

spring in relation to this, but far fewer than we were hoping for.

We received basically similar comments this time around as well in addition to one farm, Bolthouse Farms in California that grows carrots that uses it.

I had additional conversations with CCOF via email about this because they are the certifier that has producers using this material. They have 49 people using it, of those, nine do grow rice.

But, when they reached out to their members, only one person wrote back about using this in conjunction with copper sulfate. That doesn't mean that other people aren't doing it, that was just the response rate that they heard.

I think the take-home message from this material is that, it was added in the hopes of replacing copper sulfate or at least minimizing some of its use. That probably has not happened to the extent that it was originally hoped for.

I underscore the value of farmer to farmer exchange, especially for the one producer that we know is using it and might be able to present that material and that innovation to other growers.

We did have a split vote in the Subcommittee on this. I did vote to delist it at that time and so did Harriet, I believe. And so, I wanted to ask Harriet if you still felt that way or if I got that wrong, if it was someone else, sorry about that.

MS. BEHAR: Well, I'm just kind of curious about the usage, how, you know, is it being used -- I don't have as much issue with allowing it, especially if it's not being in heavy use.

You know, if it's being used in rotation with other things or whatever, I think maybe it's --

MS. OAKLEY: When it's used, I think it's predominantly used as an irrigation cleaner and as water treatment probably in ponds and

other ditches or other waterways.

I think it isn't heavily used. I think it is a low toxicity chemical relatively speaking. Of course, as I noted, toxicity to bees.

I am inclined to change my vote at this point. But, I also do think that it underscores the importance of recognizing the only added material with a certain intention that may not always be the case. That may not how be -- may not be how the material is adopted.

And when it has a board classification as an algaecide, it's going to be used in other ways.

That's my comment. Any comment or discussion?

MR. ELA: Other discussion?

MR. MORTENSEN: Yes, just quickly. With limited surface water, bees get their -- the water needs that they have from nectar and from pools of water. So, unfortunately, there's probably some degree of exposure here that will

happen.

But, other than that, I have no comment.

MR. ELA: Other discussion?

I'll say that I was originally a little skeptical on renewing this one, hearing some of the public comment and that there are some uses for it.

I'm more inclined to vote for it at this point. I guess that the case wasn't made that it should be taken off. I mean, I don't know if it was made to stay on, but in the absence of clear marker either way, it makes me lean towards leaving it on. Anybody else?

Dave?

MR. MORTENSEN: Yes, I was also struck by the comments we got on this and several other things that we did not have that information as recently as a month ago.

So, we did hear a lot about this one, aqueous potassium silicate and others since we were voting on them.

MR. ELA: Emily?

MS. OAKLEY: Just in conclusion, I think an argument that Dave made in the Subcommittee should be repeated here that we don't want to remove a lower toxicity chemical, even if it isn't being used for that use right now.

But, I do think we want to avidly encourage innovation and spreading of information where it might be being used.

MR. ELA: Okay, anything else?

Tom?

MR. CHAPMAN: All right, we have a motion to remove sodium carbonate peroxyhydrate from the national list.

The motion was made by Emily and seconded by Jesse.

This is a yes vote will be to remove, a no vote to retain and the voting will start with Ashley.

MS. SWAFFAR: No.

MR. RICE: No.

MS. BEHAR: No.

DR. SEITZ: No.

MR. MORTENSEN: No.

MR. ELA: No.

MR. BRADMAN: No.

DR. GREENWOOD: No.

MS. DE LIMA: No.

MR. SCHWARTZ: No.

MS. ROMERO-BRIONES: No.

MS. OAKLEY: No.

MS. BAIRD: No.

MR. BUIE: No.

MR. CHAPMAN: The Chair votes no.

MR. RICE: That's zero yes, 15 no, zero absent.

MR. CHAPMAN: The motion fails.

Steve?

MR. ELA: All right, newspaper, Clarissa?

DR. MATHEWS: This material appears at two listings within the national list, at 205.601(b) Herbicides, Weed Barriers, as

applicable, Mulches.

And then, also at 205.601(c) as compost feed stocks.

And, the listing is newspaper or other recycled paper without glossy or colored inks.

MR. ELA: Harriet?

MS. BEHAR: So, we did get a new TR on newspaper and reviewed that in great depth.

The public was universally in support, although except one organization.

There was some discussion about using it in conjunction with plant-based materials. I know when I've used newspaper as a mulch, I put it underneath my straw or hay just to prevent that light from coming through. I believe that's what they're referring to.

And, the one organization talked about that we should be encouraging more plant-based mulches. That's it.

MS. ELA: Discussion?

Emily?

MS. OAKLEY: I do think it's worthy of

people to read the supplemental TR because it -- we were hoping that it would reveal fewer toxins in paper, but it actually reveals higher toxins in paper than probably were originally in the listing back in the day.

And, the difficulty of removing glossy paper and ink paper from newspapers has also increased, but I don't think we can address them.

I just want to reiterate that the level of exposure has probably increased, not decreased over time.

MR. ELA: Other discussion?

Tom?

MR. CHAPMAN: So, we have a motion to remove newspaper and other recycled paper from the national list.

The motion was made by Harriet and seconded by Asa.

A yes vote is to retain, a no vote -- a yes vote is to remove, a no vote is to retain and the voting will start with Scott.

MR. RICE: No.

MS. BEHAR: No.
DR. SEITZ: No.
MR. MORTENSEN: No.
MR. ELA: No.
MR. BRADMAN: No.
DR. GREENWOOD: No.
MS. DE LIMA: No.
MR. SCHWARTZ: No.
MS. ROMERO-BRIONES: No.
MS. OAKLEY: No.
MS. BAIRD: No.
MR. BUIE: No.
MS. SWAFFAR: No.
MR. CHAPMAN: The Chair votes no.
MR. RICE: That's zero yes, 15 no, zero absent.
MR. CHAPMAN: The motion fails.
MR. ELA: Plastic mulch and covers. Clarissa?
DR. MATHEWS: At Section 205.601(b) as Herbicides, Weed Barriers, as applicable, Mulches.

The listing is plastic mulch and covers, petroleum based other than polyvinyl chloride (PVC).

MR. ELA: Harriet?

MS. BEHAR: Okay. So, there was pretty good support for this material discussing the way that it warms soil and controls weeds.

And, many producers also wrote in and talked about that they could not farm or produce certain crops without it.

There, in the discussion, we talked about burning of that plastic when it's removed from the soil, which is part of the annotation.

And, one commenter stated that the annotation would be informative, but it is already covered by the Federal Clean Air Act and some state statutes.

There was comment, too, by numerous certifiers and advocacy groups about wanting us to move forward with biodegradable, biobased mulch. But that does not really affect this listing.

And, there was one last comment, too, that we should be moving more towards plant-based mulches and away from petroleum.

MR. ELA: Discussion?

Emily?

MS. OAKLEY: I was the abstention in the Subcommittee and I will be abstaining again because I'm a farmer representative. I could certainly not vote against this material, but I have reservations, great reservations about the widespread use and reliance on this both because of the waste output and the concern of growing with plastic touching your crops and soil. But, I understand its widespread use.

MR. ELA: Yes, there is no doubt that there is heartburn over this issue and that we would all prefer alternatives.

Other discussion?

Harriet?

MS BEHAR: And, I agree with Emily that there is actually a lot of concern at times of heavy rains that the water can't infiltrate if

you've got a whole field or say, many high tunnels in a row that there can be quite severe erosion from the water running off of plastic.

But, it is an extremely useful production aid, as I said, for weed control and for warming soil and even for insect management when you use different colored mulches, silver and red and things like that.

MR. ELA: Tom, do you have a comment?

MR. CHAPMAN: Yes, I mean, I think we all know the alternative here is the biodegradable, biobased mulch.

I notice in the public comment that there was a research project going on, I think a USDA funded research project that was at University of Tennessee about some other campuses including Washington State.

And, I notice we're traveling to the State of Washington, so I don't know if there's an opportunity there to potentially get some update on that research and their, you know, early findings if they'd be willing to share it.

DR. TUCKER: I would also echo what Paul said yesterday about this topic of biodegradable mulches being of particular interest to the program given the current status of the listing and our policy memo on the topic.

So, this is an area we plan to pay some attention to in the coming months.

MR. ELA: Jenny, can I ask on that, so the program's paying attention to that. Is that something we need to consider for a work agenda item for the NOSB or should we just let you play it out?

DR. TUCKER: I think the program may initiate a -- there has been requests from the Board to look at this. And so, I think that we could see this as an NOP initiated work agenda item to the Board to open that dialogue.

MR. ELA: Great, that's -- I'm pleased to hear that.

So, Emily, one last comment?

MS. OAKLEY: Yes, I just I forgot to say that I'm growing strawberries on plastic

mulch right now, so, just some hypocrisy in my thinking.

MR. ELA: Scott?

MR. RICE: Just a quick note on the Washington trials, those are just north of Seattle in the Mount Vernon area and I'm sure that we could get the folks involved in that to address our meeting in the spring.

But, I do know, at last check, the materials that they are using in their trials are not -- do not fit the current definition as was passed for biodegradable mulch.

MR. ELA: Fair enough.

Asa?

MR. BRADMAN: Just one last comment. I just want to echo the heartburn and, if we can, figuratively, at least, bring in all of the prior comments related to concerns about plastic and waste and into the transcript, or at least refer it into the transcript for today's meeting.

Because, there's really it's a tremendously challenging issue and also a

tremendous force of basically a toxic waste material directly from organic production and also related to the difficulties of recycling it because of its contamination by soil and other materials.

MR. ELA: I think we can move to the vote, Tom.

MR. CHAPMAN: Okay. We have a motion to remove plastic mulch and covers petroleum based other than polyvinyl chloride from the national list.

The motion was made by Harriet and seconded by Dave.

A yes vote is to remove, a no vote is to retain the listing and the voting will start with Harriet.

MS. BEHAR: No.

DR. SEITZ: No.

MR. MORTENSEN: No.

MR. ELA: No.

MR. BRADMAN: No.

DR. GREENWOOD: No.

MS. DE LIMA: No.

MR. SCHWARTZ: No.

MS. ROMERO-BRIONES: No.

MS. OAKLEY: Abstain.

MS. BAIRD: No.

MR. BUIE: No.

MS. SWAFFAR: No.

MR. CHAPMAN: Chair votes no.

MR. RICE: No.

That's one -- excuse me, zero yes, 14 no, one abstention, zero absent.

MR. CHAPMAN: Motion fails.

Steve?

MR. ELA: Aqueous potassium silicate, Clarissa?

DR. MATHEWS: At Section 205.601(j), I'm sorry, (i), As Plant Disease Control, aqueous potassium silicate CAS Number 1312-76-1, the silica used in the manufacture of potassium silicate must be sourced from naturally occurring sand.

MR. ELA: Dave?

MR. MORTENSEN: Yes, very quickly, this is -- this particular application is for insect and mite control. It would be sprayed on as a foliar application.

And, the idea is that the silica that results from the application will either have direct effects on insects that would be feeding on the leaves or indirect effects by uptake of the silica tetrahedra across various cells on the leaf surface that would induce a plant defense where the plant then upregulates and produced defense compounds.

At the time of our review when the Subcommittee voted on this, we had heard little from stakeholders on whether or not it's being used. And, we had a very limited data set or data sets on efficacy.

The Subcommittee posted several questions asking for folks to get back to us and we heard from quite a few people.

Their response on is it being used was highly regionally skewed with California

certified organic and several consultants from the Pacific Northwest responding that it is used for mite and spider suppression in veg crops.

And, from my read on that, it was mostly an argument that having this tool in the toolbox adds another practice, another compound that could be used that would reduce selection for resistance and other problems as well as a replacement of things that we would like to see there be less used of, for example, copper sulfate, at least in the case of the disease management.

So, we appreciated all that feedback.

Interestingly, in the Midwest and in the East we had, you know, folks responding, Pennsylvania certified organic, for example, that they had no folks responding that they were using it.

The Committee discussed for quite a bit about, and we saw this reflected in public comments, so the public comment was, you know, there are folks using it.

But, we were also interested in information on, you know, field worker and applicator exposure.

And, the concern here is that the data that we had to go on that's, one, evaluating the mechanism of action of the compound is contradictory and thin.

And, two, whether there would be an impact on the animals that would be feeding on plants that were sprayed including humans, would result in health effects.

And, that was a concern. So, that would be my summary of this.

When it was last relisted in fall of 2014, the Crops Subcommittee voted 4-3 in favor of removal. And, the broader Committee Board voted 9-7 to retain the compound.

MR. ELA: Discussion?

Harriet?

MS. BEHAR: Well, we did get quite a few -- quite a bit of feedback from producers, from the manufacturer giving us information on

the efficacy, because our questions were efficacy and essentiality.

And, I was surprised to see the number of CCOF growers and the producers, including a former NOSB member, actually, I think more than one mentioning to see this material be retained.

I don't really see that there is that much of an environmental issue. And, actually, in biodynamic farming, you do spray actually a silica as an insect control or, you know, to make the fibers in the plant less palatable to the insects.

And, so, I'm probably going to change my vote on this seeing that there is a need for it and I would hate to take away that tool from all those producers.

MR. ELA: I agree, Harriet, there was a very strong response and I continue to be concerned about the lack of data that helps us to assess that the safety of its use, that continues to be a concern of mine.

But, there is no question that we

heard from folks that they are using it some in an integrated pest management program and on the West Coast for sure.

Asa?

MR. BRADMAN: One thing that raised concerns for me in terms of the Subcommittee discussions was the fact that it essentially acts as a systemic compound and it's going into the plant and then altering the plant.

And, to me, that puts it in a slightly different category and raises concerns for me, just almost in principle philosophically.

It's not like a systemic pesticide that, you know, the toxic material is there and, you know, you can't wash it out.

At the same time, though, the mechanism here is just concerning to me and that's why I voted to not relist it.

MR. ELA: Other comments?

Emily?

MS. OAKLEY: This is a question for Dave. If you are going to be changing your vote

or if you think you will stay with your original vote?

MR. MORTENSEN: Because of the concerns I had about animal and human health effects of the systemic action of it, I will continue to be voting to delist.

MR. ELA: Other comments?

I will make one, but I'll defer. But, I think I voted to delist this in the Subcommittee, I'll be changing my vote just based on the public comment.

My biggest worry was, essentiality and whether it was being used and that, to me, was adequately answered and I will just tell the stakeholders that this is where public comment really, I mean, the Subcommittee that voted unanimously against relisting this and now it's, you know, based on your comments, it does have an influence.

So, anybody else have a comment before we vote?

MR. MORTENSEN: I guess I would also

just like to say that when someone doesn't change their vote because of the additional information, it's not that we don't value the input, I continue to value the input and it actually pushed me much closer to being supportive of this.

I was very negative about it initially, as effectively a synthetic insecticide. But, anyway, I'll leave it at that.

MR. ELA: Tom?

MR. CHAPMAN: We have a motion to remove aqueous potassium silicate from the national list.

The motion was made by Dave and seconded by Harriet.

A yes vote is to recommend removal, a no vote is to not recommend removal.

And, the voting will start with Dan.

DR. SEITZ: Yes.

MR. MORTENSEN: Yes.

MR. ELA: No.

MR. BRADMAN: Yes.

DR. GREENWOOD: No.

MS. DE LIMA: No.

MR. SCHWARTZ: No.

MS. ROMERO-BRIONES: Yes.

MS. OAKLEY: Yes.

MS. BAIRD: No.

MR. BUIE: No.

MS. SWAFFAR: No.

MS. BEHAR: No.

MR. RICE: No.

MR. CHAPMAN: Chair votes no.

MR. RICE: That's 5 yes, 10 no, zero absent.

MR. CHAPMAN: The motion fails.

MR. ELA: Elemental sulfur.

DR. MATHEWS: If I could just interject for a minute here, it appears that there are two listing of this substance.

MR. ELA: Yes, there are two.

DR. MATHEWS: At (i) and (e).

MR. ELA: That's correct.

DR. MATHEWS: Okay.

MR. MORTENSEN: So, just very, very quickly, the first draft and the second draft are these two different -- it's exactly the same compound. The only difference here is that the compound is being targeted for use for fungal and plant disease management.

And, here, the target is powdery mildew. And, Tom, you're wrinkling your brow. Is there a question or --

MR. CHAPMAN: I'm confused. For aqueous potassium silicate, there's only one listing, isn't there, in our books?

MR. MORTENSEN: Well, the book -- I have it as two and we --

DR. TUCKER: There --

MR. MORTENSEN: -- voted --

DR. TUCKER: -- appears to be a listing at (e) as in insecticide, including acaricides or mite control.

MR. MORTENSEN: Oh, you're right, and then (i).

DR. TUCKER: And an additional listing

at (i) as a plant disease control.

MR. ELA: so, for protocol --

DR. TUCKER: So, the current motion, the vote that just took place only addressed one of those.

MR. ELA: So, for protocol, we should probably vote on the second one, as well, Tom, since they're listed twice.

MR. CHAPMAN: Was that an error in the slide or the way we published the material? Because we only voted -- I thought we had moved them forward together as a grouping, it's a slide issue, yes.

MR. ELA: We have, two, right?

MR. PATTILLO: The proposals were done, you've completed two proposals, but we're missing one slide for Section (e).

MR. CHAPMAN: Were the proposals forwarded separately or are they done together?

MR. PATTILLO: They were done separately.

DR. MATHEWS: They're separate.

MR. CHAPMAN: They're separate? Was that the case --

MR. ELA: Tom, I would propose we vote on the second one just to be clear.

MR. CHAPMAN: Yes, I just want to make sure. Did we do separate ones for newspaper as well or was that a single?

MS. SWAFFAR: There was one proposal for newspaper in our packet, but two for aqueous potassium silicate.

MR. CHAPMAN: Okay.

MR. ELA: And, newspaper was linked together for aqueous based --

(Simultaneous speaking.)

MR. CHAPMAN: -- in mind of the two listings, okay. And, is that the case with the sulfurs as well?

MR. ELA: Sulfur, we -- a sec here --

MR. MORTENSEN: I think this is the only one like that, as I recall.

MR. ELA: Sulfur, we have them all grouped under one.

MR. CHAPMAN: And lime sulfur?

MR. ELA: Lime sulfur, they are grouped under one.

MR. CHAPMAN: Okay. So just --

MR. ELA: So, we just --

MR. CHAPMAN: Just so we're clear with the public, we have some level of flexibility to combine or not combine, but we're going to vote here based on how the Subcommittee forwarded it to us. So, I guess this was one that was just, unfortunately, overlooked.

But, the newspaper was in two listing, we voted on once to recommend not sunsetting it for both listings. We are going to do the same for the three listings on elemental sulfur and the two listing for lime sulfur.

But, aqueous potassium silicate came to us as two separate motions from the Subcommittee and so we will vote on both separate motions.

So, I think we're clear now and, Dave, sorry, go ahead.

MR. MORTENSEN: Okay, thanks.

And so, the only difference is the target pest group. The target pest group here or plant pathogens, particularly, mildews on plants, powdery mildews which are a huge disease problem in all sorts of vegetables, fruits and fruit crops.

And, really, everything else is the same.

The comments that we received about, you know, having this tool in the toolbox there was specific language in a lot of the comments about mite and spiders as well as powdery mildew.

So, the argument, again, was the same.

MR. ELA: Emily?

MS. OAKLEY: Just a point of clarification for Tom. I think the reason that we did this in two separate motions was because it came from the Subcommittee as a removal so we needed to specify both of those sections.

MR. ELA: Okay.

Are we ready for a vote?

MR. CHAPMAN: So, we're going to have -- the one we voted on last time was (i), that was what was read into the record. So, I'm going to give it to Clarissa before we vote to make sure we read in the (e) section.

MR. ELA: That makes sense.

MR. CHAPMAN: And, just so the public knows, we're broadcasting the wrong one because we don't have it up on the slide. But, we're talking about 205.601(e).

MR. ELA: Well, Clarissa's going to read it.

MR. CHAPMAN: Clarissa?

DR. MATHEWS: So, this particular listing is at paragraph (e) as Insecticides including acaricides or mite control and the substance is aqueous potassium silicate CAS Number 1312-76-1.

The silica used in the manufacture of potassium silicate must be from naturally occurring sand, sourced from naturally occurring sand.

MR. CHAPMAN: So, just to be clear, we already voted on 205.601(i) and we're now voting on 205.601(e) aqueous potassium silicate.

We are ready for a vote.

MR. ELA: Ready for a vote.

MR. CHAPMAN: So, the seconded motion from motion made by Dave, seconded by Harriet.

A yes vote is to -- I'm sorry, I'm still reading the slide.

MR. ELA: It was seconded by Asa.

MR. CHAPMAN: The motion was made by Dave, seconded by Asa.

A yes vote is to remove, a no vote is to not recommend removal and the voting will start with Dave.

MR. MORTENSEN: Yes.

MR. ELA: Yes.

MR. BRADMAN: No.

DR. GREENWOOD: Yes.

MS. DE LIMA: No.

MR. SCHWARTZ: No.

MS. ROMERO-BRIONES: No.

MS. OAKLEY: Yes.

MS. BAIRD: No.

MR. BUIE: No.

MS. SWAFFAR: No

MR. RICE: No.

MS. BEHAR: No.

DR. SEITZ: Yes.

MR. CHAPMAN: Chair votes no.

MR. RICE: We have 4 yes, 11 no, zero absent. The motion fails.

MR. CHAPMAN: Steve?

MR. ELA: Thanks for that catch, Tom. I skipped on those pages, and Clarissa, sorry for the confusion.

Elemental sulfur with all three listings this time.

DR. MATHEWS: Yes, we'll do all three listings. At Section 205.601 paragraph (e) as Insecticides, including the acaroides or mite control, paragraph (i) is plant disease control and then, again, at paragraph (j) as plant or soil amendments.

And, the listing is elemental sulfur.

MR. ELA: Asa?

MR. BRADMAN: Thank you. And, I'll say, I'll try to brief but this is an issue that's dear to my heart.

So, just to kind of review, sulfur is up for -- we have three listings here, both as a nutrient, as a plant disease control.

And, we've had extensive public comments on sulfur I would say representing thousands of growers. And, across the board among producers, there's strong support for this and I think they've made a strong case for essentiality.

I, you know, last spring, we talked about work that I've done looking at the relationship of sulfur and reduced lung function in children living nearby where the materials are applied.

And then, also, there's an extensive history of sulfur causing respiratory, ocular, dermal and other illnesses in farm workers.

And, those concerns have been raised by myself and others in the community as, in some cases, reason to not relist sulfur or to at least encourage more controls and evaluations.

One thing we considered last year with respect to our work was whether dust versus wettable applications. If dust could be reduced, that might reduce exposure.

And, that partly came out of discussions with ag commissioners and NAPA and Sonoma County where especially kind of orchard blasting type applications cause a lot of drift and outreach and regulatory problems among neighbors.

We've had some thoughtful comments from CCOF about use of the material and a number of growers have bought specialized equipment that is likely reducing the spread of especially dust applications versus wettable applications.

Many growers talked about purchasing special equipment not for just say strawberries, but also for vineyards. And, often, water is not

available.

And, this relates to a suggestion, a question that we posed to the organic community is whether they would consider -- we could consider an annotation that eliminated dust applications acceptable on organic.

That annotation is a little bit beyond what we can do for this sunset, but the responses were kind of interesting.

There were certainly people who said we absolutely support an annotation to eliminate dust. Whereas, especially, I think in the wine industry and in strawberries, there was like, no, we need this tool.

I had thought about voting no on sulfur just as a voice for those concerns. Rather, I kind of view this as a signing statement about my concerns about the material.

In some ways I think we should separate the use as a plant nutrient from uses of pesticide. It is the most heavily used pesticide in California and many regions of the world. And

we should evaluate that separately.

I do think it's essential, but I think it's something we need to monitor.

One suggestion by Beyond Pesticides is to include an annotation that really emphasizes the worker protection standards related to sulfur, the EPA worker protection standards.

And, I think that's something we can -- should consider and maybe even for other materials to have maybe perhaps stronger recommendations on workers protections.

I noticed that CCOF listed some of the protections that go into people in their certification that are using the material. And, one piece that I think was left out, although I'd like to clarify, is -- was lack of respiratory protection and whether that's specific to here. It might have been just left out. But, I know that's an issue.

I do know growers in California who used, say dust applications and their workers were getting sick and they switched to a wettable

formulation with better protection and those problems in their workers just literally went away.

So, I think I've covered all the ground on this review and perhaps we can have some discussion before voting.

MR. ELA: Discussion?

Harriet?

MS. BEHAR: With so much pervasive use in California, has there been any resistance reported from, you know, from insects?

MR. BRADMAN: Not that I know of. I mean, it's used as a miticide and, you know, acaricide and it's also used as a fungicide. I think the fungicide use actually predominates.

MR. ELA: I can say that --

MS. BEHAR: And, plant disease as well?

MR. ELA: Plant disease, it's multi-action and from my understanding, there's no disease -- there's never been documented resistance partly because it's not a single -- it

actually acts on multiple pathways. So, it's not a single point which is, I mean, given it's been used for thousands of years, it's pretty stunning.

MR. BRADMAN: Yes. And, also just a reminder, that sulfur, I mean, one real benefit is that's it's not a systemic poison. You know, it's not going to kill people.

MS. BEHAR: One other question. If we decide, perhaps in the future to annotate it to wettable powder only, would that take away some uses that we wish would -- we still had or --

MR. BRADMAN: It probably would. I think it would. Certainly, there -- and people in the community assert that strongly. And, like I said, I mean, there's some new machinery.

In fact, I just had a side conversation with folks with a dust applicator for strawberries that, you know, is low to the ground and is unlikely to have the kind of community wide exposures that would result say from blasting a vineyard.

MR. ELA: I would also say if we actually like for soil application, if we limited it to wettable, that negates, because that's often put on as a granular form so I think we'd have to take that into account as well.

I will personally say that I would not agree with annotating it for the worker protection standards for the very reason that that's the law. It's already the law, we don't need to annotate something that's already the law.

If an employer is not following that, they should be taken to task under that.

And, it also means that, as those standards change, we don't want to have to keep messing with the list.

I mean, I'm not in favor of adding things that are already something somebody has to comply with. But I do -- I'm very sensitive to the human health concerns.

MR. BRADMAN: Right. Yes, no, I understand that. And also, it would put

additional -- potentially put additional burdens on certifiers.

MR. ELA: Other comments?

(No audible response.)

MR. ELA: Tom?

MR. CHAPMAN: Okay, so, we have a motion to remove elemental sulfur from the national list and this motion does incorporate all three of the listings.

The motion was made by Asa and seconded by Harriet.

And a yes vote is to remove, a no vote is to retain and the voting will start with Steve.

MR. ELA: No.

MR. BRADMAN: No.

DR. GREENWOOD: No.

MS. DE LIMA: No.

MR. SCHWARTZ: No.

MS. ROMERO-BRIONES: No.

MS. OAKLEY: No.

MS. BAIRD: No.

MR. BUIE: No.

MS. SWAFFAR: No.

MR. RICE: No.

MS. BEHAR: No.

DR. SEITZ: No.

MR. MORTENSEN: No.

MR. CHAPMAN: The Chair votes no.

MR. RICE: That's zero yes, 15 no, zero absent.

MR. CHAPMAN: The motion fails.

Steve?

MR. ELA: Lime sulfur.

Clarissa?

DR. MATHEWS: We have two listings in Section 205.601. The first at paragraph (e) as Insecticides including acaricides or mite control. The listing is lime sulfur including calcium polysulfide.

And, the second listing is at paragraph (i) as plant disease control. The listing is lime sulfur.

MR. ELA: So, this is my material,

full disclosure, it's something we use a fair amount.

Most of the public comments were readily in favor of lime sulfur noting it's widespread use for everything from as fungicide to acaricide to I think some thinning notes were made as well.

So, there's definitely -- we heard from the community essentiality. The alternatives to lime sulfur are fixed copper and copper sulfate, but those pose more environmental risk than lime sulfur, so there may be a benefit to it.

I think the one negative comment we received was that one group would be in favor of limiting the use of lime sulfur when that listing could be annotated for use only when beneficial arthropods are not present.

They were considered about its broad spectrum side and that it might actually disrupt biological control.

So, and there was a comment that prove

thinning cited in some comments might not be an allowed use.

I think I'll just put my editorial comment on that. At that same time, it's being used for fire blight control and also for fungal control. So, it becomes a little -- that comment may be attributed there are alternate uses at that same time.

Discussion?

(No audible response.)

MR. CHAPMAN: Okay, we have a motion to remove lime sulfur from the national list.

The motion was made by Steve and seconded by Emily.

A yes vote is to recommend removal, no vote to retain and the voting will start with Asa.

MR. BRADMAN: No.

DR. GREENWOOD: No.

MS. DE LIMA: No.

MR. SCHWARTZ: No.

MS. ROMERO-BRIONES: No.

MS. OAKLEY: No.
MS. BAIRD: No.
MR. BUIE: No.
MS. SWAFFAR: No.
MR. RICE: No.
MS. BEHAR: No.
DR. SEITZ: No.
MR. ELA: No.
MR. CHAPMAN: The Chair votes no.
MR. RICE: That's zero yes, 15 no, zero absent.
MR. CHAPMAN: Motion fails.
Steve?
MR. ELA: Sucrose octanoate esters.
Clarissa?
DR. MATHEWS: At Section 205.601(e) is insecticides, including acaricides or mite control. The listing is sucrose octanoate esters, CAS Number 42922-74-7 and 58064-47-4.
In accordance with approved labeling.
MR. ELA: Sue?
MS. BAIRD: Yes, we had a pretty good

discussion on this for livestock. It is, though we are addressing it now for crops as an insecticide, it has been approved by EPA under registration two different numbers to control soft belly insects.

It's permitted as a foliar spray, fields, greenhouses, nurseries and any type of agricultural crop.

It biodegrades rapidly. It's not toxic to mammals or any targeted organisms. The amount used will not substantially increase the amounts of the esters in the environment. It's nontoxic to honeybees and many beneficial insects. There's no phytotoxicity in crops.

We've got no comments this time for fall for the use or against the use of SOEs in crops.

In spring, we did have four comments that said that they used it as effective tool for rotation with other pest control materials that are allowed in organic production.

So, I'm not clear if, and this is a

Harriet question, when you said there was nothing -- no products registered if that was strictly for miticide for insects for bees or if this also for crop production.

MS. BEHAR: No, and Clarissa did send me the deregistration determination. I don't know the exact form name but it has been deregistered for both livestock varroa and on crops.

It was the same manufacturer and they removed their request for that.

But, there was one public commenter that I -- the Organic Produce Wholesalers Coalition did support the use and both in this comment and the previous.

And so, when I found out that both of the products were no longer registered, I went back to the public comments and just to be open and frank, I am friends with Lynn Coody and so I contacted her. And, we had a kind of back and forth of why did they support the use?

And, she said that they had sent out a

survey to their producers, but that was for the previous sunset. It wasn't a new survey on that because it's been deregistered so they wouldn't be using it. Yes, they wouldn't be using it now.

But, they just said for a tool. But it has a lot of the same issue with it's not EPA registered.

I don't know, ESMA didn't do research into if they're using it internationally, but it is not on the EU list and I don't know about Canada.

MR. ELA: Emily?

MS. OAKLEY: There were also public comments from another commenter that refers to the EPA delisting. I just wanted to point that out.

MR. ELA: Clarissa, do you have anything to add to that delisting?

DR. MATHEWS: Only that I did also confirm directly with EPA.

MR. ELA: So, if there -- so, there is no listing for it on crops?

DR. MATHEWS: At the time of my clarification, there was no registered product.

MR. ELA: Thank you for -- and thank you for checking on that.

DR. MATHEWS: You're welcome.

MR. ELA: That's really useful information.

Other comments?

MR. BRADMAN: Well, I just had a question, if it's not registered for EPA, I don't know if it's required to have a food tolerance.

It seems to me like we shouldn't -- you can't even have it on our list if it's not registered.

MR. ELA: I think that you see the vote on the Subcommittee was to not delist it, this information came out since we voted on it. And, I would at least I voted for it -- I voted to not delist it originally. My vote has changed based on that. I don't think we can have a material on the list that has no use.

Emily?

MS. OAKLEY: Same here.

MR. ELA: Harriet?

MS. BEHAR: Having used this material, I will attest to it being completely miserable.

(Laughter.)

MR. ELA: Anybody else have comments?

Lisa, you have a very quizzical look on your face. I don't mean to call on you, but you -- can we clarify something?

MS. DE LIMA: So, is this same situation in livestock where it's the same exact situation?

MR. ELA: Pretty much.

MS. DE LIMA: Okay.

MR. ELA: Does that help?

MS. DE LIMA: I want to be consistent in my voting.

MR. ELA: Yes.

Any other discussion?

(No audible response.)

MR. ELA: Tom? We didn't give you as much time as you needed, did we?

MR. CHAPMAN: Yes, so I'm trying to research quickly online about tolerance levels for sucrose octanoate esters. I don't know if it's a true statement whether or not the tolerance has been removed from the --

MR. ELA: Okay.

MR. CHAPMAN: So, just something to keep in mind, but I don't know if that's going to change the way anyone votes on this item.

Don't use us as the record for making that determination, I guess. We never should use this for the record anyway.

All right, so we have a motion to remove sucrose octanoate esters. It's a seconded motion from the Subcommittee.

The motion was made by Sue and seconded by Jesse.

A yes vote is to recommend delisting this material, a no vote is to recommend its listing remains and the voting will start with Rick.

DR. GREENWOOD: Yes.

MS. DE LIMA: No.
MR. SCHWARTZ: No.
MS. ROMERO-BRIONES: Yes.
MS. OAKLEY: Yes.
MS. BAIRD: I'm going to say no for the same reason I said, it may -- just because it's not currently got a product listed, maybe in the future it will be.
MR. BUIE: No.
MS. SWAFFAR: Yes.
MR. RICE: Yes.
MS. BEHAR: Yes.
DR. SEITZ: Yes.
MR. MORTENSEN: Yes.
MR. ELA: Yes.
MR. BRADMAN: Yes.
MR. CHAPMAN: Chair votes yes.
MR. RICE: That's 11 yes, 4 no, zero absent.
MR. CHAPMAN: The motion passes.
Steve?
MR. ELA: Okay, hydrated lime.

DR. MATHEWS: Section 205.601(i) as plant disease control. The listing is hydrated lime.

MR. ELA: Dave?

MR. MORTENSEN: Okay, hydrated lime, yes, this has been around for a long time. It's centrally important for its use as a foliar application for disease management in all sorts of vegetable and fruit crops.

It is necessary, or a central ingredient in something called the Bordeaux mix where it's mixed with copper sulfate for applications.

There has been strong support. It's widely used.

During the course of the Subcommittee discussions, I think we collectively saw this as something that is a widely used quite safe product.

And, the comments that we received by and large supported that.

MR. ELA: Discussion? Comments?

(No audible response.)

MR. ELA: Tom?

MR. CHAPMAN: So, we have a motion to remove hydrated lime from the national list.

The motion was made by Dave and seconded by Jesse.

A yes vote is to remove, a no vote is to retain and the voting will start with Lisa.

MS. DE LIMA: No.

MR. SCHWARTZ: No.

MS. ROMERO-BRIONES: No.

MS. OAKLEY: No.

MS. BAIRD: No.

MR. BUIE: No.

MS. SWAFFAR: No.

MR. RICE: No.

MS. BEHAR: No.

DR. SEITZ: No.

MR. MORTENSEN: No.

MR. ELA: No.

MR. BRADMAN: No.

DR. GREENWOOD: No.

MR. CHAPMAN: The Chair votes no.

MR. RICE: That's zero yes, 15 no, zero absent.

MR. CHAPMAN: The motion fails.

Steve?

MR. ELA: Liquid fish products.

Clarissa?

DR. MATHEWS: Section 205.601(j) is plant or soil amendments, the listing is liquid fish products. Can be pH adjusted with sulfuric, citric or phosphoric acid.

The amount of acid used shall not exceed the minimum needed to lower the pH to 3.5.

RM. ELA: Dave?

MR. BRADMAN: So, liquid fish products, I think really the comments and input we have is this fall really reflects some of the discussions that we had last spring.

There's vast support for relisting of liquid products.

Based on my review of comments and users, we probably have thousands represented

just related to organizations and individuals that submitted comments.

There was also expression of concern about the issue that came up last year or last spring about the use of wild fish stock as sole source material for production of liquid fish products and support for a work agenda and a review of that, perhaps not as complicated but similar to the issues that are going on around marine materials.

You know, my sense is that this is an essential and important material and that I know I will be supporting its relisting. But, I would like to participate in, and I hope that, as a Board, that we can all participate in a work agenda from the program to review the use of the source fish stocks for this material.

MR. ELA: And, I would like to clarify, the program has approved that work agenda for the Committee. So, it is on our list.

Emily?

MS. OAKLEY: Just to clarify, I was

the abstention and that was before we knew that this material would be -- or this item would be added to our work agenda.

So, it was sort of waiting for that. So, my abstention will be a no vote. And I thank the program for allowing us to work on this issue, I'm looking forward to it.

MR. ELA: Harriet?

MS. BEHAR: There was also some discussion by a manufacturer about the pH and wanting some clarification about where the process, and so I'm not sure, you know, if we'll work on that or not. But I just wanted to recognize that that was brought to our attention.

MR. ELA: So, at the Tucson meeting, we received a large amount of public comment. The NOP had asked us to clarify about the pH requirement of 3.5, whether that was throughout the whole process as the fish product is being made or it was a final process.

We heard a fair amount of public testimony from that in Tucson, and the take-away,

we haven't talked about it extensively in the Committee, but that to minimize the use of phosphoric acid in that product, the best way was to have a final pH of 3.5. And that also makes the certification easier because the certifier doesn't have to be there through the whole process.

I think the manufacturer, we discussed that at the meeting, but the manufacturer was asking for some clarification on that.

The Crops Committee will be making -- will forward a note to the NOP that that is our opinion. We'll put it in writing and then the NOP can act on it as such to the manufacturer. But at least we'll make that clearer rather than just letting that drop.

Other discussion? Ashley?

MS. SWAFFAR: I just want to say that I think this is a very critical material for a lot of smaller farms, especially vegetable farms. So I highly support this item.

MR. ELA: All right. Tom?

MR. CHAPMAN: All right, we have a motion to remove liquid fish products from the national list. The motion was made by Asa and seconded by Jesse.

A yes vote is to remove, a no vote to relist, and the voting will start with Eric.

MR. SCHWARTZ: No.

MS. ROMERO-BRIONES: No.

MS. OAKLEY: No.

MS. BAIRD: No.

MR. BUIE: No.

MS. SWAFFAR: No.

MR. RICE: No.

MS. BEHAR: No.

DR. SEITZ: No.

MR. MORTENSEN: No.

MR. ELA: No.

MR. BRADMAN: No.

DR. GREENWOOD: No.

MS. DE LIMA: No.

MR. CHAPMAN: Chair votes no.

MR. RICE: That's zero yes, 15 no,

zero absent.

MR. CHAPMAN: The motion fails. Steve?

MR. ELA: Sulfurous acid. Clarissa?

DR. MATHEWS: That's Section 205.601(j) as plant or soil amendments. The listing is sulfurous acid, CAS Number 7782-99-2 for on-farm generation of substance utilizing 99 percent purity elemental sulfur per paragraph (j)(2) of this section.

MR. ELA: All right, this is my lead. Basically, sulfur is burned to create an acid to acidify the irrigation water and is used on farms with high pH soils.

Almost everybody wrote in to support it, noting that if irrigation water has a high pH, if it's left untreated it causes calcium carbonate buildup on the leaf and fruit surface. Lowering that pH helps reduce that buildup and gives better nutrient uptake in the soils.

The one negative comment that opposed the relisting of this saying that the

accumulation of carbonates and bicarbonates through irrigation water is in more arid regions and that actually is just farmland that should not be farmed to start with.

But, in general, with the exception of that comment, the comments were in favor that this benefitted growers in having to reduce some of their nutrient applications because of adjusting the pH.

Discussion? Harriet, do you have a comment?

MS. BEHAR: I was surprised to see that there were only 12 CCOF members that listed this product, but I'm not sure that -- I think most people who are running it in irrigation are probably using the elemental sulfur or doing it as a powder in the soil. But I will vote to keep this on the National List, but it did surprise me that it wasn't more in use.

MR. ELA: Dave?

MR. MORTENSEN: Steve, I was just curious if, in looking at this, you came across

how the sulfurous acid is actually introduced into the water stream?

And the reason I ask is, where I worked in Nebraska, it was always a concern about backflow where you tap in whatever you're applying and that it could actually go the other way by mistake with faulty equipment.

MR. ELA: So, in answer to that question, the acid is created by spraying water through the smoke when you burn the sulfur, and then that is pumped into the -- or injected into the pipeline.

So I think your concerns with backflow, one usually only reduces the pH to something around 6, so we're not talking highly acidified water after it's injected. So it's, you know, essentially safe; it's not like injecting a pesticide into it.

So I don't know if that answers your question but --

MR. MORTENSEN: It does. Thanks, Steve.

MR. ELA: And, in response to Harriet's questions, I know we have a number of growers in our area that use them that we would not have seen, organic growers, and it makes a significant difference in their like iron chlorosis, for example.

It's actually, full disclosure, something I may install next year, assuming it's still on the list. For those growers that use it, it seems to be very effective and reduces their other nutrient problems.

Scott?

MR. RICE: Yeah, I just echo that. It's a wide use in the tree fruit industry in the northwest and elsewhere.

MR. ELA: Any other discussion?

Tom?

MR. CHAPMAN: All right, we have a motion to remove sulfurous acid from the National List. The motion was made by Steve and seconded by Harriet.

A yes vote is to remove, a no vote is

to retain, and the voting will start with A-dae.

MS. ROMERO-BRIONES: No.

MS. OAKLEY: No.

MS. BAIRD: No.

MR. BUIE: No.

MS. BEHAR: No.

DR. SEITZ: No.

MR. MORTENSEN: No.

MR. ELA; No.

MR. BRADMAN: No.

DR. GREENWOOD: No.

MS. DE LIMA: No.

MR. SCHWARTZ: No.

MR. CHAPMAN: Chair votes no.

MR. RICE: That's zero yes, 15 no, and zero absent.

MR. CHAPMAN: The motion fails. Steve?

MR. ELA: All right, a vote we've had international interest in, ethylene. Clarissa?

DR. MATHEWS: Section 205.601(k) as plant growth regulators. The listing is ethylene

gas for regulation of pineapple flowering.

MR. ELA: Emily?

MS. OAKLEY: Yep, so, it's used to induce uniform flowering in pineapples. And it's important to note this is pineapple only.

It's an essential tool for commercial production of pineapples for the export market, as we've heard from the numerous producers and producer groups and others, both on the webinar, in person, and in the written comments.

Commenters stated that no viable alternatives exist and that without it it would be impossible to achieve the uniform ripening necessary for timing the harvest for food shipment.

We heard both in the spring, and was also heard in the 2015 review in Stowe, and again this time, that, by one commenter at least, that the material does not fit an OFPA criteria and it is not essential for the production of the crop, but rather is employed for economic reasons.

I would say that I think that it is a

tricky material and that it is truly being applied for economic purposes. However, this time around, we did hear public comment and received significant written comment suggesting that flowering reduction reduces pest damage by allowing for uniform application of pesticides and minimizes worker entry into the field, which thereby also reduces disease introduction and damage to the crop.

Are there any questions or comments?

MR. ELA: Harriet?

MS. BEHAR: So, that was very important to me when we did hear the public comment that when you have a flowering, you know, intermittently throughout the field, it attracts the pests and damages the younger pineapple. And so it's not just being able to send the product to market, but actually help save the crop.

I do say I have some concern about the monoculture of that crop, that it's pineapple after pineapple after pineapple. But it does appear that the growers are doing a good cover

crop, and a nitrogen fixing one at that, in between.

But, for just kind of longer term sustainability, I hope that they think about doing a little bit more rotation, because I don't know that much about pineapple, but I do know that if you grow the same crop in a field year after year after year, even with a three to six month break, something will probably come in, an insect that will over -- you know, they live in the soil, or disease or whatever.

So, that has nothing to do with ethylene, it just has to do with pineapple. One of the essential food groups, along with chocolate and wine.

MR. ELA: Other comments? I do want to reiterate thank you to the Costa Rican contingent for making the long trip. Your testimony is very important, just like any grower and any other stakeholder. And I hope to heck that you get to do something fun here beside sit in a convention room for three days. So, please

enjoy your time in our country.

Vote?

MR. CHAPMAN: Please enjoy the fine warm weather in the state of Minnesota in October.

All right, we have a motion to remove ethylene gas from the National List. The motion was made by Emily and seconded by Harriet.

A yes vote is to remove, a no vote is to retain. And the voting will start with Emily.

MS. OAKLEY: No.

MS. BAIRD: No.

MR. BAIRD: No.

MS. SWAFFAR: No.

MR. RICE: No.

MS. BEHAR: No.

DR. SEITZ: No.

MR. MORTENSEN: No.

MR. ELA: No.

MR. BRADMAN: No.

DR. GREENWOOD: No.

MS. DE LIMA: No.

MR. SCHWARTZ: No.

MS. ROMERO-BRIONES: No.

MR. CHAPMAN: Chair votes no.

MR. RICE: That's zero yes, 15 no, zero absent.

MR. CHAPMAN: The motion fails. The Costa Ricans are happy.

(Laughter.)

(Applause.)

MR. CHAPMAN: Steve?

MR. ELA: Microcrystalline cheesewax. Clarissa?

DR. MATHEWS: Section 205.601(o) as production aids. The listing is microcrystalline cheesewax, CAS Number 64742-42-3, 80090-03-08, and 8002-74-2 for use in log-grown mushroom production, must be made without either ethylene, propylene, copolymer, or synthetic colors.

MR. ELA: Sue?

MS. BAIRD: Yes, microcrystalline wax is a type of wax that's derived from refining heavy petroleum distillates during the petroleum

refining process. It's recovered from crude oil through a series of filtration and on and on.

And it's used in mushroom production to seal the plug holes in shiitake logs in which the spawn is actually inserted. It is petroleum-based, and even though used in small quantities, it does not biodegrade in the environment.

We had heard, in the spring, public comments that there were natural soy waxes from domestically produced non-GMO soybeans that was now available. And, based on that information, and because that survey was done with a larger, more commercial mushroom production, there was some suggestion that perhaps it was no longer needed.

But, since that point, we've heard from smaller shiitake mushroom growers who're saying, yes, we absolutely do use it, and, in fact, QCS said that they disagreed with the subcommittee's statement that there were alternatives such as natural soy-based wax that were available to replace this material.

And their statement was that every soy-based wax that they've reviewed for use in organic production comes from hydrogenated soy oil, which is synthetic and prohibited in organic production. They said that their certified mushroom producers that are growing on shiitakes are, in fact, using microcrystalline cheesewaxes. And they said they'd conducted internal review for three separate microcrystalline cheesewax products and they've found that they were compliant to 601.

MR. ELA: Discussion? Harriet?

MS. BEHAR: So, there was a producer who wrote quite extensively in favor of this material. It actually happens to be someone that I know and someone that I inspected.

He mentioned he sells a lot to mushroom growers, and he said that he sells, on average, four tons of clear cheesewax to growers each year. This represents 80,000 logs a year that are being treated with this microcrystalline cheesewax.

And probably you've heard that I was not that favorable to this material, because I disagree with the TR in how rapidly it biodegrades, because I have seen it out on the forest floor when it looks like it's been there for at least three to four years, because the logs that it was in are just about gone and they get all this wax. But I don't want to take away a tool.

He also talks about the fact that it's a clear wax and that you can then see underneath how the spawn is growing and you can kind of manage your production that way. So I am going to vote for this material.

MR. ELA: Emily?

MS. OAKLEY: I can't remember if I'm one of the yeses or the abstain, but I just wanted to clarify my change of position.

We did not receive public comment to the extent that we did this time around in the spring, which underscores the benefit of having these materials before stakeholders for two

meetings. So, thanks to those who reached out to their growers and submitted comment to us.

MR. ELA: Asa?

MR. BRADMAN: I just have a question for clarification about the soy wax option. I understand that's hydrogenated, it would be synthetic, and would need to be on the list.

If it were to be on the list, and I think there's some history I might not be fully versed on, but it looks like there may have been or could be a petition to list it. And then would that provide an alternative to the microcrystalline cheesewax?

MS. BAIRD: Yeah, according to QCS. And I have not researched this, but they said that everyone that they had researched, they were a synthetic-based soy. And, therefore, it would have to be petitioned to be on the list.

MR. ELA: Emily?

MS. OAKLEY: Yeah, we did have this petition before us in 2016, and that was a very painful, painful meeting for many reasons. And

that vote was actually, I thought, not the awesomest, and so we did not successfully vote to add that to the list.

MR. ELA: Tom?

MR. CHAPMAN: Yeah, I want to remind folks that just being bio-based doesn't mean biodegradable. And on the other material, I don't think there was sufficient research done on it to come to that conclusion at the time it was brought forward before the full Board.

MR. ELA: Emily?

MS. OAKLEY: Yeah, to elaborate on Tom's point, I think there were some concerns that a TR wasn't received. Perhaps it's time to re-petition that and request a TR.

MR. ELA: Other discussion? I mean, we can always talk FDA wants a five log reduction and if we keep this product on we have a no log reduction.

Anybody else? Tom?

MR. CHAPMAN: Who doesn't like log reduction jokes?

All right, the motion to remove microcrystalline cheesewax from the national list. The motion was made by Sue and seconded by Emily.

This is a motion to remove so a yes vote is to remove, a no vote is to retain. And the voting will start with Sue.

MS. BAIRD: No.

MR. BUIE: No.

MS. SWAFFAR: No.

MR. RICE: No.

MS. BEHAR: No.

DR. SEITZ: No.

MR. MORTENSEN: No.

MR. ELA: No.

MR. BRADMAN: No.

DR. GREENWOOD: No.

MS. DE LIMA: No.

MR. SCHWARTZ: No.

MS. ROMERO-BRIONES: No.

MS. OAKLEY: No.

MR. CHAPMAN: Chair votes no.

MR. RICE: That's zero yes, 15 no, zero absent.

MR. CHAPMAN: I swore I heard 17 no's.

(Laughter.)

MR. CHAPMAN: The motion fails. Steve?

MR. ELA: Potassium chloride. Clarissa?

DR. MATHEWS: In Section 205.602, non-synthetic substances prohibited for use in organic crop production. At paragraph (e) the listing is potassium chloride unless derived from a mined source and applied in a manner that minimizes chloride accumulation in the soil.

MR. ELA: Harriet?

MS. BEHAR: So, this is a prohibited natural, just so people understand that.

There was public comment. The certifiers stated that the annotation, which is an important one, is verified at inspection and during review. Many see it as necessary but feel that that annotation is important.

In the first round of comments, one certifier noted that it's difficult to find potassium sulfate, which is not this material, but that there's issue with dust suppressants and that some certifiers allow all dust suppressants and others look at them and don't allow them. So they thought that that should be looked at.

CCOF said that there were close to 50 producers using it, and there was strong support by public comment just to relist the material on 205.602.

MR. ELA: Discussion? Tom?

MR. CHAPMAN: All right, so this is a motion to remove potassium chloride from the national list. The motion was made by Harriet and seconded by Emily.

A yes vote is to remove, a no vote is to retain the listing. And the voting with start with Jesse.

MR. BUIE: No.

MR. RICE: No.

MS. BEHAR: No.

DR. SEITZ: No.

MR. MORTENSEN: No.

MR. ELA: No.

MR. BRADMAN: No.

DR. GREENWOOD: No.

MS. DE LIMA: No.

MR. SCHWARTZ: No.

MS. ROMERO-BRIONES: No.

MS. OAKLEY; No.

MS. BAIRD: No.

MS. SWAFFAR: No.

MR. CHAPMAN: Chair votes no.

MR. RICE: That was zero yes, 15 no, zero absent.

MR. CHAPMAN: The motion fails. And that concludes 2020 sunset.

(Applause.)

MR. CHAPMAN: I would propose that we go through a couple of these and then we'll break.

MR. ELA: Yeah, as a note to the Board, it's 3:35 and you can pay attention to

your agendas where that puts us. So, obviously, on these proposals, we want to have a robust discussion, but we'll see if we can keep it focused while at the same time getting the information out that needs to be brought out.

So, if we could start with allyl isothiocyanate, also known as AITC. That is Jesse's material.

MR. BUIE: Allyl isothiocyanate -- and heretofore we'll call it AITC -- we received an addendum to this particular material after we had voted. The vote was zero yes and six to not list it. And I would like to send this back to the subcommittee for further deliberation for the following reasons.

After reviewing the addendum that was submitted, many of the issues that we were concerned about have been dealt with. And I think that we, as a subcommittee, ought to look further into that.

For an example, TR lines 607-608 discusses AITC drip would therefore be

problematic for both the beneficial soil fungi and associated plants. The addendum has information that would deal with that particular concern that we have.

Also, another one was lines 451 and 452, inhalation toxicology data for AITC and its degradance are not available. Well, that information has been provided in the response.

And also another response -- and there were 16 of these that were submitted that I feel that we should look further into before making a decision on this particular material.

TR 459 to 460 states that the physical properties of AITC are similar to those of the conventional soil fumigant MITC, and indicates much of the TR referred to MITC for its data. And the respondent showed that this comparison, that MITC was really four times higher than AITC.

And there are 16 of these. So, as a result of this new information that we received, I'd like to make a motion to send this back.

Any discussion?

MR. ELA: I think that goes to the Chair if there's a motion, doesn't it?

MR. CHAPMAN: There is a motion, is there a second? There's a second from Asa, and we can discuss the motion.

MR. ELA: Now we can have discussion; we couldn't before. So, Emily?

MS. OAKLEY: Thank you, Jesse. I hear what you're saying but I don't share your concerns about the petition addendum changing my position on this material.

I rely on the technical report more than I would rely on the petitioner's differing information from the technical report, simply because the technical report is coming from an unbiased third-party, whereas the addendum is coming from the petitioner who has an interest in seeing the material approved.

That being said, I don't think that the concerns that I had to originally reject this material would be changed by sending this back to the Committee. So I would like to proceed with

the vote and urge those here to vote to keep it on our list and vote to remove it.

MR. ELA: Tom?

MR. CHAPMAN: I was swayed by some of the public comment here to potentially review this substance as a treatment for nursery stock. And I know that once we've reviewed that my vote may not, you know, turn to approving this substance.

But I would like to at least have a chance to explore that as an option and get further information so I support sending this back to the subcommittee.

MR. ELA: Lisa?

MS. DE LIMA: I was going to ask the same question the rest of the folks on Crops, because I wouldn't want to send it back for the reasons that Jesse had said, agreeing with Emily. But I was interested in other people on Crops and what they were thinking as far as considering it for the nursery stock.

MR. ELA: I can answer that. Scott,

you had your hand up, too, and I want to respect what you want to say, and then we'll definitely answer that.

MR. RICE: I express my interest in seeing it have that limited use as well if it's potentially beneficial to the nursery stock industry, because we see a lot of non-organic perennial tree fruit and it'd be great, if this were a resource, to have it as a tool.

MR. ELA: So, I'll put my two cents in. I tend to follow more with Emily on this one. While I agree, we desperately need a phytosanitary material for the production of nursery stock, I don't agree that we should use a broad scale, broad spectrum fumigant. You know, that's a very magic bullet conventional approach. And just because it's naturally occurring does mean that it does not still have dramatic effects on the soil.

As I become more versed as an organic grower, I mean, I switched from conventional. When we first switched, we tended to look, you

know, for those bullets, like it's the progression that goes in. Now, I look at it very much as a systems approach.

And I believe that when we apply these broad spectrum things, we really damage, permanently damage they system. Or maybe I shouldn't say permanently, but more than just a while.

And so I guess I'm personally not in favor, even though it means that we may not have that phytosanitary restriction. But I'd rather call a spade a spade. If we're going to do a broad scale fumigation, call it conventional and go ahead and use those conventional ones, versus putting the organic material in that really is doing the same thing and, to me, causing harm to that soil, biota, and ecosystem.

And I don't like calling that organic because I don't think it's in that -- I don't think it's in the spirit or in the belief. So, I don't know if that makes sense, but that's my two cents.

Asa, and then I'll go to Sue.

MR. BRADMAN: I guess I would like a little clarification. If this were one of the materials used for phytosanitary purposes for nursery stock, is that still an application to soil? Or is that, say, after harvest and before shipping or something like that?

Because what I'm interested in is -- I don't know if this is the material, but maybe this also opens up a discussion on even the concept of, you know, an organic approach to producing nursery stock from ground zero. It's almost like the day-old chick issue: can we take this and go back?

And I don't know if this is the material for that, but, if it's not used in the soil, is there an opportunity here to have a discussion that might move that issue forward?

MR. ELA: Sue?

MR. BRADMAN: That's a question to everyone.

MS. BAIRD: I guess my -- and I truly

second the concerns of fumigants. I just don't like them. But if we don't bring this back and at least explore it for nursery stock -- and I would be open to just limiting to nursery -- if we don't do that, are we going to stop the prevailing methobromide and some of those broad spectrums that we have today?

MR. ELA: Dave?

MR. MORTENSEN: Yeah, and I guess because I think Tom asked what the subcommittee thought -- or Lisa did, sorry. My view aligns very closely with Steve's and Emily's on this. I really would like to see us be moving in the direction of a systems approach to this kind of management, which led me to ask some questions about the cover crop use in fields. There are cover crops actually that produce a very similar compound to this one.

That's not addressing the nursery part of this, but I just think that we really need to be pushing ourselves to be looking at systems approaches rather than these remedial chemical-

by-chemical solutions to the problem.

MR. ELA: Emily?

MS. OAKLEY: Yeah, I want to echo that, especially in terms of the cover crops. I mean, that is the beauty of organic. We are looking at the whole agro ecosystem and we are taking approaches that avoid the use of chemicals.

And so I just want to read to you the first paragraph on the last page of this. Mustard seed, meals, mustard green, manures, plowed under cover crops, Regalia, an approved OMRI material, are biopesticides that are available; SoilGard, a fungal biocontrol material; Serenade and bionematicide MeloCon are also feasible alternative materials available for use in organic crop production systems.

So I don't think there is a lack of other ways of addressing this in a spirit that is more in keeping with OFPA and our rules and the spirit of organic.

I really don't think sending this back

is going to create an organic nursery stock industry based on this material. And I think it, frankly, won't change the ultimate outcome. That's just my personal view on this.

MR. ELA: Harriet?

MS. BEHAR: So, I'm fairly torn on this material. And my mucus membranes are burning; having made horseradish in a food processor, I'm very familiar with this allyl isothiocyanate.

So, but I feel we would be a little bit remiss in not at least exploring it for nursery stock, because, having done the piece on organic seed and nursery stock in strengthening that, I'm painfully aware of how little organic there is. Which means that the nursery stock, not only has it been treated with prohibited fumigants, but it's been treated with pesticides and has not been grown in organic soil and all of those other wonderful things that happen to plants when they are being treated organically.

So, I guess I would like to see it go

back to subcommittee. And all the points that you're making now could then be brought forward, and perhaps we'll vote it down based on that, but at least we would have given the nursery stock people the due diligence in reviewing it for their special use.

MR. ELA: Asa?

MR. BRADMAN: I just want to follow up and say I really respect Dave and Emily, the direction you're coming from. And if I were to vote on this petition as presented, I would vote no on it. I would vote it down.

I guess, again, I want to repeat my question. And maybe we can't answer that right now, but when we talk about phytosanitation, we're using that word sanitizer again, which, you know, in terms of the processing and food safety, we use these broad spectrum, nasty chemicals that are as bad as, you know, almost anything out there.

And for nursery stock, again, I'm not clear, if you were growing it in a nursery stock

environment, using it in nursery stock environment, would this be still something you would put in the soil and you would be, you know, raising root stocks in the soil and then, you know, grafting them out? Or is this some sort of post-use that would be more contained?

I just want to understand that distinction, because I agree with what you're saying about soil and systems. And I guess, is there a systems approach to phytosanitation? And that's what I don't understand and that's just my kind of agronomic ignorance right now.

MR. ELA: So, I think the TR notes that these are soil-borne pathogens and nematodes. And not all nursery stock is sold as bare root. Oftentimes, nursery stock may or may not be sold in containers from plant out.

I mean, in fact, many nurseries are going more in that direction away from bare root. So, I don't think you would -- I don't think there's a clear answer to your question.

I mean, theoretically, it could be

applied to bare root plants, I suppose, and I don't really know the answer to that. But it's still soil-borne diseases that we're looking at.

We need to keep moving on. I know I can see confounding looks, but I don't know that more discussion necessarily will help with it.

Are we ready to vote on whether to send it back? So, Tom.

MR. CHAPMAN: Okay. So, we have a motion to refer allyl isothiocyanate, or AITC, back to the Crops Subcommittee. The motion was made by Jesse and seconded by Asa.

This is a simple majority vote and the voting will start with Ashley.

MS. SWAFFAR: Yes.

MR. RICE: Yes.

MS. BEHAR: Yes.

DR. SEITZ: No.

MR. MORTENSEN: No.

MR. ELA: No.

MR. BRADMAN: Yes.

DR. GREENWOOD: Yes.

MS. DE LIMA: Yes.

MR. SCHWARTZ: Yes.

MS. ROMERO-BRIONES: No.

MS. OAKLEY: No.

MS. BAIRD: Yes.

MR. BUIE: Yes.

MR. CHAPMAN: The Chair votes yes.

MR. RICE: That is 10 yes, 5 no, zero absent.

MR. CHAPMAN: All right, it's 10 yes, so that's a majority and the motion prevails. So this item is referred back to the Crops Subcommittee.

MR. ELA: Emily, do you have a point of order?

MS. OAKLEY: I just want to note that the Crops Subcommittee has a couple of pressing issues on our agenda, so this may not come up as quickly as we might like, but we do have other issues that are before us as well.

MR. CHAPMAN: Yeah, I'm going to refer us to the policies and procedures manuals that

rank the order of precedence of materials, and petition items are up there with sunset materials. So petitions and sunset materials need to be prioritized by the Subcommittee and then following items from there on out.

MR. ELA: All right, do you want us to continue?

MR. CHAPMAN: Yeah, let's take break. It is -- what time is it? It is 3:50, so let's plan to do a quick break and come back at 4 o'clock for the remainder of the Crops Subcommittee and the closing items.

(Whereupon, the above-entitled matter went off the record at 3:51 p.m. and resumed at 4:05 p.m.)

MR. CHAPMAN: All right, we're back in order. It's 4:05. I'm optimistic we might still be done by 5 o'clock, but some say I'm too optimistic on these things.

MR. ELA: So, you'll buy me a beer if we are?

(Laughter.)

MR. CHAPMAN: I'm going to hand it back over to Steve and we'll resume the crops section.

MR. ELA: All right. Another proposal, sodium citrate, which is one of Harriet's materials, proposals. Just as a Chair note, this is a little odd, so, go ahead Harriet and we'll talk about this.

MS. BEHAR: Who is a little odd? The proposal or me?

MR. ELA: I'm talking about myself.

(Laughter.)

MS. BEHAR: Okay, so we did receive this petition in July of 2016, and because of its oddness it's taken us until now to really bring it forward.

Sodium citrate is a salt derivative of citric acid. It appears on the National List as an approved ingredient in organic processed foods. It's a synthetic.

However, the petition was for sodium citrate to be used as an anticoagulant in blood

meal. Blood meal does not appear on the National List because it's an approved non-synthetic.

We typically do not review processing aids or secondary ingredients in crop inputs. So, we did talk to the National Organic Program about this and they said that we were petitioned and, in order to do our due diligence, we should move forward with a review.

So, we put it out for public comment and we did get quite a few responses like why are you reviewing a processing aid in a crop input?

There was quite a few commenters who stated that the National Organic Program's Guidance Number 5034-1 should be amended to address the use of processing aids.

And, of course, we could work with the program on that.

So, we did vote in Subcommittee. We didn't see any reason why it was a problem since it's a allowed in organic food.

Other public commenters stated that when we have a natural product or even a

synthetic that's a crop input, we should have some overriding determination of what it is, what its standard of identity and then any processing aids would then be approved as part of that standard of identity.

The other thing that this opens the door to is that if we approve this, and it is -- first of all, we're not really sure where it would be placed on the National List.

And, second, would it then cause other materials to either come off the list or not be approved by certifiers because they have not had the processing aids or secondary ingredients reviewed.

There was some good public comment about how to maybe review these processing aids, things like if they're allowed in organic food that those should be allowed.

If they didn't -- if they just barely had a technical or functional effect in the final product, you know, it wasn't like say a fertilizer that this pumped up the technical

effect of that fertilizer.

So, there was that type of activity in the public comment.

In addition, others warned us against approving it all together because of the precedent that it would add an additional level of review for inputs to farm and crop materials.

Where we're not really sure, too, if this is a rare occurrence or if we put this on the list would we get a flood of processing aids or not? We really didn't have the time to go through every material that's both natural and allowed as well as synthetic and on the national list to see if any of them had processing aids that would then perhaps went by the approval this be put on the National List.

Lastly, we did discuss this with the program and we will probably have a cover letter either way discussing this issue with them and that they could deal with it on their own as far as deciding to not put it on the National List or work on guidance and update it to deal with this

issue.

The other thing, too, is I have been referring to this as a quote, unquote, processing aid. But, that is really a term for food and not for inputs, but not really knowing how else to call it, I'm calling it that.

But, technically, processing aids are reserved and on the definition of our regulation are for food or livestock feed.

MR. ELA: And so, Harriet, I think that probably gives a good background. We -- I'll just add in that it, as Committee Chair, we brought this issue up to the Executive Committee.

It was decided Executive Committee to go ahead and work on it. And, at this point, even though it's a bit of a quagmire, I feel like, as a Chair, it's my prerogative -- that we should not -- we should act on a petition that's before us and move it along.

So, my sense is that pass it and then put it -- pass it on NOP and it's then their choice as to how they wish to deal with something

that isn't clear where it goes on the list and probably is a processing aid.

MS. BEHAR: Right. And then, just making it clear that the program has heard our concerns that even, if and when, we do pass this, that they understand why we're passing it and that the -- and the implications of its passing.

MR. ELA: And, that, yes, and that we're not necessarily advocating that it -- well, that we're cognizant that it's part of a natural material and a processing aid.

Discussion?

Tom?

MR. CHAPMAN: Just to echo that the -- I am supportive of this petition but have those same concerns and really ask the program to review the precedence and repercussions of this type of petition before they act on our proposal.

MR. ELA: Yes, and I will be putting a recommendation to that effect with the proposal saying that we feel this an awkward situation that we're really not, even though we have no

problem with the material, we don't want to set this is a disallowance of what had been natural materials.

All right, if there's no further discussion, I think we could, certainly don't want to cut anybody off, but we can move to a vote.

MR. CHAPMAN: Okay, so there's two motions, do we need -- there's two motions, I question whether we need this first motion, to be honest, Because it's goes back to the handling listing, but we'll do it for clarity's sake.

So, there's a classification motion, motion to classify sodium citrate as a synthetic substance.

The motion was made by Harriet and seconded by Emily.

A yes vote is to classify the substance as a synthetic, a no vote is to not classify it. The voting will start with Scott.

MR. RICE: Sorry, catching up a bit.

Yes.

MS. BEHAR: Yes.

DR. SEITZ: Yes.

MR. MORTENSEN: Yes.

MR. ELA: Yes.

MR. BRADMAN: Yes.

DR. GREENWOOD: Yes.

MS. DE LIMA: Yes.

MR. SCHWARTZ: Yes.

MS. ROMERO-BRIONES: Yes.

MS. OAKLEY: Yes.

MS. BAIRD: Yes.

MR. BUIE: Yes.

MS. SWAFFAR: Yes.

MR. CHAPMAN: Chair votes yes.

MR. RICE: That's 15 yes, zero no, zero absent.

MR. CHAPMAN: And, now we have a motion to add sodium citrate to 205.601 with the annotation for use as an anticoagulant in the production of blood meal.

The motion was made by Harriet and seconded by Emily.

A yes vote is to adopt this motion and annotation, a no vote is to reject this recommendation for the listing. And, the voting will start with Harriet.

MS. BEHAR: Just wanted to say that it is currently being used and the answer is yes.

DR. SEITZ: Yes.

MR. MORTENSEN: Yes.

DR. GREENWOOD: Yes.

MS. DE LIMA: Yes.

MR. SCHWARTZ: Yes.

MS. ROMERO-BRIONES: Yes.

MS. OAKLEY: Yes.

MS. BAIRD: Yes.

MR. BUIE: Yes.

MS. SWAFFAR: Yes.

MR. CHAPMAN: Chair votes yes.

MR. RICE: Yes.

That's 15 yes, zero no, zero absent.

MR. CHAPMAN: The motion passes.

Steve?

MR. ELA: All right, our next petition

proposal is natamycin and I'll turn that back over to Harriet.

MS. BEHAR: So, another tricky material. The petition was for the National Organic Standards Board to declare this material non-synthetic and then it would be allowed in both crops and livestock.

However, we requested a technical review and found that, yes, we agree that it is a non-synthetic, but we're concerned by the use of natamycin as a human health product.

There -- it's used in food as a mold inhibitor. It's used in human health to control fungal problems, usually in the eye and yeasts.

There has been some resistance according to the technical review of candida to natamycin Because it is used fairly regularly in both breads, especially high moisture bread like English muffins and in things like cold packed cheese food and other cheeses, sliced cheeses and things like that.

So, it -- and yogurt. So, it is used

a lot in the food supply and there has been shown to be some effect on human biology and bacteria -- I'm sorry, yeast getting resistant to it.

So, we decided that we would then accept it as a non-synthetic and put a proposal forward to put it on the National List of prohibited non-synthetics. And so that is our proposal.

Public comments, there were quite a few public advocacy groups that absolutely agreed that it should be both on the crops and livestock lists.

Most, the Organic Produce Wholesale Coalition again stated they did not wish to have it added to the list -- I mean, to approved. They liked it on the prohibited non-synthetic list.

There was discussion about that it could kill beneficial fungi in the environment. And there -- also, that I also reached out, because part of the petitioner's public written comment was some letters from mushroom growers

that find it very useful in the control of dry bubble disease.

So, I may sound like I know a lot about a lot of things, well, I don't know anything about dry bubble disease in mushrooms.

But, I did reach out to Tina Ellor who is a former member of the National Organic Standards Board, a mycologist and knows quite a bit and is in contact with many organic mushroom growers, especially on the East Coast.

And, she stated that in their conventional side, they do use natamycin, but they have been able to get by quite well without it on their organic side and that she did not consider it a necessary material for their organic mushroom production.

She stated that it's been a challenging couple of years for flies and diseases and that she interviewed some of her growers and it came back that there was not any issue.

She said the only products we use

fairly routinely are oxidate and a couple of different fly control products that they rotate.

They make good management and exclusion their front line defense. And, that's a quote from her email.

So, that's where we sit with natamycin with the Subcommittee did discuss this over numerous conference calls and I believe it was a unanimous motion to list it both as a non-synthetic and then put it on 602 as a prohibited non-synthetic substance in crop production.

And, as I said before, there were quite a few public commenters that said that we should also add it to the livestock prohibited list because it is used in control of yeasts and molds in livestock feed.

MR. ELA: Discussion?

Emily?

MS. OAKLEY: Yes, I did talk to some organic mushroom growers in my region and they had never heard of this product.

The petition did approach me

privately, but I can't remember everything that they said. I know that they approached many other people as well.

But, I did not hear from those mushroom growers although it was a small sample, any need for this.

MR. ELA: Ashley?

MS. SWAFFAR: Yes, so I was just looking at the petition. They didn't classify where they would want this petition to, but obviously, they submitted this petition hoping to use it in organic production.

What is the precedence of this Board receiving a petition and then putting it on the restricted list? Has it ever been done before, Tom?

MR. ELA: Tom?

MR. CHAPMAN: I can't answer that directly. What I can say is we often receive petitions and change where we list it or how we list it.

An example while we were on the Board

was glycerin was petitioned to be removed and then we recommended its placement on 606 with a different annotation.

So, that's an example of it comes to us, but then, once it's kind of in our purview, we decide how to handle the substance.

MR. ELA: And, I think this one was unique in the sense of -- well, I mean, everything's unique, but interesting in the sense that once we vote that it's non-synthetic, it's out of our purview.

I mean, it can be used, because it's a crop substance, it's non-synthetic then it's open field. So, it's a little different than a handling or another substance. So, that -- I think that's where we decided to take kind of the unusual, you know, I don't know if it's rare, but unusual step.

Harriet?

MS. BEHAR: A couple things. So, I neglected to state, in cheese and breads which are retail packaged. It will appear on the

label. So, a consumer will see that natamycin typically with parentheses, a natural mold inhibitor is what's written.

However, for what they had asked for used in mushroom production or post-harvest handling of fruits, that would be -- would not appear on any label that a consumer would see.

We did ask the petitioner on the webinar and he stated that, if you're in Japan, there'd be a sign, but nothing is required here.

And, I think that transparency is extremely important and we don't have that.

MR. ELA: Tom?

MR. CHAPMAN: I'm going to put Lisa on the spot here in a second, she can decline to answer, but I'm curious to know if MOM's allows this substance in food products and, if not, what was the reasoning behind that ban?

MS. DE LIMA: I don't have the reasoning in front of me, but we don't allow it. So, where we would see it crop up are the places that Harriet said, cheese and bread.

And, I'm not going to say any names, but I don't think we're the only retailer that does that. I think that's pretty common throughout all the natural --

MR. CHAPMAN: Pretty common for the retailers to have the list, but you don't. I cared less about that, I cared more about the reasoning and you don't know that off the top of your head? Okay.

MR. ELA: I reached out to another retailer as well. I mean, I asked Lisa first, but I am aware that disallow it in processed foods.

And, said, you know, so what would your policy be and, you know, if you don't allow it over here, would you allow it over there? And, they didn't give me a definitive answer.

The answer was essentially, it's unlikely we would like it, you know, if we're not allowing it one spot, we're probably not going to allow it in the other spot.

MR. CHAPMAN: But, do you know why they're not allowing it?

MR. ELA: I could not -- I mean, they didn't give me that answer. It was more just a matter of, you know, even just basic protocol if you don't like it one place, they don't want to get caught in a double standard.

So, Harriet?

MS. BEHAR: I just want to reiterate, if it's approved as being requested for use, a retailer, unless they reached out to every grower would not be aware and every mushroom producer that it had been used or not.

And, of course, it may not be used on every lot every time. So, there would have to be continuous interaction with the suppliers to find out if it had been used.

Or, I suppose retailers could just say we don't want you to but there would be no way of checking or verifying that.

MR. ELA: And, I'll just say one final comment as a fruit grower who stores fruit and that is up on the list. I mean, I was personally conflicted by this because there are times I

could really see it.

It would be very useful in my operation. The human health side, though, is even though it may be a very small use, there's precedent on this Board for not using antibiotics that have potential in human use such as some of the light ones, so I feel to be consistent, I have to kind of go with that, even though, from a personal standpoint, this is attractive.

One last comment, Tom?

MR. CHAPMAN: Yes, I mean, I do want to note that we had that one comment from the pickle producer. It was unclear from those comments where in the supply chain he was looking to have natamycin used.

I mean, it was potentially he was looking at a post-harvest application. But, he also talked about the potential of using it in a processing application which, if that was a methodology that he wanted to us it would need to be also on 205.605(a) I believe. It would need to be on one of the lists or it would need to be

organic natamycin.

So, just to note that that wasn't a full usage if they're using it in the processing portion of their operation.

MR. ELA: Yes, it depends where they use it.

All right, I think we -- if there's no further substantial discussion, we should move towards the vote.

MR. CHAPMAN: All right, so we have a motion to classify natamycin as a non-synthetic substance.

The motion is -- comes from the Subcommittee from Harriet and seconded by Emily.

A yes vote is to classify natamycin as non-synthetic, a no vote is to not classify the material and the voting will start with Dan.

DR. SEITZ: Yes.

MR. MORTENSEN: Yes.

MR. ELA: Yes.

MR. BRADMAN: Yes.

DR. GREENWOOD: Yes.

MS. DE LIMA: Yes.

MR. SCHWARTZ: Yes.

MS. ROMERO-BRIONES: Yes.

MS. OAKLEY: Yes.

MS. BAIRD: Yes.

MR. BUIE: Yes.

MS. SWAFFAR: Yes.

MR. RICE: Yes.

MS. BEHAR: Yes.

MR. CHAPMAN: The Chair votes yes.

MR. RICE: That's 15 yes, zero no, zero absent.

MR. CHAPMAN: Motion passes.

We also have a motion to add natamycin to 205.602, non-synthetic substances prohibited for use in organic crop production.

The motion is -- was made by Harriet and seconded by Emily.

So, a vote here would be to recommend the addition of this substance to the prohibited list to prohibit its use in crop production, a no vote would be to not list it which would allow

its use in crop production and given the classification.

The voting will start with Dave.

MR. MORTENSEN: Yes.

MR. ELA: Yes.

MR. BRADMAN: Yes.

DR. GREENWOOD: Yes.

MS. DE LIMA: Yes.

MR. SCHWARTZ: Yes.

MS. ROMERO-BRIONES: Yes.

MS. OAKLEY: Yes.

MS. BAIRD: Yes.

MR. BUIE: Yes.

MS. SWAFFAR: Yes.

MR. RICE: Yes.

MS. BEHAR: Yes.

DR. SEITZ: Yes.

MR. CHAPMAN: Chair votes yes.

MR. RICE: That's 15 yes, zero no, zero absent.

MR. CHAPMAN: The motion passes.

Steve?

MR. ELA: all right, next up, a proposal strengthening the organic seed guidance of October 2018.

I'll let Harriet go in to review the public comment. But, there are some changes to this proposal.

MS. BEHAR: So, this -- there was many comments on the proposed guidance and many of them did not agree with each other. So, there's still not consensus in the public on the guidance.

So, we're going to bring forward those sections of the proposal have been removed. However, there was almost universal public agreement with moving forward on the regulatory language which can be done on its own.

So, again, I encourage you to, in the public docket, start writing up your comments so as soon as it's open, because it'll only be for two weeks or so to get us some information on that.

I know we're a little pressed for

time, but I just want to answer a few of the points that public commenters made.

There was some comment about adding, that we timely ordering of seed. And, I specifically did not put that in there because while it's a good practice to order organic seeds as early as possible, there are times when other constraints might prevent that from happening such as many farmers use operating loans obtained in the spring and so they wouldn't have the funds to purchase their seed until spring.

In addition, farmers are now being very cautious based upon the extreme weather conditions that we are now facing and they want the flexibility to purchase seed that would then they'd be able to assess their current conditions before they plant.

There was concern that the allowance for horticultural growers to review seed catalogues for characteristics that they're looking for was not necessary, that that there was a discussion about you could use variety

trials or horticultural growers could be looking at catalogues.

The reason for that was is that many horticultural growers could grow 50 to 200 varieties like I do on my farm and, if I'm using 60 percent non-organic seed, then I would have a heck of a lot of -- I would have to basically have my whole farm be variety trials.

So, I was trying to give some allowance to people who are doing small amounts of a whole variety of different things.

So, might change that wording a little bit but I just want to be able to -- but the point was is to have them be looking at the characteristics that they are seeking out so they can actually be judging whether or not the organic varieties that are out there are equivalent because they need to be not just looking at the actual variety name, but the equivalency to what they want to grow.

There was concern about the number of five seed suppliers need to be found and

discussed if they had organic seed or not versus three.

There was strong support for up to get five. There was strong support for having none. So, I don't know, we'll find the middle ground on that, but I don't think it will be four.

And, I'll see what the best and also the Subcommittee to see if we can find some kind of common ground to encourage the growers to be really seeking out more.

And, we have learned out over time -- learned over time that requesting organic seed from non-organic seed suppliers does stimulate the production and availability of more organic seed as those suppliers learn that there is a market for it.

There was, lastly, you'll be happy to know, there was discussion about how to help certifiers really understand what improvement is when seeking out organic seed. And so, I made a note of that, that in the next guidance we'll try to be giving --

And, some certifiers did give some activities that could be used for actually saying, yes, there has been improvement or there has not.

Be assured that all the comments that are current -- that have been given will be taken into account and that's not just from this proposal but I will keep going back to the previous ones and feel free, of course, to submit further comments.

MR. ELA: All right, comments?

Tom?

MR. CHAPMAN: Just a note that we'll need to make a motion on that -- on those amendments.

MR. ELA: Yes.

MS. BEHAR: Yes, we'll be -- so, we're just going to come forward with the regulatory change.

MR. ELA: Right, you'll need to make a motion to do that.

MS. BEHAR: Oh okay. Okay.

MR. ELA: Do you want -- as point of order, do you want that motion and then discussion?

MR. CHAPMAN: I think we can discuss it and then we can make the series of motions.

MR. ELA: Okay.

Emily?

MS. OAKLEY: I think one of the greatest keys to success in vegetable crop production is variety selection. I think that most, if not all, vegetable producers are doing extensive on farm trials.

There's a limit to the number that you can do in a growing season and be successful and keep track of them effectively to determine your results.

But, I also want to say that while we're all striving for continuous improvement, we also rely on the varieties that we've chosen over many years of production because they are successful for us. And, I appreciate the work that you've done on this.

MR. ELA: I'll make a comment. I mean, on the horticultural side, too, it gets complicated especially in perennials because we're dealing with a root stock and a variety, so it's not just a variety selection.

The characteristics of the root stock often affect, I mean, a gala tastes like a gala regardless, but the whole tree is very different, depending on the bottom. So, it gets a little more complicated in terms of access and choices.

I mean, essentially, there is very little organic perennial material out there for reasons we've already talked about.

But, it's not an easy nut to crack. Conversely, you're planting a perennial so you're talking about a non-organic thing that's out there for a year and then is the next 20 or 30 years is organic. So, it's not quite the same as rotating a crop every year, either.

I think it does -- I think it is a different -- there are different issues there.

Other discussion?

(No audible response.)

MR. ELA: It seems like we should have a motion to amend the document that was sent forward.

MS. BEHAR: Yes, so I would like to make a motion that the guidance be removed from the document and from the proposal to be sent back to Subcommittee.

MS. OAKLEY: I'll second.

MR. CHAPMAN: We have a motion and a second.

The motion to remove the guidance references and to look at that, it's magic, it shows up on the screen.

And then, just for the sake of clarity, we also have the full proposal, can you project that, Michelle?

Well, yes, we'll be voting on a motion to amend and then we'll be motioning, if that motion passes, then we'll be putting on the amended proposal.

All right, so, and if you could just

slowly scroll down?

You'll see we removed the sections referring to -- keep scrolling -- we removed the sections related -- keep scrolling -- related to -- keep going, just keep, yes, yes -- related to guidance and we left the sections that were related to -- keep going -- that were related to the -- is it all showing up -- it's coming, all right -- there we go, all the cuts out related to guidance -- so keep going down, keep going, go until we reach the bottom.

And there we are, so the motion as amended, we can go back to the --

MR. ELA: I'm glad we left the title in there.

MS. BEHAR: Yes, so, I just want to say that I had hoped to get this over the finish line, but this is obviously an area that the community is very passionate about and very passionate about if it's a comma or a period or an and or an or. And so, we want to get it right.

MR. CHAPMAN: Yes, we'll probably take a prerogative to fix the title in the back end.

But, the motion is what we're looking at right now.

So, it's the motion -- the amendment before us is to delete certain words to make the motion read motion to accept all the additions as described in the proposal section above to the National Organic Program regulation.

The motion -- the amendment was made by Harriet and seconded by --

MR. ELA: Emily.

MR. CHAPMAN: -- Emily.

MR. ELA: Emily.

MR. CHAPMAN: Emily, Dave, Emily, Emily?

MR. ELA: No, the amendment was seconded by -- wasn't it?

MR. CHAPMAN: Emily, yes. Seconded by Emily.

A motion to amend is a simple, only requires a simple majority and a yes vote is to

accept this amendment, a no vote is to reject the amendment and the voting will start with Steve.

MR. ELA: Yes.

MR. BRADMAN: Yes.

DR. GREENWOOD: Yes.

MS. DE LIMA: Yes.

MR. SCHWARTZ: Yes.

MS. ROMERO-BRIONES: Yes.

MS. OAKLEY: Yes.

MS. BAIRD: Yes.

MR. BUIE: Yes.

MS. SWAFFAR: Yes.

MR. RICE: Yes.

MS. BEHAR: Yes.

DR. SEITZ: Yes.

MR. MORTENSEN: Yes.

MR. CHAPMAN: Chair votes yes.

MR. RICE: That's 15 yes, zero no, zero absent.

MR. CHAPMAN: The motion passes and the main motion is now amended.

Any further discussion on the main

motion?

(No audible response.)

MR. CHAPMAN: Otherwise, we'll proceed to a vote. So, the motion? Yes. Do you want to read it, want me to read it?

MS. BEHAR: I just wanted to read it that the --

MR. CHAPMAN: The motion is to accept all additions described in the proposal sections above to the National Organic Program regulation.

(Off microphone comments.)

MR. CHAPMAN: Okay, so the amended motion was originally -- the main motion was presented by Harriet and seconded by Dave.

And the voting will start with Asa, a yes vote is to adopt the amended motion.

MR. BRADMAN: Yes.

DR. GREENWOOD: Yes.

MS. DE LIMA: Yes.

MR. SCHWARTZ: Yes.

MS. ROMERO-BRIONES: Yes.

MS. OAKLEY: Yes.

MS. BAIRD: Yes.

MR. BUIE: Yes.

MS. SWAFFAR: Yes.

MR. RICE: Yes.

MS. BEHAR: Yes.

DR. SEITZ: Yes.

MR. MORTENSEN: Yes.

MR. ELA: Yes.

MR. CHAPMAN: Chair votes yes.

MR. RICE: That's 15 yes, zero no, zero absent.

MR. CHAPMAN: Motion passes.

Steve?

MR. ELA: That concludes the proposal section -- voting section.

So, we have three discussion documents which are petitions that are before us but which we haven't yet received TRs or haven't made a formal proposal.

The first one is a discussion document on ammonium citrate and ammonium gycinate. Dave and Emily are co-working on this.

Dave, do you want to take it?

MR. MORTENSEN: Yes, so, these two compounds manufactured by a company by the name of Alpha Chelates, they submitted these two compounds for us to consider in the Subcommittee as agents that would help deliver micro nutrients to the soil for plant uptake.

They -- these chelates, then, which is the micro nutrient and the compound that this company was applying for addition to the national list at 205.601, this dates back to 2016.

The Board concluded that alternatives existed back in the fall of 2016 and the applicant pursued several, well four now, addenda to have -- in which they pointed out that the Board didn't understand our inorganic chemistry basically.

And, was pleading for us to take a more critical look at this on these two compounds.

And, they were pointing to other compounds, one of which we had said was the

alternative and were basically making an argument that we were misapplying language about what is a chelating agent and what is a chelated compound, the combination of the micro nutrient and the chelating agent.

We spent a good bit of time, actually, a great deal of time, and Emily was spearheading this and I agreed to help co-spearhead it.

And most recently, we requested a technical report on this to help sort out the chemistry.

A number of us also consulted some chemists in our local work spaces and we are now at a point where a proposal will be developed that will be three-staged.

The first stage of the proposal will be to clarify ambiguous language around chelating agents and chelated materials.

And the technical report, we just received will be very helpful in forming that first stage.

The second stage is that future sunset

reviews and new additions to the list, we would be applying this clarified language about chelating agents and chelants.

And, in the third phase, we will complete the review of these two compounds, ammonium citrate and ammonium glycinate.

And, that is what I've got for now.

MR. ELA: Discussion among the Board?

A somewhat technical discussion document, but one that we've received a fair amount of information from the petitioner, so we're hoping to move that forward.

All right, if there's no other discussion on that, the next discussion document is calcium acetate.

Calcium acetate is basically being petitioned for use as a nutritional supplement. While a number of other calcium products exist on the market, calcium acetate acts more -- much more quickly and may actually help with plant nutritional disorders.

So, the other thing that it can be

used for is to prevent sun scald, so it can be sprayed on top of plastic to reduce heat load or in other uses to help reduce sunburn on plants.

Basically, we -- the public comments from it kind of echoed those items, that it can be used as a plant or soil amendment, that it can protect crops against sun damage.

Basically, one comment was that if we do add it, it should be annotated for use as a foliar spray to treat a physiological disorder associated with calcium uptake.

Another comment was though -- although calcium acetate is a synthetic, it's production from non-synthetic vinegar and natural calcium carbonate aligns closely with other crop inputs currently on the national list.

So, it's synthetic, but it's very similar to some of the natural materials.

And then, another comment was essentially that it made no sense to use a sun scald protection if you're applying black plastic which is a synthetic material and then you need

another synthetic material to reduce the effects of the first synthetic material, that that's -- they didn't say it, but that's called a treadmill.

So, just that pointing out that we shouldn't be approving materials that -- we may might want to look at the original material to start with.

So, that's that in a nutshell. I don't know if there's any discussion, but it will probably be appearing next meeting as a proposal as well.

Any discussion?

(No audible response.)

MR. ELA: Okay, and finally, this is the easy on to end on, you know, not much public comment, the paper pots.

And that, I'll turn over to Harriet.

MS. BEHAR: So, I did make extensive notes of all the public comments, but I think we've all heard quite a bit of public comments on this about, you know, comparing it to newspaper

and recycled paper and virgin paper and adding to the list, adding and expanding it to include other paper-based production aids.

We did hear from a second manufacturer which is one of the questions that we did ask on the petition, although it's not a paper chain pot, but the Ellepot is another type of paper made in Denmark.

I was actually very impressed with the number of personal letters that were sent in, testimonials from farmers on the importance of this material.

Also, the numerous certifiers who do not allow its use but were in favor of allowing the grace period for use until the National Organic Standards Board has its chance to review it.

So, we're going to go right to a resolution and I will read it. The NOSB thanks the NOP for enforcing the national list and for its close review of this issue.

Paper pots are not explicitly listed

on the national list and, therefore, its usage as a production aid can be confusing.

Different certifiers have viewed this differently with decisions made in good faith and with equally compelling perspectives.

In the opinion of the NOSB, paper pots that may include virgin paper and adhesives are used as a nursery production aid like many other types of pots.

At the time of field planting, the paper should be considered used and, therefore, recycled since they have been used in the nursery.

If this paper material is applied to the field, it could then be considered a recycled paper for use as a mulch.

Based on comments received at the fall 2018 NOSB meeting, we have heard universal support for this material and this application. Its moratorium on usage will create a substantial financial burden on those growers who have used this system in good faith with the consent of

their certifiers.

We understand that the national list could be clearer in this regard and the National Organic Standards Board is in the process of considering a petition on paper pots.

Be it resolved, by unanimous vote, to ensure a full and timely review of paper pots, we request the National Organic Program allow the continued use of paper pot usage while this review and potential rulemaking proceed.

We believe the interpretation offered in this resolution allows the program to take this path while maintaining fidelity to the existing regulations that the program is charged with protecting.

MR. CHAPMAN: I have a motion for a resolution. Is there a second?

MR. ELA: Dave.

MR. CHAPMAN: I'm waiting for somebody here to say second.

MR. MORTENSEN: Second.

MR. CHAPMAN: Thank you, Dave.

We've got a motion and second, is there any further discussion on this item?

MS. OAKLEY: I would just still encourage those who would like to elevate this issue to the Secretary and Undersecretary level to go ahead as needed with letters.

Thank you.

MR. MORTENSEN: I would also just like to thank all the folks that have reached out to the Board and also to the Board itself for collaborating on the resolution.

MR. ELA: And, I will echo what Emily says, I think it's been very unclear to me of the farmers out there along with others that it feels like when we submit comments to the NOSB that we have done our due diligence.

The reality is that the NOP does not read those comments, we do. And so, I would echo Emily saying the comments you made to the NOSB as growers and especially about the financial burden of this do send those letters to the Secretary and Undersecretary.

It's a stamp or an email and I can't reiterate how important those could be to helping you with this process.

With that, I think we should vote on the -- go ahead, Tom.

MR. CHAPMAN: Before we vote, I had my hand up to say something else.

MR. ELA: Yes.

MR. CHAPMAN: I also appreciate that this resolution acknowledges the NOP's role in strict interpretation of enforcement and that's something we like.

But, sometimes, there are confusion -- there is confusion in the standards. That's happened more often that we would like it to, particularly in the complex interpretation of materials.

And so, I do think this flexibility is prudent. So I hope this can potentially lead a path forward on this item.

MR. ELA: Yes, and I think we do applaud, we want strict enforcement of the list

and this is such a gray area, depending on how you look at it.

To me, the universal acceptance of people making comments, including those certifiers that didn't necessarily approve it is telling.

MR. CHAPMAN: Seeing no further discussion, we'll proceed to a vote on the resolution and the motion at hand.

The motion is before you, and a yes vote would be to adopt this resolution, a no vote would be to not adopt this resolution. The voting will start with Rick.

DR. GREENWOOD: Yes.

MS. DE LIMA: Yes.

MR. SCHWARTZ: Yes.

MS. ROMERO-BRIONES: yes.

MS. OAKLEY: Yes.

MS. BAIRD: Yes.

MR. BUIE: Yes.

MS. SWAFFAR: Yes.

MR. RICE: Yes.

MS. BEHAR: Yes.

DR. SEITZ: Yes.

MR. MORTENSEN: Yes.

MR. ELA: Yes.

MR. BRADMAN: Yes.

MR. CHAPMAN: Chair votes yes.

MR. RICE: That's 15 yes, zero no, zero absent.

MR. CHAPMAN: The motion passes.

MR. ELA: Tom, I'd like to add in just on the final comments on this that we did listen carefully to one of these issues as we cannot approve a product, we are approving materials. And, I think the comments of paper in general as a planting aid, whether it's the seed strips or whatever, that we take those -- that actually that as we look at it, we may look at that broader use of paper as a planting aid.

And, that may actually help us kind of proceed on this topic so that we're thinking broader based.

My one concern is I really wrestle

with the adhesives, especially added after the paper is made. And so, I would really appreciate any feedback as stakeholders on the open docket or to the Committee somehow of how we can make sure that we allow a very appropriate use of this technology and whatever form.

And also, don't make it so broad that we end up with unintended consequences of allowing materials we -- none of us really want on our soils.

MR. CHAPMAN: And, to echo on that, just I also hope that if the NOP does take action like we're asking on this, it would actually potentially free up the Subcommittee to put the sufficient time and thought into this instead of trying to rush through to protect the one application that we may appreciate without thinking of all the potential applications of this material.

MR. ELA: If there is no other discussion, then that finishes the Crops Subcommittee section of the program.

Thank you to the Crops Subcommittee, it was a long docket this time. You guys did a great job.

And, it's before 5:00.

MR. CHAPMAN: All right, thank you, Steve. That concludes the Subcommittee portions of the agenda.

And, looking at the agenda, it's the next section is deferred proposals and final votes. We have no deferred proposals or final votes, so we'll proceed to the work agenda item and I am going to sit over by Michelle's desk to run through the work agendas.

We will be publishing this later, so okay, so first up on the upcoming work agenda will be 2021 sunsets. This is the last year of the sunset reorganizations.

The sunset reorganizations are quite long, so it is here, it's also published in the proposal on the reorganization of sunset materials.

Okay, we're now going to run through

non-sunset items by Subcommittee.

So, first up is CACS and we continue to have the import oversight item on our work agenda. Definitely the update from the spring 2018 public comments will be planning to come forward.

Scott, do you have any other ideas off the top of your head putting on the top of what the Subcommittee might take this agenda item further?

MR. RICE: We're still I think on the heels of what we've just worked on in this meeting. Might take a look at what just in general what other aspects we can dive into whether it's building on further risk factors or there was some mention of developing something similar as risk factors for certifiers and certified operations. So, that's an idea as well.

MR. CHAPMAN: And, after the last meeting, we regrouped with the program and identified the best areas for us to work on for -- on this subject area in the last semester and I

think we'll do probably the same here as well to get there.

Thinking on where NOSB work would be most helpful.

Up next is Crops and so, all the materials discussion documents, we are expecting that those will come forward as petitions for votes including the AITC that was pushed back.

We also have a work agenda item to review the annotation -- to review a recommendation for an annotation on liquid fish products.

The biodegradable based mulch is still on there as a TBD and then we sent the guidance portion of the genetic integrity of seed grown on organic land back as well.

Up next is Handling. So, Handling has the silver dihydrogen citrate petition that was sent back to it as well as the two petition discussions that we discussed, pullulan and collagen.

Livestock Subcommittee has one

petition for oxalic acid. That was also a petition discussion here.

MS. SWAFFAR: Tom, can I say something?

MR. CHAPMAN: Yes.

MS. SWAFFAR: so, also we do have a work agenda request in for vaccines made from excluded methods. So, hopefully, we might be adding that to our work agenda.

But, we have some pretty hefty sunset items including my favorite material, methionine.

MR. CHAPMAN: Okay. And then, on Materials Subcommittee, we have the marine materials item that may or may not come forward for a vote at the next meeting.

We have the excluded methods ongoing work. We have research priorities that we discussed bring forward as a discussion document to get feedback at an earlier stage, the genetic integrity transparency that was sent back as well as the sanitizers work agenda item.

The sanitizers item is still in its initial stages, so I -- we don't expect to have

something at the spring meeting in terms of a discussion document or a vote, is that correct?

MS. BEHAR: Yes, I think by then we will have decided what we want in the TR and will have probably initiated it, but probably won't be back by spring.

MR. CHAPMAN: Then we have been collecting some minor changes that we've made related to the policies and procedures manual, best practice of petition discussion documents being one.

We've also assigned some petition responsibilities to the role of the Secretary, namely to monitor the open docket and notify the rest of the Board if something comes forward.

So, I think we have enough parking lot items that we'll probably reconvene the Policy Subcommittee to bring forward those changes in the policies and procedures manuals as well as fix up some conflicting sections that are in there currently.

And, that is the totality of the --

what we expect to bring forward at the spring meeting.

Any questions from the Board?

(No audible response.)

MR. CHAPMAN: Then, I believe this document gets published after the executive calls, is that correct? Yes, so, look for that for updates as this changes.

Clearly, this is our best thinking on what will happen. But as we proceed through the year, you know, time will tell what we can actually bring forward or what information we have for the spring meeting.

Okay, so up next, we have officer elections. And, I'm going to ask Michelle to put up some slides of the officer elections sections of our policies and procedures manual.

So, I'm just going to read through this briefly.

So, in the election of officers, we first start with nominations. Any NOSB member is eligible for consideration for any officer

position.

And, members may self-nominate or be nominated by another member of the NOSB. Members are also able to serve more than one term in any officer position, but I think it's missing here that you can't serve for three years or more.

Officers will be elected to a one year term by a majority vote.

Newly elected officers assume their positions at the conclusion of the fall meeting and assume all the responsibilities thereof at that time.

I was unaware of this, but I guess outgoing NOSB officers will assist incoming officers with the transition through their new roles to be completed no later than January 23rd of the following year. Man, did I think I was out.

Votes will be by secret ballot. We start with the Chair then proceed to the Vice Chair and the Secretary.

The secret ballot that we use are

these handy dandy cards.

Ballots will be counted for one office at the time and it's generally done with the Secretary and the Vice Chair, although, if those members are nominated for the office, then we will select from other members of the Executive Subcommittee just to prevent conflicts of interest.

We do require a majority vote, so the first nominee that receives the majority of the votes will be elected. But, if there's a plurality then the candidate receiving the least number of votes will be removed from running and we will re-vote for that position until a nominee receives the majority.

In the event of a tie, there will be a re-vote and re-vote and a re-vote and a re-vote until someone finally gets a majority.

The votes will remain confidential and the ballots will be disposed of and a nominee, unfortunately, may withdraw their name at any time, but not once you're in office.

And, in the event of only one nominee, then we won't need to use the cards, we will just vote by acclamation.

Are there any questions from Board members about the procedures?

Okay, at this time, then I am going to pass down the blue cards. Please take one and pass it along. And, these will be for Chair.

So, at this time, we will open it up for nominations for Chair.

Emily?

MS. OAKLEY: I nominate Harriet for Chair.

MR. CHAPMAN: All right, we have one nominee for Chair.

Need to speak into the mic, Eric.

MR. SCHWARTZ: Sorry, I nominate Scott for Chair.

MR. CHAPMAN: All right, we have two nominees for Chair.

Do the nominees want to keep their names in?

MR. RICE: Just a clarification, anyone can withdraw at any time?

MS. BEHAR: I guess I want to clarify that I did not offer the pies as bribery.

MR. BRADMAN: Do the nominees want to say anything?

MR. CHAPMAN: We don't normally have the nominees speak, but if they want to, we can. Otherwise, we'll just proceed to a vote since the Chair -- since the Vice Chair and the Secretary are both running, I'm going to ask Steve, the Crops Chair, if you don't mind, counting the votes with me and collecting the votes.

(Off microphone comments.)

MR. CHAPMAN: Okay, so, write down the votes and then we'll pick them up. Steve, maybe you can get that side, I'll get this side.

(Voting by secret ballot.)

MR. CHAPMAN: All right, we have a new Chair, Harriet.

(Applause.)

MR. CHAPMAN: Okay, next up is Vice

Chair, nominees for Vice Chair?

Harriet?

MS. BEHAR: Steve.

(Off microphone comments.)

MS. SWAFFAR: I'd like to nominate Scott.

MR. CHAPMAN: We got a nomination for Scott.

Oh, I need to pass out the cards.

MR. CHAPMAN: Okay, anyone else? Sorry, I had to pass the cards.

(No audible response.)

MR. CHAPMAN: No? All right, so, on this one, I'm going to ask Harriet to count the votes with me.

So, it's Scott and Steve.

(Voting by secret ballot.)

MR. CHAPMAN: And we have a new Vice Chair, Steve.

(Applause.)

MR. CHAPMAN: And, up last, the position of Secretary.

Oh, come on.

Yes?

MS. SWAFFAR: I would like to nominate Scott.

(Laughter.)

MR. CHAPMAN: We've got Scott, anyone else?

All right, seeing no one, I think we can do this one by the good old fashioned acclamation.

Here, here. So, let's give a round of applause for our new officers, Harriet as Chair, Steve as Vice Chair and Scott as Secretary.

(Applause.)

MR. CHAPMAN: We will now move on to other business.

(No audible response.)

MR. CHAPMAN: Seeing none, then I think we can move to adjournment, 5:16 enough for you?

MS. BEHAR: I would like to say something.

MR. CHAPMAN: All right, I guess we've got some things to be said. I guess I'll start with Harriet and then --

MS. BEHAR: Well, I would like to very much thank Tom for his two years of leadership. It's going to be difficult, I'm going to study the transcripts on how you've run the meeting to try to run them as smoothly and evenly and really encourage interaction and a lot of good debates.

So, I really appreciate your time as Chair, thank you very much, Tom.

MR. CHAPMAN: Thank you, Harriet.

(Applause.)

MR. CHAPMAN: And I look forward to sitting down in the cheap seats at the end.

So, Emily or A-dae, you're going to have a new person chatting your ear off.

Jenny?

DR. TUCKER: So, a couple of closing comments. I want to first welcome our new officers to their new roles. So, congratulations to all of you, we look forward to working with

you, so thank you very, very much in advance for your service and for all your service to date.

So, let's give them another round.

(Applause.)

DR. TUCKER: I'd like to thank the entire Board. Obviously, this is a very intense time of your lives in addition to these three days, the dedication and devotion and time that you put into this work is just tremendous.

So, let's give a round to the Board.

(Applause.)

DR. TUCKER: Let us thank the audience for being here, sticking it through. Woo hoo.

(Applause.)

DR. TUCKER: And, of course, I want to thank the NOP staff who are -- who remain completely focused through this event. So, of course, Michelle, who runs the place, thank you, Michelle.

(Applause.)

DR. TUCKER: Clarissa, you did a nice job at my side hand, thank you very much.

(Applause.)

DR. TUCKER: Devon, you're fabulous.

And then, of course, let me acknowledge Paul, even though he had to leave a little bit early. He's a tremendous help in supporting all the Board's work.

And then, finally, I want to say a thank you, a special thank you to Tom. So, in the National Organic Program, we have awards called "kudos" and we give them when people have gone above and beyond in service to our stakeholders and to others in the program.

And, Tom gets two "kudos" for his two years on the Board, so he gets a travel mug with the organic seal on the sleeve and he gets a thermos with the organic seal.

And so, you don't have to take the box on the plane if you don't want to, but this is for you to thank you for everything that you have done.

I've enjoyed working with you.

(Applause.)

MR. CHAPMAN: Thank you.

DR. TUCKER: Tom has played just a vital role during a transition period. He opened the meeting by talking about how we went from having really not a complete USDA leadership line to here we are with all the positions filled except for mine, the Associate, which will be next.

And so, Tom, you've provided a voice of stability, of support, of friendship and it's just a true honor to know you. So, thank you.

(Applause.)

MR. CHAPMAN: Thank you, Jenny, and thank you for this nice thermos, it will do great at keeping my beer cold.

(Laughter.)

MR. CHAPMAN: With that, if Harriet could do the honors with hitting the gavel, I think we will consider this meeting adjourned.

MS. BEHAR: Meeting adjourned.

(Whereupon, the above-entitled matter went off the record at 5:20 p.m.)

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C E R T I F I C A T E

This is to certify that the foregoing transcript

In the matter of: National Organic Standards Board
Fall 2018 Meeting

Before: USDA

Date: 10-26-18

Place: St. Paul, MN

was duly recorded and accurately transcribed under my direction; further, that said transcript is a true and accurate record of the proceedings.

Neal R. Gross

Court Reporter