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Meeting Of The National Organic Standards Board (NOSB)

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15 East Liberty Street Savannah
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The National Organic Standards Board convened at 8:00 a.m. with Tracy Miedema, Chairperson, presiding.

Members Present
Tracy Miedema, Chairperson
Colehour Bondera
Steve DeMuri
Joseph Dickson
Kristine "Tina" Ellor
Barry Flamm
John Foster
Wendy Fulwider
Katrina Heinze
Nicholas Maravell
Robert "Mac" Stone
Jennifer Taylor
C. Reuben Walker

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Tracy Miedema: Welcome and good morning. We are now back in session for day two of the fall meeting of the National Organic Standards Board. Today is the day that we dedicate to committee deliberations. A note here for everyone who may not know the workings and the structure of how the NOSB works when we're not here with you all, most of our work, really of it when we're not together, is performed in small groups and committees.

And for most materials and most issues various delegates or champions take point on various issues, and we do a lot of relying on one another's expert opinions. We can't possibly become experts on every single topic. In many cases, we're learning and hearing about information right along with you, so this is our only time when we sit in a room together is when we're with the public. Today we'll start out with the Crops Committee.

We've invited some experts this year to give expert testimony on a few topics. I'll let each of the committee chairs introduce their experts in good time here. So a quick run through of how the day will proceed. We'll start out with Crops Committee this morning, and then move onto Livestock Committee. The agenda is set up that we move through all of the Crops Committee and Livestock Committee work before lunch.

The afternoon then is Handling Committee, Materials Committee, Compliance Accreditation and Certification, and lastly the Policy Development Committee. We are scheduled to recess at 5:30 today. One other announcement, committee chairs, I had asked for any of you who had voted on committee updates to published documents to please print out copies for the public. I know of one for the Handling Committee, and I have a stack of those copies here.

Do any other committee chairs have printed updates to be able to share with the public on committee documents? Any others? Okay. I'm going to hand these to the program and ask someone to set this outside on the table. And with that, I will turn the meeting over to John Foster, chair of the Crops Committee.

John Foster: Thank you, Tracy. Good morning everybody. Glad to see everyone's nice and perky this morning. I can tell. There's a lot of good conversation already happening. I'm glad to hear it. We're going to have a presentation this morning from Dr. David Granatstein. I would do him nothing but injustice if I tried to introduce him. He's gonna be must better at giving you the important facts to his expertise.

He'll be giving a discussion about materials, crop materials, tree fruit materials, specifically streptomycin and tetracycline. He's been working on a working group with a number of folks and has about 15 minutes. We'll start with that, and move along after that. So David, to you.

Dr. David Granatstein: Thank you, John. And I want to thank the NOSB for putting this on the Agenda. We really appreciate it. Let's see, while you're getting the slides up, I'll just briefly introduce myself. I'm David Granatstein with Washington State University in Wenatchee, Washington. Been involved in organic agriculture since about 1975, and for the past 18 years I've been on the faculty at WSU where the majority of my time has been working with organic agriculture.

So what I want to do today is give a short update on the work of a group of folks that have come together, and I'm representing that group. We've called ourselves the Organic Tree Fruit Industry Work Group. And I can make this work -- this group was a result of the last meeting in April where the NOSB, based on the discussion there, said can we have some ongoing discussions with folks on the ground about the progress of alternatives, and we took that to heart and have organized a group to do just that.

So I convened a group along with Matt Grieshop of Michigan State, and I'll show you that membership in a minute, and this is kind of what we hope to be able to do. Our long-term goal is improving organic tree fruit production, and we hope as part of that we can establish good communication between us, the growers, the industry and the NOSB to make the best decisions possible. So that's really what we want to have happen over time.

Our members, we've got about 17 people from all across the country, small and large growers, university, industry, and we have several of the leading fire blight researchers as part of this group which is just terrific to have. I am not one of those people. I'm not a fire blight person, but I have access to them by virtue of their participation. So I may not be able to answer all your questions, but I can certainly get to the folks that can.

And I do want to recognize industry support, Northwest Horticulture Council, which is based in the northwest obviously, has supported my travel here because we don't have any funds to do this particular work. So first of all, I just want to mention that I passed out to the Committee some documents. You have a copy of on the green sheet, everyone on this

working group. On the back of it is a list of some funding information that you were interested in.

Then next is a copy of the presentation so you can follow along with my slides and take notes, and then we have a couple other documents that you can refer to later. I won't go into great detail because of the limited time. So I'm going to start out just with this slide of the disease of fire blight and make a very simple point that it's an extremely complicated disease.

This is one of the struggles with it, the fact that it gets into the plant and becomes systemic is one of the things that makes it a bit unique. Because of that, fire blight control is based on prevention, not cure, so that makes it a bit different than many of the approaches we take in pest management, and in particular, unlike insect IPM where we typically think of building up to some economic threshold and then taking action, you can't let the trees get infected because there's no cure for them other than the chainsaw.

So it's kind of a different approach and mentality I think than our typical sense of IPM. Genetic resistance in the long run is certainly where we want to me. There's our most resistant variety of apply. At this point the one that's in commercial production is the Red Delicious, but as I think we talked about in April, this particular variety is not a high preference for the organic consumer. So we do see a lot more interest in this.

I took a look at a lot of the lists that are out there on resistance. I talked to a number of apple breeders across the country and at this point, there is no real consensus on what's a strong contender. If I were to go out today and buy another variety, what would it be? It's a very, very difficult decision for a grower to make. You look at some of the ratings lists, and some will list a particular variety high, others low.

They're based on different types of tests, different strains of fire blight exist in different regions, and so you can test under one strain and get a different result under another. So my feeling walking away from that is these resistance ratings are nice, but they're not very solid guidance for someone who is going to spend a lot of money replanting an orchard.

We've got new varieties, and many of them are more susceptible, so the question is how do we develop ones that the consumer in the marketplace will accept that also have these disease resistance characteristics.

Geneva Rootstocks, we discussed those in April. They are -- they exist, yes. But I called the industry -- I made calls to a number of nurseries around the country, and basically you can't get them.

Again, if I wanted to go out and plant an orchard tomorrow, I could not get Geneva Rootstocks. They're not available currently. So this is an issue that's gonna take them a while to ramp that up. And then just to point out, when we're looking at variety change in tree fruit in a perennial crop, it's very different that in a grain, for example, wheat. So we could go out tomorrow, one of the cheapest things you can change in wheat production is the variety.

You change nothing else other than the bag you poor into the drill. In a perennial crop, the cost fact obviously is huge, both in terms of cash outlay, and then the loss production. So it's a very big decision to replant an orchard. The risk in something like wheat is pretty low. You try a new variety, it doesn't work, you go back to your old one the next year, simple. Well, you can't do that when you've replanted an orchard.

So the risk level is much, much higher, and typically, replanting doesn't occur until you've paid off your establishment costs which can be anywhere from seven to ten years in a perennial crop. So it's quite a different scenario to look at variety change, and it's a much longer term strategy than in something like an annual crop. Many other management practices are used by growers. These are all part of the mix of what folks are doing to try to control fire blight.

We've mostly been talking about here what are some of the materials, particularly the biological control materials, that might be used to replace antibiotics. So one paper that's probably the best that's out there looking at some of the more humid regions, was done by Sundin, et al., published in 2009, and basically their conclusion was the prospects were not particularly good based on their field trials over seven years and three states with available biocontrol materials. Not particularly promising was their conclusion.

So that -- a bit of levity about where we are, that's what that said to me, we're not as close as we thought in those regions. Here's an example of research done in eastern Washington where I work, by Tim Smith. He's tested fire blight materials for decades now. In this particular figure, each of these bars represents the range of results. The red line in the middle is

kind of average. So we -- there's always some variability. We're talking about biology here.

And on this particular scale, higher is better. So a hundred percent control is good. That means we have no fire blight. Up at the top, then you see streptomycin 85, 90%, oxytetracycline is similar average, but a bit bigger range, so there's more variability in that material. And then we see the material we discussed in April again, the new yeast product, Blossom Protect, and that's right in there with oxytetracycline. So that's why people are quite excited about this.

It's showing some good promise, and it is being tested in certain areas of the country. Unfortunately, it's not registered by the EPA, so people can't use it. Again, it looks like it's available, we hear about it, but it's illegal to use. So we've got to get it registered before it's a viable alternative. At this point in time, this is kind of the range that we've got to work with in organic systems.

We've got a number of biologicals, hopefully this will be registered in 2012 now is what they're predicting. Antibiotics are currently available, two of them, but slated for expiration. There are new antibiotics being registered. Whether they would be accepted if they were petitioned, unknown, but there are others being looked at that are not used in human or livestock production, so they're completely different, and take away some of the issues around human health that have been discussed here.

And then there's other materials, Serenade Max is a microbial fermentation product. There's plant growth -- or plant defense stimulators now that are being looked at as well. So we are seeing more products become available. But the big question is then, how do we use them? They haven't worked well as standalone replacements. That's kind of been really consistent research results. But Ken Johnson and others from Oregon have looked at how do stagger them in different timings for different phases of the disease and perhaps improve our effectiveness.

So in this case, they are looking at king of the output of a typical fire blight model. These are the data generated by the models that the growers use to determine whether or not to treat, and they're trying to figure out where these different products might fit in as the disease risk goes up as the different development of the flower progressing. And they're starting to make some very good progress, so I think this idea of integrated control has been a very positive development.

Initially it was integrated biological with antibiotics, now they're just integrating several different biological without antibiotics, and also integrating other practices, in this case thinning sprays on apples of lime, sulfur, plus oil. So one of the questions when we start to use these different materials, we need to also look at them within the context of the whole system. If we go out today and spray a biological such as Bloomtime, so a living organism, and then two days later we spray for scab with sulfur, and the sulfur kills all your biological, we've got a conflict in the management system.

And those are some of the things that need to be worked out to make these things practical alternatives on the ground. So as we move to biocontrol, it's gonna be a lot more complicated, more knowledge intensive, and we need definitely more field experience to see how these will pan out in different environments. Probably the most promising results to date is the work from Ken Johnson, and Ken was funded for an OREI project earlier this year, specifically to look at organic fire blight control.

So this is a very positive development that's going to push this effort forward in Oregon, Washington and California. We still have the more humid regions that aren't part of this project that need similar work. In this case, these graphs are the opposite. In other words, this is the number of strikes, fire blight's infections per tree, so higher is worse. The lower down we go, the more control we're getting from these different practices.

So this is essentially just spraying water on the tree after it's been infected, no result obviously, and everything is compared against that. So one of the things Ken did was just to look and see whether the thinning spray in and of itself was having any effect, and indeed it was. It's knocked down fire blight in all three of these tests, and he now has a number of these tests that he's done. So it was kind of a new thing no one had even though of.

Lime sulfur is pretty harsh material, does it affect the fire blight organism, the answer is yes. Then he started to look at combining it with some of the biologicals and comparing that with an integrated program, biological plus antibiotic versus antibiotic only, and now he's got enough years and different varieties where he's starting to see that this particular treatment is coming in quite similar to the antibiotic, and that's where really people want to be, to kind of see that we're getting similar level of control, consistency over time, location and variety.

So these results are quite promising, but again, this is all small plot work with inoculated trees. This is not grower experienced in the field yet, and that's what the OREI project is going to move this to. Other research, there's a lot more going on out there. Interestingly, right across the parking lot from is a fire blight researcher that I had not really delved into his program, and I've spent some time talking with him.

So for example, he's working on the ecology of the stigma. This is actually inside the flower, and the stigma exudes various materials which essentially are food for the fire blight bacteria that have to grow on this area first, get to high enough populations that they can then infect the blossom. So there may be some opportunities to interfere with the life cycle by the nature of those exudates from the stigma. They have developed systems for testing fire blight materials.

They can do it year round now with these live crabapple system in the laboratory, very interesting, which accelerates the ability to do the testing. Otherwise you've got once a year to do the test in the field. It's not -- it's very difficult to make progress. And looking at viruses as well, there are certain bacteriophage that will attack the fire blight bacterium, and in this case he's attaching them.

This is a picture of an electron micrograph attaching it to a biocontrol organism, the Bloomtime, and having it go into the system via that. So it's kind of like a double control idea. So again, still experimental, but another mode of action that could be very, very effective down the road. As far as funding for fire blight research, I did some surveys around the country to try to get a sense of what has gone into it, and we estimated somewhere in the range of $600,000 of grower funds have supported research on antibiotic alternatives that would be organic and compliant.

Ballpark for Washington and California, where I did get some detail. USDA supports several major programs on fire blight alternatives. Again, fairly significant investment over the past decade or so. We've got the new OREI project coming online at about $500,000. And just to point this out, I took a look at the number of papers on different topics that are presented. There's an international fire blight working group through the International Society of Hort Science. They meet every three years.

And if you look at the trend lines for what their paper topics are on, it's actually in one of the papers I gave to John, you'll see over time a huge increase in biocontrol, very little work on antibiotic and chemical control,

and increasing work on breeding. So clearly the research community has been working on these things for many, many years. It's not for a lack of effort, it's for a lack of success.

We just haven't come up with things that have worked as effectively as the practices we're currently using. So what needs to be done? We need to get Blossom Protect registered, obviously, so growers can go out and use it and see how it works in the real world. They're estimating February 2012 at this point at the EPA. We need the field-scale grower experience, and I think Ken Johnson emphasized this in April It's one thing for him to do the test under controlled condition.

He takes care of the microbes. It's another for a grower to throw it in the back of the pickup in the sun and it all dies and then he sprays it on and wonders why it doesn't work. So we need that level of understanding of what's going to work at grower's scale. We need the consultants to get familiar with it to understand the timing and I showed in that one chart. That's going to be critical. We need more testing in different climates.

There's been some work done in Michigan at this point with Blossom Protect. In their case, they did not find control nearly as good as what was found here in Oregon and Washington. So are there some climatic differences that we don't know about yet? We have very little experience with pears. Obviously pears is gonna be another big one where this product needs to fit in, and as I mentioned, integrating with other parts of the management system, and that's going to vary tremendously with the part of the country we're looking at.

Because here in the west -- or here in the west -- in Washington state we don't have scabs, so we don't have to worry about that. But that's the driver of organic systems in the Midwest and the east in most cases. Long-term, as I said earlier, varieties, and there is more and more work going on. Marker-assisted breeding may be able to help accelerate that process.

So where are we now? Well, at least in this picture we're looking down at Lake Chelan from a beautiful organic orchard. But I think in Washington state, in eastern Washington we're getting pretty close. If the research does pan out at grower scale, I think we'll be looking like we've got some alternatives that will work. The OREI project will start this summer. It runs for four years, and that's really going to be the key piece.

It's gonna be the validation in the field with the growers across different sites, different varieties, and then the grower and consultant education. So that's a four-year process that they'll go through on that project. And then the other parts of the country we just don't know enough yet. And, of course, the risk is much higher in the Midwest and east than what we face in eastern Washington.

So my assessment is, if we lose these materials, we can probably get by in eastern Washington, but the rest of the country will probably suffer much worse. That's kind of my take from what I could find out. So to wrap it up, what grower's want to do is avoid this. They don't want the fire blight strikes, that tree is starting to get infected, because once it gets infected it can get pretty bad and get to that point.

And ultimately, this is really where we're headed and what we want to maintain. That's what our organic tree fruit working group wants to help support. So thank you again, and I'd be happy to take any questions.

John Foster: Thank you very much. We have about five minutes I think to start some questions. I know a lot of discussion over the last year or so has been about kind of the economics of it, marketing preferences, consumer preferences, things like that. This is really just about fire blight, so let's keep questions kind of focused on that, if we could, for now. Obviously, we'll have more discussion on those other topics too, but questions for -- yes, Nick?

Nicholas Maravell: Thank you for an excellent presentation. What do you see as the stumbling blocks for getting more research and a better knowledge base in the Midwest and the east? What -- and I take it from your characterization of the OREI grant that's been made, that the projects that they're scheduling will not have any sites in the Midwest or the east or will it?

Dr. David Granatstein: Yeah. The OREI project from Ken Johnson is specifically Oregon, Washington, California. That's how it was written, yeah. So folks in those regions would need to seek out the funding to do the work. But for example, George Sundin at Michigan State has already tested Blossom Protect to some extent. I don't know what funds he uses for that, but people are doing these tests kind of on an ongoing basis. They bootleg them off little pots of money here and there.

But to do the full-blown type of thing that Ken Johnson hopes to do, someone would have to put forth a fairly substantial proposal.

Nicholas Maravell: And do you anticipate that type of activity coming about, or is the working group trying to direct people in that direction for example?

Dr. David Granatstein: At this point, no. I think we're just -- we're trying to provide initially the communication with NOSB, but we're finding a side benefit to be communication amongst the folks on that group who might not otherwise be talking all that much. So I think that could be a side benefit. I think Ken Johnson's experiences are going to filter back to the folks in the Midwest and east, and perhaps it will spur them to do something.

I don't know the specifics of the programs that those researchers have and whether organics is, you know, high enough on their radar screen to be something that motivated to go after a major grant. I don't really know that at this point.

Nicholas Maravell: Thank you.

John Foster: Tracy?

Tracy Miedema: A couple of questions. Thank you again so much for putting together this task force. It's a real -- it's a true blue ribbon group of scientists, and a great example what this Board needs more of, coordinated scientific information coming in. So my first question is, what are some of the key differences between conventionally grown apples and organic apples and pears today, just so we as a Board as sort of reminded, and the public is reminded on systemic difference and applications of materials today.

Dr. David Granatstein: In general, not just for fire blight, or...

Tracy Miedema: That's right. In general. Just what are the big differences, and then secondly, what can this Board do to help your group:?

Dr. David Granatstein: Big differences. Well, I guess for years I've been contending that the difference has been shrinking, at least in Washington state. Organic and conventional are looking more and more alike as time goes on. The biggest driver in our region has been the Codling Moth. Historically that's the driver of the entire apple management system because it's such a devastating pest. And the work that's been done to look at the pheromone mating disruption and now other additional

practices has probably been the most important development for the emergence of organic apple production in Washington state.

The same pest is in pears, but it's not as much a driver as it is in apples. So with the advent of that particular technology and the whole mating disruption based system, Codling Moth granulosis virus, et cetera, et cetera, the pest management difference between the two systems has really shrunk. In many cases people may be using essentially an organic regime. The might use success instead of entrust. Two different formulations, one's organically approved, the other is not, but it's the same active ingredient.

So you see a lot of that where it's fairly aligned. Herbicide would be a big difference. The organic growers still struggle a lot with orchard floor management. That has a whole set of ramifications, whereas conventional growers can use an herbicide very cheaply and effectively and deal with their weed control. Fertility would be another place. Organic nutrients are quite a bit more expensive, but we do have more and more conventional growers using organic amendments, manures, composts, in conjunction with a fertilizer because of the benefits to their soil.

So again, that's a place where we see coming together. And thinning, the lime sulfur plus fish oil which is an organic compliant practice was actually proposed by an organic grower. It was researched by a research commission and found to be probably the most effective thinner. So that's now a standard and conventional practice. So it's example how in our state at least, the two systems have really converged and shared a lot of technology back and forth. Does that help answer that question?

It's probably very different in others parts of the country, but in Washington, that's the situation.

Tracy Miedema: It does, and it surprises me. I didn't realize organic had had such a positive effect on conventional apple growing, so that's a nice surprise. And how can we help you, you know? The time frame here is short in NOSB time, like I said at the last meeting, two years is, you know, a blink of an eye.

Dr. David Granatstein: Yeah. Well, just by putting us on the agenda. This is tremendous, to open the dialogue, and to find venues to continue to conversation whether it's with the Crops Committee, I'm not sure. Just

giving us guidance about what's the best mode to communicate outside these meetings to keep moving these issues forward.

John Foster: Jay?

Jay Feldman: Thank you. And thanks for your work. I am especially excited to hear that conventional is starting to mimic organic. That's the dream come true. I was wondering if you could give us a little more detail on the cultural practice. You talked a lot about materials. Can you identify key cultural practices that might be different and the research needs around those, as well as then touch on perhaps local varietals that might be an issue for further research as well. Thank you.

Dr. David Granatstein: Cultural practices, probably attention to nitrogen is a little more crucial with organic growers because nitrogen induces a lot more lush vegetative growth. Lush vegetative growth is more subject to infection. So particularly on young trees which are the most prone to infection, but they're the ones you're trying to get to grow to fill the space to get into production, that's where I could see some big differences.

Organic growers will have to be much more careful at that phase of the orchard life than a conventional grower who can potentially deal with a fire blight infection with antibiotics in the long run. So I think nitrogen management is a big one. Organic growers I've heard may go out and actually hand pick secondary blossoms that are coming out after the main bloom when infection is much more likely, so your past fruit set, but the trees still put out bloom, those blooms are potential infection points.

So I've heard of people actually going out to do some of that. I'm not sure at what extent that's possible, probably not being done in a conventional orchard would be my guess. But otherwise, a lot of other practices, the sanitation and all that is going to be very, very similar. And as far as varieties, I know now for example in our apple-breeding program that we have in Washington, they are screening for fire blight as part of their protocol.

There are -- in fact, I was talking to the apple breeder. So there's kind of a difference between screening things for its resistance or susceptibility, and consciously breeding for them. This is, again, here I am learning. I'm not a breeder, I'm not a fire blight person, but that's what's kind of become very obvious to me. Most of the breeding in this country, fire blight's been more or less an afterthought.

So we'll breed for something else and then see how it does on fire blight. And part of the problem as I think we discussed in April, some of the intentional breeding that's used the crab apple parents where there are natural resistance genes have led to very poor fruit quality because the fruit is small, flavor is not there. Those genes are pretty dominant coming in along with the fire blight genes.

So the challenge is, how do we start to separate those traits out, and that's where the marker-assisted breeding technology apparently is going to be able to help. So they'll be able to kind of figure out where the fire blight resistance genes are. And I was reading a paper on the plane yesterday. There's multiple genes. People don't fully understand it.

There's a long ways to go just to understand the whole infection process from a molecular and genetic level, such that you can say this is -- if we bring this gene across we're going to get resistance, and it will be expressed and it will be there for the long run. It sounds like people aren't really at that point of confidence yet. So the information is much more after the fact you take a variety, you challenge it out in the field with the organism, and you monitor how well it does.

That's the extent of our fire blight resistance knowledge in a sense, versus being able to very carefully select for germplasm with very prominent and dominant genes that will last and provide the level of resistance that makes it worth it.

John Foster: Thank you. Tina, you need to be the last question.

Kristine Ellor: I had a question specifically about Serenade Max. It is OMRI listed, it is allowed for us, and you called it antibiotic like. It's a bacteria.

Dr. David Granatstein: It's not a live bacteria. It's like the extract from the fermentation broth was my understanding.

Kristine Ellor: Okay. Interesting.

Dr. David Granatstein: And so there may be antibiotic like materials in that fermentation. In fact, a number of these biocontrol agents are antibiotic producers. So, I mean, that's the irony in a way...

Kristine Ellor: Right.

Dr. David Granatstein: ...that's that a natural mechanism of ecological warfare among microbes is antibiotic. So some of them are antibiotic producers,

that's part of their control mechanism. The Serenade Max, apparently it's not a true antibiotic, but it has antimicrobial like properties when it's used.

Kristine Ellor: Right. Yeah. And it is allowed.

Dr. David Granatstein: Right. Yeah, absolutely. Yeah. It's not strictly an antibiotic, but it may have some chemicals in that mix that the bacteria have produced that are antimicrobial.

Kristine Ellor: Okay. Thank you.

John Foster: A yes or no question?

Male: Is anyone looking at compost teas as a prophylactic?

Dr. David Granatstein: There has been work done on that in the past. I'm not aware of anyone doing it right now. I know it -- and people sprayed it on again, it was like throwing it on the wall and seeing what would stick. It was highly variable, and I don't recall every seeing efficacy for fire blight per se.

John Foster: All right. Thank you very much for the information.

Dr. David Granatstein: Thanks again for having me.

John Foster: I'm sure we'll be continuing to have a dialogue over time. I don't know what your availability is the rest of the day.

Dr. David Granatstein: I'm here all day. So I'm happy to visit with anyone during the day.

John Foster: Thank you. That would be very helpful. And then let's reconnect at the break, you and I, and we can talk about next steps.

Dr. David Granatstein: Thank you very much.

John Foster: Thank you very much. All right. We're going to move onto a discussion document around inert ingredients. I believe Emily it looks like is presenting for us. Thank you.

Emily Brown Rosen: Hi. I'm Emily Brown Rosen for anybody that doesn't know me already, with the NOP Standards Division. And I'm here just to give a brief update. We have this working group that's been going since last year, about June of last year, to kind of -- to take the recommendation from the NOSB to work on the inerts and report back. So this is a little

update on what we've been doing. Lorraine, could you move the slides, I don't have the thing.

So this is who's on the group from NOP. It's myself, Lisa Brines, and then from EPA we have Chris Pfiefer who is in the Biological, Pesticide, Pollution, Prevention Division, Kerry Leifer who is in registration with -- he's a specialist on inert ingredients. And then from NOSB we have Jay Feldman, Tracy Meidema and Jeff Moyer, a former NOSB member. And we've been meeting monthly for the last number of months.

A little background, this is always a hard thing to explain, but inerts are permitted -- inerts are the -- well, I'll get into that later. But OFPA does permit inert ingredients in pesticides that are not classed by EPA of toxicological concern. So the question has been what does that mean and how do we apply that to inerts organ production?

The NOSB recommended in '99 and 2000, and the NOP incorporated into the rule the current listing that synthetic inert ingredients that are classified by EPA as List 4a or 4b, would be permitted, and all pesticides used on organic crop production, and that lists three inerts which are of unknown toxicological concern would be allowed only in passive pheromone dispensers. So that's what we've been operating with since 2002.

But the problem is EPA revised this system and no longer uses this system of classification, it's obsolete, and we are working with an old list that dates back to 2004. So manufacturers come in and they are petitioning for new inerts that will not be added to EPAs old list for some of them they claim be more ecologically benign, but they, you know, they will never get added to List 4, so we need a new system to deal with this.

And the other issue is that most of our international partners do not even look at inert ingredients in pesticides, so it becomes kind of a barrier, especially EU and Japan, although Canada does have a similar system for -- since they've kind of followed our framework when they adopted their standards. So the plan is that we -- this working group will submit a proposal to the NOSB, NOSB will develop a formal recommendation based on that and whatever else they think is worthy of considering.

Then they'll be public comments during the NOSB as usual. Then NOP would try and finish the rule making no later than October 17 which is the sunset date for List 4 inerts. The NOSB approved a renewal of the current list for allowance for another five years last spring, and so we'd like not to

have that extend past a whole nother round if possible. Right now, the EPA new system for registering inert ingredients is that they're all listed in 40 CFR under -- either they have an exemption for residues -- an exemption for tolerance of residues, or they actually have a tolerance residue established.

So there's a certain amount that could be present in the crop at the final consumption. So they're all -- all the approved ones are now listed in the CFR. They also have a category that they just classed as minimal risk inert ingredients that predominantly what was formerly on the 4a list, a lot of non-synthetic substances, and these can be used in the products that are even exempt from EPA registration. Okay. This is a chart I put together of showing what we had and what we formerly allowed.

If you look at the -- up at the bar chart on the left, that's the old List 4. There's about 883 total ingredients there. That breaks down to on the 4a, 251, and on the 4b, 629. So this what we're saying now is currently allowed in organic. And so that's a big pile of inerts. However, when we solicited information from OMRI and WSDA who graciously helped us by giving us, you know, a compiled list of all the inerts they're aware of in products they've reviewed, and so we think that, you know, from that information that the actual number of 4as in use is this much smaller column here to the right which is a total of 224 materials.

Of those 224, 97 are 4a and about 124, it's that top brown spot there, is the 4bs, and the 4bs are generally your synthetics of more dubious distinction. So we compared that to what's on the current 25bs list. So of the 25bs in use right now, you know of the inert ingredients in use that appear in 25b now, there's 87. So this next smaller chunk as you see, it's mostly green.

That would be the 4as, 81 are 4as, 6 are 4bs, so that's -- of this sort of medium-sized stack on the second column, the next column over is those would qualify for being 25b and then on the right is the leftover chunk that we have not dealt with, so that's gonna be our problem group at the end. How do we deal with those that are currently in use.

They're on the minimal risk list from EPA, which I think there's pretty good consensus at the working group that the minimal-risk list is a good baseline just, you know, to start with that we're seeing that as, you know, an acceptable groups of inerts as a clump. So now we're trying to decide

how to deal with these ones that we know are in use, that are synthetic and they're not already classed as minimal risk.

So that was the purpose of putting out this discussion paper to -- you could go ahead now, to provide a number of options and get feedback from the public and manufacturers, what (inaudible) we could go, and there's a wide range of options, you know, including just accept 25b and refer -- and then case by case review of everything else, or accept all of EPA's classifications. So we're looking forward to analyzing the comments and taking that further.

And that -- we also proposed options for List 3 inerts so -- okay, go ahead, next slide. And the EPA List 3 inerts have a different sunset date. They're scheduled to sunset in 2013, so unfortunately they weren't all discussed together and have been broken up. But List 4 has been renewed and the Board is going to be asked to renew or change the current EPA List 3. So we put in some options there to try and get feedback now, and then when the Crops Committee makes the recommendation in the spring, we'll have a little more information, and hopefully can be integrated with this whole idea.

On List 3 it turns that List 3 a huge old list. It has -- I think it's got 3,000 materials on it, but really as far as OMRI and EPA are aware, there's only nine substances in use in pheromones at the current time. So there might be more we don't know about somehow, but that's what we came up with. So there may not be a reason to continue this listing, or we may want to, you know, we provided options like refer to the EPA, new classification, and, you know, or even specifically list the known ones that we know are in use.

So those things are under consideration and we will be taking more input. Okay. So once we get our, you know analyze these comments and come up --we're probably trying to work on a sort of bigger, more broad proposal to give to the Crops Committee, but then the Crops Committee will have their full proposal, they'll be a public comment, and then as I said, you know, there's a lot more opportunity for interaction with the public, NOP starts rule making, more comments, final rule and then we anticipate there will have to pretty lengthy phase in or implementation period, because when you talk about reformulating pesticides it takes a long time.

They need to get reapproved by EPA, they need, you know, manufacturers need -- it's hard to get them all notified and in compliance,

and so it's gonna be a big shift, you know, if there is a big change in the final outcome. So I think that's it. Any questions? I know Jay's gonna go into it a little bit further when he talks about the List 3 issue. Okay.

John Foster: Any clarifying questions? We're gonna have, you know, a little more discussion on this in a minute too, but I want to give that opportunity. Thank you, Emily, very much. Very helpful. So, since we're on the heels of inerts discussion, I think we'll -- Jay, you had asked for some time on that to continue this topic, and then we'll move back to the agenda sequence for the crops.

Jay Feldman: Thanks, John. Lorraine's gonna put up a PowerPoint on the inerts discussion. But just -- I know you're all very wonky people, so this is a great topic for everybody here, especially early in the morning. But just so you -- just to bring everyone to the same level on this, you know, the inert ingredients are the part of a formulation that really make up the liquid or the dust or the granule.

So if you look at a pesticide label, you'll see active ingredient, inert ingredient, and the active ingredient is usually a fraction of the total ingredient, and the inert ingredients are the majority in most cases, not all, but in many -- I should say many cases. So the question has always been since it's considered proprietary information and confidential business information, how do we as a board evaluate what in essence is the majority of the product?

It can be a sticking agent, and adjuvant, it can be -- have a lot of different purposes, and what we've learned over time is that inert ingredients are not inert as we think of them in Webster's definition. They are -- they can be biologically and chemically active, and sometimes more harmful potentially to health and the environment than the actual active ingredient itself. So that's just -- that's the baseline we're working with here of information.

So we put this paper together, as you know, and as Emily described, this fantastic group of people. We're really happy to have the participation of the EPA folks that know this lists inside and out. This group, as Emily pointed out, but this paper together. We are introducing it through the Crops Committee because the working group doesn't have a home per se, but ultimately this is an issue for the Crops Committee. The Crops Committee is not endorsing this in any way.

But through the Crops Committee we're seeking comments, in particular on the status of the former List 3 inert ingredients. List 3 were, you know, was a list that EPA had identified as materials of unknown toxicological concern. So there was really an issue of not knowing fully what we think we ought to know about these materials, and therefore, as we began evaluating these things, we -- as EPA began evaluating these things, sometimes they got moved over to List 4, sometimes they got moved up to a higher toxicity category.

But anyway, there are these List 3s which we approve as a Board under 205.601 (m)(2), and there there's the allowance for former List 3 because the EPA has now done away with this listing system which is scheduled to sunset November 3, 2013 under our rule. A vote to determine renewal is scheduled for May -- the May NOSB meeting or thereabouts. So we're looking at this coming up at our spring meeting.

The NOSB must be able to review any substance recommended for the national list, as you know, according to 6518 (m), and here are the evaluation criteria. I don't know if I need to go through all these, but the potential of such substances, you know, in terms of detrimental effects, interactions, toxicity, probability of environmental contamination, the effect a substance has on human health, the effect of the substance on biological and chemical interactions, the alternatives to using the substance.

So we're basically doing a review that in theory at least we should be determining whether there is a toxicological concern associated with the materials. Inerts must be reviewed. This means that any EPA-permitted category of inerts used in organic formulations would need to be reviewed. The OFPA criteria includes the need for use, the absence of natural alternatives, and cradle to grave considerations which are not part of the process that EPA, that's why this collaboration with EPA is both important and challenging, because every time we raise an OFPA question with EPA folks, they say, well, that's not part of our criteria.

We don't do that. And when we -- we don't look at cradle to grave when we allow an inert ingredient, you do. We don't look at essentiality, you do. So there's that give and take. They have an awful lot of good information. We have to integrate that information into our standard under OFPA. Fifth is the Federal Insecticide, Fungicide, and Rodenticide Act. That's the registration law in the country that allows the registration of pesticides.

The need for review need not happen at once. In the interim, the NOSB could accept an EPA list. Emily mentioned 25b. 25b is a provision of the Federal Insecticide, Fungicide, and Rodenticide Act that basically establishes a mechanism for EPA to allow essentially chemicals it considers grass. I mean, I don't like to use that term, but generally recognized as safe or materials they feel are in that category. The working group notes that the EPAs criteria do not include, again, need, manufacture, misuse or disposal issues.

In addition, if a baseline EPA category is accepted, the NOSB will need to provide other options for substances not covered by the list. The NOSB may need to separately consider the few former List 3 chemicals, the nine that Emily that just mentioned. The working group on inerts believes there are at least 120 substances. Emily mentioned 124 today in current use and organic production as inert ingredients that are not included in EPAs current 25b list, inerts of minimal concern.

Most of these substances would be classified as synthetic and appear on the former EPA List 4b. The working group examined several options as you know. For inerts generally you use the 24b list. Allow all inerts exempt from tolerances, allow certain classes of inerts, review all inerts individually. Options for former List 3 inerts allowed only for passive pheromone dispensers. Up for the 2013 sunset review, which as I said earlier will be looked at in spring of 2012, here are our options.

Relist as is, change later, do not relist, ask for petitions for inerts, list known specific inerts used in pheromones, allow those exempt from requirement of a tolerance under 40 CRF 180.1122, that's EPA law, inert ingredients for use in passive pheromone dispensers just blanket, inert credit ingredients for use in retrievable polymetric pheromone dispensers blanket. So that's, I mean, those are some of our options.

Summary of comments on the inerts paper. Now I'm getting into the section of what did we hear back once we put this paper out? We didn't get that many comments. We heard from Beyond Pesticides, National Organic Coalition, CCOF, OTA, OMRI, Wolfe DiMatteo and Driscoll. And listing for List 3 inerts and pheromone products. This is what we heard from CCOF, OTA and WDA said they prefer option 11.3a, which is inert ingredients of semiochemical dispenser products which essentially are pheromone but, you know, they include other pheromone-like materials, dispense products that are exempt from requirement of tolerance under 40 CFR 180.1122.

They also said that should be clearly stated on with a clarification that this listing is limited to pheromones, so that would be an annotation. Beyond Pesticides and NOC said that given that there are only four materials that fit into this classification, there is no -- that that's the number we got by looking at the Washington State list, and OMRI list. We came up with these four. There is no reason not to address them individually in the upcoming sunset review.

Brian McElroy of Driscoll commented that his growers are depending on light brown apple moth pheromone products because they are in the LBAM quarantine area, and asks that any action taken will be sensitive to the need for LBAM pheromone use. Is the list of former List 3 inert ingredients that are currently used in NOP-compliant pheromone products accurate? None of the commenters that we heard from in this process reported any additional former List 3 ingredients in NOP-compliant pheromone products.

CCOF and WDA warned against assuming that the list we have is complete. If anybody has any ideas on how we get a better list, let us know. OMRI stated that they knew of only three synthetic inerts on the former List 3 in the products, the ones listed in Options 2.3b. Has the term passive pheromone dispensers been problematic? Is retrievably polymetric pheromone dispensers a better fit? This comes up a lot because obviously we're referring to passive dispensers, don't have a real good definition.

All commenters pointed out the problem with having undefined or poorly defined terms, we hear that a lot. WDA preferred passive, Beyond Pesticides suggested that it is better to drop the descriptive term and review the approximately four chemicals in use. Four or three. How might alternatives to synthetic inert ingredients be considered and implemented? WDA thought it very likely that alternatives to the use of synthetic inert ingredients would be initiated by those formulators with the resources to enter into research and development unless they were research incentives and funding provided by government.

So there again, we need to promote research. BP said that NOSB has a process for considering alternatives to materials, and this should be applied to alternatives to synthetic inert ingredients which are not -- I'm sorry, which are not inert and should have no special standing among materials. Meaning they're not innocuous, they may have biological chemical activity. I'm almost there. What are the barriers to the

development and use of alternative natural ingredients? This again, a question on our discussion document.

Wolfe DiMatteo said that full disclosure of inert ingredients might provide an incentive for development of national inert ingredients. CCRF said a barrier is that formulaters do not place a priority on formulating for organic use and have no incentive to do so. They support full disclosure and suggested an approaching to give incentives through disclosure. They suggested that the WGI and OMRI develop better outreach to companies making products used in organic farming.

What timelines for implementation are appropriate? CCOF said their clients want changes in materials approval to happen in a systematic way with no disruption, 18 months. OMRI said the timeline for any change should give significant time to manufacturers to reformulate up to five years. That's a longer time frame. NOC said policy should foster reformulation of brand name products with less toxic ingredients and set a timeline for the Board to evaluate all substances.

And then Beyond Pesticides said the former List 3 would be reviewed within a time frame of sunset again coming up in the fall of 2013, adopt a general approach to inerts, develop a list of former inerts. There's a four-year window before former lists, as Emily said, are up for sunset to consider petitions. The process will only be complete when all inerts are individually weight against OFPA criteria.

Replacements, Wolfe DiMatteo suggested EPA List 4 inerts of minimal concern with an annotation or clarification that this refers to the most recent update. In addition, they would add the inert ingredient eligible for 25b. OTA suggested using the 40 CFR exemption as well as those that are non-synthetic and those that are recognized with 25b, and OTA also supports the idea of adopting List 4 and 4b into the NOP handbook and changing the rule to refer to those documents.

4b is a real interesting issue because it doesn't at all match our criteria for exemption, because it's based only on exposure. What are the preferred replacement options referred to. Again, OMRI referred to their previous comments. The said NOP is now working on a permitted substances list as guidance as we know as permanent inert ingredients should be included in that list. The regulations could then reference inert ingredients and pesticide formulations according to the guidance.

BP said all references to inert ingredients should eventually be eliminated, and all materials should be judged against the OFPA criteria, and then goes on to talk about the 25b as a category. And then some other general comments that we got, several groups mentioned that they agree with the premise that all ingredients in a formulation have a purpose and most added ingredients are not truly inert, so we seem to have agreement on that.

BP and NOC said that as is required by our law, inert ingredients, like any other materials used in organics, should be evaluated against a criteria of the underlying statute, and foresee that those ingredients now classified as inerts would go through the same process as any other materials being reviewed for inclusion. And then finally we've got comments that oppose -- OTA, CCOF, WDA oppose requiring the review of inerts, and we have pointed out that of the section required materials including inerts to be reviewed by NOSB, which that's C -- C of that section requires -- that's of the OFPA underlying statute 6517 (c)(1), but of that section it requires materials including inerts to be reviewed.

So there isn't a blanket exemption. I think some people have seen this as a blanket exemption. Thank you. A lot of good comments and feedback for the Committee to consider.

John Foster: Thanks for that expedited summary there, Jay. Appreciate that. Obviously an issue of ongoing discussion. We'll have continuing reports, I'm sure. It's not falling off any radars any time soon. Are there any specific questions relative to this topic we want to jump on right now? Tracy?

Tracy Miedema: Just a quick one. This materials inerts used in passive pheromone dispensers, happened to be my very first material, very first day on the Board almost five years ago. Jerry Davis, the chair of the Crops Committee said, here's your job. Get on the phone, go out and start calling farmers. Start calling orchards and talking to people. I had no idea what these -- what a passive pheromone dispenser was, and some of the people in this room may not either.

But it's these boxes that hang in fruit trees, and an essence sort of wafts out of the box. This is very layman, because that's what I am here, and this wafting substance prevents the boy and the girl bug from mating. And orchardists were absolutely thrilled with this technology because it was

such an improvement over harsh nuking of their fields. It just stopped the boys and the girls from being able to mate.

And I talked with orchardists about what would you use instead, and they were so appalled that the question was even being raised because it was such a tremendously soft solution. So the OFPA does make special provisions for inerts, and they use EPA as the meeting out of what is and isn't inert and okay. So this conversation is going to happen later on. I just want to pass on that bit of, you know, digging around from five years ago.

Whoever it is that champions this material, I would urge you to go beyond a Google search and beyond the comments and talk to the farmers that are using this tool out there.

John Foster: Thanks, Tracy. Other questions? All right. All right. So we're running a little bit long, not unexpected. We've got a number of materials petitioned and sunset items to discuss. This really -- this time is really primarily for those members of the board who are not on the Crops Committee to engage questions. I encourage that. Crops Committee have deliberated and otherwise ponder these materials in pretty good detail.

Want to make sure that we're getting a lot of questions from the members of the Board who haven't had the opportunity. So let's focus on that. That's, you know, discussion day to day, so let's try and do as much of that as possible. And then -- okay. And we'll proceed in the order on the agenda from the rest of this. And Tracy, you had a question here.

Tracy Miedema: I'm going to make this same announcement at the beginning of each of committee deliberations which is what we're beginning now on materials and topics that we'll be voting on. And the announcement is for all board members to disclose any conflicts, because really, if you are conflicted, then you should not participate in the deliberations either on the topics that are taken up. Of course, you wouldn't vote, but you also should not participate if the deliberations if you're truly conflicted. So this is your opportunity to speak up. Jay?

Jay Feldman: Thank you. I would like to just make a general statement. I actually learned this from Katrina in my first meeting. I don't know if I sat next to you or this impressed me, and Katrina would make the statement at the point of voting -- we did that at the point of voting, not the point of deliberations I think, that I work for a company that uses or may use, and

probably does use most of the handling materials we're gonna talk about today.

And I just want everybody to know that, and if you think I have a conflict, then tell me what to do. Is that something like what you said? So I want to make a similar statement in that respect, which I don't view as a conflict myself, but I want to disclose to the Board in the interest of transparency, and I think this is part of the process that's being proposed by the Policy Development Committee.

Correct me if I'm wrong, Calvin, that we had this kind of discussion before the deliberations and then get it out on the table. I work for a public interest organization. It's both an education advocacy organization. We've been around -- we just celebrated our 30th anniversary this year -- whoo -- had a big party in D.C., it was nice. And over the years we've developed alliances, collaborations, support networks from many in the industry.

At the time they were developed 20, 25 years ago, we didn't really think of them as industries because they weren't. They were small farmers, they were people that were mixing stuff in their backyard. I think at that point Gene (inaudible) was still crushing grapes with his feet, and was sending us little bottles of Cascadian Farm strawberry jams or whatever. But obviously it has evolved to an industry, and we have worked in collaboration.

We as an organization get no corporate support from groups except in one category of our work and that is restricted to the conducting of a national conference every year. We're having our 29th national conference next year -- or, I'm sorry, we're having our 30th next year. We just had our 29th. And on our website we indicate the companies that support that conference. So we have companies like the esteemed Whole Foods, which Joe works for; Organic Valley, which Wendy works for, see all these cross alliances that exist in this community?

It is truly a family and we're not incestuous, but we have close relations. We have gotten support -- we have support -- I'm just reciting the ones that are on our website, the National Consumer Co-Op Grocers Association, and the big one that has drawn some attention from folks in the audience is Frey Vineyards. And so to get on our website, just to show you how transparent we are, with your logo, and in supporting the

conference, you give Beyond Pesticides $4,000, and that goes directly to scholarship funds and the management of the conference.

In fact, it doesn't support the conference in total. It amounts to partial funding for the conference. I think the conference costs us about $35,000 average a year. So I disclose that because in the spirit of transparency, it certainly is clear that people that my organization collaborates with do indeed have a financial stake in the decisions of this board That is no different from any individual board members, I believe, that have an individual -- whose companies they work for and they derive income from have a financial stake in the outcome of most of the work that we do on this Board.

So I disclose that in the interest of transparency, and I can take any questions.

Tracy Miedema: And just a note, what Jay's referring to will be placed on the public record in the coming days, but there was a very specific request that Jay Feldman recused himself the sulfite vote based on the $4,000 that he as executive director of Beyond Pesticide accepted from Frey Vineyards who is opposed to a particular petition. So also in the spirit of full disclosure, that was the letter that was received, and I sought advice from Miles and he ask that I make this announcement.

He asked that the letter be placed on the public record, and that this Board decide whether or not it's appropriate for Jay to vote or not. Jay indicated that he was not willing to recuse himself, and so it would be something that we could discuss or not. Jay?

Jay Feldman: Thank you. I, just so you know, as Tracy is referring to a letter that was sent directly from a party that has a financial interest in the decision of this board representing the wine growers that have petitioned this board, and that was sent directly to Tracy, myself, the vice chair, and secretary. As you know, this is a decision that is governed by our policy and procedures manual. The policy and procedures manual is very clear.

Based on our attorney's reading of this, and the standard that is in our policy and procedures manual is that we all have -- as we know from ethics training, we are on this Board because we're stakeholders and we have an inherent interest in these decisions. And our policy and procedures manual recognizes that and requires us to recuse ourselves when we have a direct financial interest, or derive direct financial gain

associated with the contribution, or associated with the generation of income off the sale of a product or a commodity that's used with the handling material or what have you.

So in that context, I certainly don't believe that most of you or I have never felt that any of the Board members that derive income from companies that have a financial interest in the decisions of this Board should recuse themselves, because we wouldn't function as a Board in that context. And similarly, the organization I work from derives income in a similar way and doesn't directly benefit me financially.

I gain nothing directly -- no financial gain from that relationship, similar to your income working for corporations, do not derive any direct financial gain. Now, of course there is an exception to that. If you are a stockholder in a company that -- on a material that you might benefit from, if you sell wine and you would financially benefit from the increased sale of that wine as explained to us due to the relabeling of sulfites, then certainly that would, and should be open to Board discussion.

But again, our policy and procedures manual is very clear on this, and I do not have any direct financial gain, or derive any direct financial support from the relationship that my -- the organization that I work for has on this specific issue for this specific $4,000 for a specific conference. Thank you.

Tracy Miedema: Katrina?

Katrina Heinze: Jay, thanks for giving us the opportunity to talk about this. You know, conflicts of interest are sometimes difficult to sort through, and the analogy to someone like me who works a company, I think is (inaudible) . So where we've tried to sort this out for someone like me would be the difference between a place where my company maybe had petitioned, so I can think of a time on the Board where my company did petition the material and I obviously recused myself.

Because the appearance in that case could be that the company was going to reward me if that material passed. In other cases, my -- the various financial incentives I get for working for a company are not tied to my actions on the Board. In your case, the analogy I would draw, or the question I have for you, because I do have a question in here, is the (inaudible) outside of the specific Frey donation, the folks who make donations to your organization, which results in your pay presumably, do

they have an expectation of you advocating and voting a certain way and that then results in them either not donating or donating?

Because that's where I could see the financial tie between the actions you take on the Board. If that's not the case, then I don't see the financial tie. So I'm trying to draw the analogy again to, you know, the objectives that might have in any given year.

Jay Feldman: Thank you for the question. I mean, obviously, I do not feel there's any connection. You know, it's interesting. Most -- I would say all of the relationships that are listed on our website have existed for 15 or more years, so I wasn't even on the Board when those relationships began. And most of the companies that are there believe in philanthropy and they believe in supporting the public debate.

They believe debate is healthy for the organic movement, and they understand the value of having a national conference that brings together the latest science, technology consumer concerns in one room. So to answer your question in two parts, first of all, there is certainly no expectation on the part of those organizations. There never has been.

I think companies that support organizations as many do, and if you look at Frey Vineyards, they're supporting dozens of organizations, many of whom are in this room, because they believe in the value of public debate, and they believe that we can enhance and grow the organic community by having that debate. But they don't direct those organizations. You know, anyone that knows anything about non-profit fundraising and how non-profits work, I think knows that given that their -- my corporation is governed by a board of directors, the board of directors scrutinizes the activities of their staff so that they're in alignment with the mission of the organization.

There's no quid pro quo. There's no written agreement. There's a simple contribution to the organization, that in this case has been longstanding. Now, in terms of a specific contribution, you can drill down a little deeper and say well, in the case of Beyond Pesticides, all the contributions it gets from corporations goes specifically to a conference which is an in out situation. In other words, the money raised for a conference is spent on a conference, none of which goes to salaries.

It goes to -- but I don't think you need to drill down that deep because whenever you get restricted grant making, whether it's from a foundation,

an individual, or a corporation, auditing principles are very clear on that. The money has to be spent for the purpose for which it is donated, and you have to show through record keeping that that is done. So in a case of the Beyond Pesticides organization, certainly accounting and auditing shows the expenditure funds for a national conference.

So that's a long answer, and I -- there is no control, there is no agreement, there's not even a discussion beyond the sheet which is listed on our website which says, would you like to donate to this forum and help advance the national discussion or organic and other issues? Check this box and send us a check.

Tracy Miedema: Tina, and then let's do -- I think we'll make this the last comment on this, Tina. Thank you.

Kristine Ellor: And I'll be quick here. I have a hard time wrapping my mind around this. You have -- Beyond Pesticides obviously has other donors, you know, who are even working for organizations sitting around the table. So, you know, would it be stretching it then to say that Jay shouldn't vote on animal welfare because he's had donations from Organic Valley. I mean, I guess from my point of view, I think it's a stretch to ask him to recuse himself. So anyway...

Tracy Miedema: Miles, do you have anything further on this topic?

Miles McEvoy: Yeah. I think that the way that Jay's described it is that there is no direct financial gain to Jay for the contribution from Frey. It goes to Beyond Pesticides which is an organization that he works for. There may be a perception that because of that contribution that -- and because Beyond Pesticides has taken a very strong stance on that particular issue, that there is a connection. So there could be a perceived conflict of interest, but there's no -- there's certainly no direct financial gain.

And as I stated yesterday, the Board is designed to have a diversity of interests, and you all have interests that are important to be heard and represented in the discussions and votes for all these different issues that you're discussing, and there's no -- we've checked with legal counsel on this. There's no violation of (inaudible) rules and there's no violations of your NOSB policy manual by this particular relationship.

Tracy Miedema: All right. Is there anyone else who needs to make a disclosure before we begin deliberations for all the committee work of the day?

Katrina Heinze: Is this time to do the standard, as Jay eluded to, I work for a company that makes a multitude of categories of organic products. I'm confident we use a lot of things on the handling list, and I'm equally confident we somewhere use a lot of things on the crops list. We don't do a lot of livestock. That's my statement.

Tracy Miedema: All right. Let's do make sure we don't get into a -- all 15 of us giving something boilerplate out of, you know, some beyond the pale need to do so. But does anyone have any other bona fide disclosure to make where one feels they are conflicted, or there is a perception of conflict?

Male: I don't know what other people's perceptions are, but in the last couple years there's a lot of perceptions. So I kind of feel like as Crops Chair, I just want to say I'm sure that some of our contract growers would use some of these materials both up for petition and the ones up for sunset. To my knowledge, we don't use them in-house, but I'm sure some of the farmers we buy from do. If anyone's got a problem, let me know.

Tracy Miedema: All right. Thank you. Let's proceed with the business before the Board.

John Foster: All right. So we're gonna proceed along the rest of the materials in the order on the published agenda. First one -- and then as we discussed in committee, I'll ask each of the people who had headed up the kind of the review of the material and headed up discussions on the material to present briefly the content of the discussion, the considerations that were made and the outcome of the voting for that material.

Tracy I'm gonna ask you for help in kind of time management with the big picture in mind, and I'll do my best to work on that too, but I mean it would help. So with that being said, Tina, if you'd be so kind as to start us off with ammonium nonanoate.

Kristine Ellor: Sure. What's in front of us, and what the Crops Committee voted on, was to ammonium nonanoate, which is a synthetic, on the national list 205601 as an herbicide, and to remove the restriction as it's listed now, which is for use in farmstead maintenance, roadways, ditches, right-of-ways, building perimeters and ornamental crops. We do have a history as a Board with this material. I think it's been in front of us twice in the last five years that I can think of.

One was the initial request to be listed. We decided as a Committee and as a Board that it's a soap, so it's already allowed. And the second time, I

believe was to remove the listing -- to remove the annotation as a soap, and in this -- and Emily can correct me if I'm wrong, in this petition, it is to expand the usage to use on food crops. So in Committee we voted one in favor of listing, four opposed, and one absent I believe the vote was.

I think John was the descending vote and you can speak to that afterward on there. Our reasoning for -- the majority reasoning for not allowing it is -- and I gotta make sure I'm looking at the right one here, there are numerous weed control alternatives, and it was the general consensus of the Committee that although this material is fairly benign and does break down, and it is found naturally, although this is synthetic form, the exception being its toxicity to aquatic invertebrates.

A broad spectrum synthetic herbicide is not compatible or consistent with organic agriculture. So I can't remember who is was compared it to, you know, there's a feel in some part of the community that an organic Twinkie might not be okay, and this is maybe an organic option for RoundUp and we just didn't find that compatible. We did have quite a few comments on this. We had eight people who favor listing, and mostly they were farmers who would like to have this tool in their toolbox.

And, you know, part of the argument was, you know, from our point of view, I think Barry and I in particular, there was a -- we had a problem with the biodiversity aspects of it, and there's a not a lot known about non-target organisms and species, that this is also considered to be an insecticide and we thought, you know, that that also made it incompatible. And some people pointed out that cultivation is also not very good for the soil microorganisms and such.

So that was the gist of the comments for. We had three comments against listing from mostly, you know, organizations like Beyond Pesticides, and people who wrote in favor of Beyond Pesticides' stance on this as well. So I think that covers my part of the discussion.

John Foster: Questions? Discussion? Again, just as blanket, I want to make sure non-Crops Committee members have an opportunity to ask questions, not being part of that discussion. So you get first dibs if you want it. All right. Anybody? Sorry. Oh, sorry, Katrina, didn't see you there. Katrina.

Katrina Heinze: I couldn't figure out how to wave so you could see me. I am interested in the -- you don't have a written one, but the minority opinion, and then I have a couple questions.

Male: I, for all the years I've been in the business, the number one problem the OFRF always reports that is the biggest significant problem for growers is weed control -- for organic growers is weed control and it's been that way for 20 years. I am not a fan of tillage. Having been a farmer myself, I tried it. I don't like what it does to the soil. That's my individual experience, and I'm not trying to paint all growers that way, but my observation, what I know as a horticulturist is that less tillage is better, generally.

I think this is a very soft material. My experience with it -- and I've used it in many applications over the years. My experience is that there's no discernable negative efforts on the entomological certainly component of the soil eco system. That's something I know more than a little about. My observation direct empirical data for me was that this is a pretty good material, and I know that a lot of growers struggle every day and lose a tremendous amount of money.

Going back again or OFRF information over the years, that's one of the common reasons that growers choose not to be organic. And consistent with my kind of general feeling that more organic production is better, this seemed to be a very small price to pay actually. And that it does -- this type of material, a soap, does -- is allowed in other contexts, I can't believe that as a general broad stroke it incompatible with organic production. Clearly empirically it's not, so --

John Foster: Okay. Katrina then Tracy then Jay.

Katrina Heinze: Two or three questions. Let me see. So my first question is, are there not other broad-spectrum herbicides also on the list? So why is this one not compatible when those are, and that's a bit of, you know, my not being crops person question. And then my second question is, it seems looking at the TR and public comment that this is the word you've used as a softer alternative than some of the things that are already on the list.

So I'm -- I guess I need to understand some of the rationale from the majority on why we wouldn't want a better alternative on the list. That seems contrary to how we normally try to operate, so I don't really understand that. I need some help with that.

John Foster: Tina, can you speak to that?

Kristine Ellor: There other things that have been used that have a long history of usage that are listed as alternatives, and like I said, you know, this is a fairly benign material, but I've also seen through the years of -- especially

attending PCOs, education, and, you know, different workshops and doing a lot of reading, that there's been incredible innovations in weed control, you know, in crop rotations, in winter dieback cover crops. I know that (inaudible) done a work on this.

I know some PCO farmers who have done a lot of work on this, And this one -- and I think part of that innovation has come about because the alternatives are so expensive. This one is maybe much more affordable, and I can see it being used much more broadly. That's my reasoning, and I'll let the other guys speak for themselves.

Male: There was a part about the softer quality of -- Katrina, correct me I'm wrong, but there was something specific about the TR commenting on that.

Kristine Ellor: I would definitely agree with that, but I see that this -- I feel that this would be used far more broadly because it is going to be much less expensive than the alternatives now available.

John Foster: Tracy, you had a question?

Tracy Miedema: Did the Committee consider an annotation that limited its use in keeping it away from water or aquatic systems?

Kristine Ellor: No, we did not up to this point.

John Foster: Did you have a follow up, or no? Okay. Jay, you had a question?

Jay Feldman: Yeah. I mean, this is one of those foundational issues again that goes to the organic systems that are inherent and integral to the act. We are not treating symptoms typically in the act. I mean, what we're trying to do is build systems that prevent weed problems, and we do that by creating incentives, I think, through the work of this board, through our decisions on various materials.

We can either create incentives to go down the path of dealing with symptoms, or we can follow the act which says we should create systems that prevent the problems. And, you know, this is a typical conventional model, I think. This product is used in a typical conventional model, and it would I think be -- to get your point, John, although in a conventional model, this would be viewed and maybe even an IPM model, this would be viewed as a valuable tool in an organic model under the standards that we, you know, are supposed to follow in the act.

This is viewed as something that falls outside the systems approach to preventing unwanted, you know, plants or weeds, whatever you call them, in an organic system. And I think organic farmers have been extremely creative. You know, I've seen the (inaudible) work with the (inaudible) , and you've probably seen it too with the -- in the different ground covers that are being used.

We, you know, under this continuous improvement approach to organic, if we go down this road of putting products on that are not compatible with the standards of the act, we end up moving away from that creativity and ingenuity that has been brought to the organic system. So not only do I think it doesn't fit within the system, and Tina mentioned compatibility, but I think it creates the wrong kind of incentive for us as community to invest the research dollars and support for dealing with preventive oriented weed management.

John Foster: Katrina?

Katrina Heinze: Two questions. One is a repeat that I'd asked the first time that I still maybe am not understanding the answer, which is, are there not similar materials already on the list, so why is this one less compatible than those, and then my second question is, this is just a tool that has to fall within the organics system plan, so a lot of this -- Jay? So a lot of that systems approach is through the organic system plan.

Just because we put it on the list doesn't mean that farmers can willy-nilly just go use it. They still have to do all those cultural, mechanical, physical things, use cover crops, and then use this as a last resort. So I -- unless I'm missing something, I don't see how this could ever be used in organic as a conventional model because we have that certifier relationship.

John Foster: Tina, in response, and then Mac.

Kristine Ellor: What's on the list now, of course, as synthetics, because if they're natural they don't need to be on the list, are as herbicides, weed barriers as applicable, herbicides soap-based, which is the one I just read, for use in farmstead maintenance, roadways, ditches, right-of-ways, building perimeters and ornamental crops, mulches, newspaper or other recycled paper without glossy or colored inks, plastic mulches and covers, petroleum-based, other than polyvinyl chloride PVC, and that's it.

That's what on the list now. So there are no synthetic broad-based herbicide allowances on the list at this time. So we would be adding that.

And I'd love to hear from the farmers on the Board if this is something that they would, you know, be interested in having.

John Foster: Mac, you're up.

Robert Stone: I guess wearing my farmer hat this past spring in Kentucky we had fully five weeks of very consistent rain, and we watched the weeds. We couldn't cultivate. We have multiple cultivation tools and humans with hoes and lots of tools in our toolbox, but I can understand this, but there are times when those tools don't work, the OSP, you can't follow your plan because of mother nature, and having another tool to allow us to keep the product in the marketplace, especially in the east with the sporadic weather patterns, I can see the value of this product.

John Foster: Nick and then Tracy and then Calvin.

Nicholas Maravell: I guess in the interest of full disclosure, I don't this product. So, you know, I don't have a bone to pick with it one way or the other. What Mac points out is very true, however, there are non-synthetic alternatives as well, if you get into that situation. And, you know, for example, and I'm not suggesting that they be used, but the TR does mention some of them such as flaming and vinegar and things like that.

We on our farm have experimented with those other approaches as well, so I guess my only point would be that there are some non-synthetics to try first perhaps.

John Foster: Tracy?

Tracy Miedema: Well, even though Jay calls them other plants, you know, us annual row crop farmers are not afraid to call them weeds. And, you know, we have -- we lose fields. So, you know, what you try to do as an organic farmer is get your field as we call it, clean, as possible and that's sprouting as many of those weed seeds and disking them and sprout and disk to get the field as clean as possible so that when you put in the seeds for the plants that you really are trying to grow, they don't get taken over by the weeds.

You bring in hoeing crews and you have a really hard time a lot of the time of the year getting people to pick up a hoe and getting out in your field. Usually it's too big to do yourself despite your best efforts. If you can't stay ahead of them because of weather events, wind, rain, et cetera, the

weeds can sometimes just grow a lot faster than the plants that you're trying to grow.

So I, you know, I don't want us to get into -- you know, I hope we don't talk totally in this realm of precious starting to call weeds you know, air quote, "other plants." Weeds are weeds and real organic farmers trying to grow vegetables so that we get to have organic vegetables, really have to deal with weeds. And even in our gardens, you know, it's -- when you're only trying to farm an acre, it's really hard to control weeds.

So, you know, let's make sure we're, you know, on planet earth here talking about weed control.

John Foster: Calvin.

C. Reuben Walker: First, a comment. When I was Oregon State, we learned that a weed was just a plant out of place. For the Committee, I would like to know again, and I commend you for talking about the written comments. Could you speak to that again in terms of the number, maybe the percent that was for, against?

Kristine Ellor: I can do better than that. I can give you that -- and the format we got the comments, was really useful, because I can refer to a page number. So I can, you know, see you break, or I can list them now and you can write them down, the page numbers of those comments so you don't have to search through for them. So 541, 574, 583, 584, 638, 687, 702, and another one I didn't have a page number for, but I can get it to you later.

Those are in favor of listing, and they were from various organizations and farmers who really like to have this tool, so that's, you know, good to hear. Against, page 541, 560 and 704. So if you want to see me, I can give you those references, but for the most part, the comments against pretty much reflect the majority committees view of it, that this is a -- this would be unprecedented adding a synthetic broad-spectrum herbicide to the national list

And the ones for were pointing out that this is a very benign biodegradable chemical in the environment. It does have issues with aquatic organisms as Tracy said, that possibly could be dealt with by an annotation, and that's pretty much the people in favor would like this to have as a tool.

C. Reuben Walker: Could you give me like the numbers, how many -- did you tally how many was for how many was actually against?

Kristine Ellor: Yeah. And I want to go on the record with saying a straight tally, you know, has variable meaning. So we have, you know, eight individual comments, and then we have three comments from organizations who represent a lot of individuals essentially.

John Foster: All right. I'm kind of feeling we're wrapping up on this. Any other unmentioned concepts or worries? Okay. We'll wrap -- we'll move onto the next then. Next on the agenda was ferric phosphate which we're moving to next spring. Next up then is IBA. Barry?

Barry Flamm: Thank you. We have a petition from Hortus USA who actually testified yesterday. They petitioned to have IBA added to the national list. IBA is in the oxine group which now is commonly referred to as hormones. When I took plant physiology it was -- we weren't allowed to call it a plant hormone at that time because it was a synthetic, and only known to be synthetically produced. Now it's been discovered that it is found naturally in some plants.

In any case, the petition, what is being requested, is a synthetic. The committee voted against listing IBA as a synthetic. The vote was six -- wait a minute. These things are -- we voted six yes and one absent that it was a synthetic, so that was taken out. And then we voted in reverse order that one yes to list it and four no. I guess I don't know what happened to the absent one in this case. It disappeared.

But in any case, the reasoning for the majority vote was that it was not compatible and consistent. It was -- and not essential. It was -- we -- on the checklist, we checked that it -- that the criteria for impact on human and environment was met, but that -- in the comments, we indicated that that would depend on the method of application, and actually there was no proposed annotations, so it would be wide open how it was used, so there could be also impacts on the environment.

I'll just read you our summary statement. There has not been shown to be a demonstrated need for IBA and organic production. Synthetic materials that achieve propogation and regulate plant growth is inconsistent with organic production. In addition, although one is checked yes, environmental impacts might be greater than indicated in the review depending on the raw material used and the manufacturing process.

In addition, although the most common probable use of IBA would be point application by dipping plant cuttings in powder, dust, or solution, the

petition request is for a broader use. Area application would present a different, more complex risk. We had a technical report of June 27 of this year, so we had pretty up-to-date information. That's a summary of my report.

John Foster: Thank you, Barry. Questions from the Board? Joe?

Joseph Dickson: Thank you, Barry. Just for those of us not on the Crops Committee, could we get just a good general layman's background on what it is and what it's used for, et cetera?

Barry Flamm: As I said, it's now considered a plant hormone to stimulate growth. I use the more common form of this class of oxine is IAA, and I've used in the laboratory, and you can do all sorts of weird things when you put it on somatic cells and that. You get it to grow and that. But it's to stimulate growth, and I think, you know, in certain cuttings and that you can get root development that you wouldn't -- might not get otherwise where you speed it up.

And it is -- it used conventionally. There is many manufacturers of it throughout the country. It's, you know, not anything new, but it has not been used and I forgot to summarize, and thank you for reminding me of this, that we got no comments whatsoever, at least not that I discovered that there was a demand for this, and we did get a few comments urging us to reject the petition.

John Foster: Katrina?

Katrina Heinze: Thanks for summarizing the public comment, that was one of my questions. My second question is, are there alternatives currently in use?

Barry Flamm: Well, I don't know if you can say there's alternatives, but the organic communities have been doing without this for a long time, so there doesn't seem to be a need. If, you know, IAA is, I think, you know, would be a possible alternative, but I do not know what the supply route would be. But I think the main thing here is that it --there hasn't been any even demonstrated need for it.

John Foster: Other questions on this? And I'll answer part of the question. When I was propogating plant material, we used this very commonly, actually. And while in a lab, I guess, it has interesting effects on somatic cells, we didn't use it in a lab. I used it on rosemary, and it -- those of you who have

green house production under your belts, it's like a nursery. You really want to talk good of that.

We found it effective in establishing a strong root mass, and that allowed the plant to withstand the inevitable onslaught in our case of (inaudible) and that allowed -- that actually allowed us to move away from fungicides and greenhouse production because of that. So that -- but again, that's my individual experience. I don't mean to say that that's true for everybody. That's just my experience with it. Jay?

Jay Feldman: And John, that was in conventional, right? That was your...

John Foster: That was in conventional that actually allowed us to move to organic, yeah. I mean, eventually. Not just because of that, but -- a quick follow up, Jay, and then...

Jay Feldman: I'm not sure what bearing this has on the action of the Board, but as you recall yesterday, we heard testimony from Joel Cronin, who I guess is the developer of this, or purveyor? Yeah. And he was suggesting that he would like to reduce the allowable concentrations in the formula, and referenced an issue, did you catch this on the inert ingredient problems that would be reduced as result of the reduction of the concentration?

So that was new information for us. I don't know that we looked at the inert ingredients, and it raises for me, obviously my antennae go up when I hear something like that. So, you know, what does that mean? Do we need more information on that? But as Barry says, this is an issue of compatibility and essentiality, you know, do we need this. If the Board things we do need this, then I would suggest we find out more about.

And it is, in fact, his changing of the petition meaning does that mean we have to bring it back and look at the changed petition and what that impact has on other issues around efficacy, what have you. Thank you.

John Foster: Thanks, Jay. Good points. Katrina?

Katrina Heinze: Some of the concerns in your recommendation had to do with what -- that there might be effects in lots of different uses. I'm wondering if you considered an annotation limiting its use to promoting rootings on cuttings, which seem to have -- be the most benign use.

Barry Flamm: Well, I think if it had met other criterion, it was deemed to be really needed, we would have looked at that, and the same thing I would say

about Jay's raising the comments. I thought that was interesting also what the petitioner (inaudible) , and if we had recommended -- if the Committee had recommended approval, that would have been a, you know, pause to relook at it and go back, but since we weren't I did not go in that detail since you all heard those comments yesterday anyway.

But no. I, you know, if we thought it met all the other criteria, then I -- and we were gonna prove it, I would certainly recommend annotating it and limiting that use so it wouldn't be used widespread. Did I clarify?

John Foster: Thank you both. Mac?

Robert Stone: I'll just remind that Board that planting stock can come into organic practice one year after planting, so a lot of this if it's woody material, it can be propagated non-organically by a producer, and then the farmer can incorporate it into their organic plan one year after planting, so -- as far as essentiality.

John Foster: Jay.

Jay Feldman: But Mac, as you know, there's a difference between annual and perennials on that provision, so it's a little -- it gets complex I guess as -- I'm not sure if we got that deep into whether this material would be used in an annual or perennial, and certainly for annual crop propogation, the use of material not on the national list would not be allowed as I understand it.

Robert Stone: John?

John Foster: It wouldn't have utility in annual production. It's a perennial. Yeah. So usable for perennials only. So other questions on that -- on the material? Excellent. Well done. I think we'll move on then if we're -- I'm seeing general agreement. Let's move onto next on the list would be odorized propane. That's gonna be real interesting. And let me kind of intro that briefly. Jay, I know you've got comments you want to make on that as well, and then we'll start the Q after that.

A petition was provided through CCOF. Azia (sp?) was kind enough to talk about this yesterday, to allow odorized propane for primarily rodent control. We had -- and there's two documents relevant to the discussion here. One is the one that's up on the screen. There's another checklist that's also part of the packet. I know Jay will speak to that. Material we heard some public comment yesterday about this, so I won't redo that, but

we decided in one of the decisions we made in the committee was to consider this under 601 as a rodenticide.

We did have a discussion about some other opportunities if the Committee decided to go this way, primarily in that it was the intended use was for rodent control. Apparently, it's also effective on armadillos, but that wasn't really our concern so we decided to just allow it to drop under the rodent control section. So I think we had a very -- as I recall, a vigorous discussion and debate.

A lot of back and forth on this, and there's a lot -- obviously, we got a lot of public comment on both sides of it. Is -- this is the part where it's very hard to be a committee chair with an opinion about a material. I'm doing my best here so please bear with me to -- it's -- I think it's fair to say we had a very good discussion. I felt it was very thorough.

I felt a lot of people brought a lot of good technical information forward both through TR and public comment. As applied, it's two to three percent apparently propane, the balance being oxygen, and then ignited in a burrow. We heard from one provider of this device yesterday. I think he gave a pretty good description of it. On the whole, I've got to look at -- sorry. I've got to look at my votes here. Crops Committee voted on the recommendation for this material to be added to the national list.

This would be on 205.601 (g)(3), to include odorized propane as petitioned. I made the motion, Tina seconded, and then there were three yeses, for nos and none absent. We did, I will say do this vote electronically in addition to the conference call, making -- because it was close we wanted to make every effort to make sure every Committee member had a chance to vote on it, so that's -- we did extend it electronically in this case. Jay? And then we'll cue up for other folks to ask questions.

Jay Feldman: Thank you. Lorraine is gonna put up a really quick -- I'll speed through this. I'm gonna present to you guys the thinking of the majority of the Committee on this which wasn't really fully expounded upon in the document that was put into the record. So I'm not sure we have -- hopefully this will -- there you go. Thank you. So as John said, CCOF is petitioning to have this device used for burrowing animals added to the national list, 601, synthetic substances allowed for use in organic.

We recommend -- the Crops Committee recommended the majority against approving the petition. It was a close vote certainly. The thinking of the majority, this is what this presentation is about. The use does not fit into any categories of allowable uses of synthetics under the law. The use fails the criteria for impacts on humans and the environment essentiality and compatibility with organic and sustainable agriculture.

Propane is not -- as you know, the 6517 (c)(1)(B)(i), you all know this by heart, right? Propane is not a copper or sulfur compound, a toxin derived from bacteria, a pheromone soap, et cetera, a product aid such as netting. These are the delineated allowables. The use of propane to explode rodent burrows has many adverse ecological impacts. That's what we focused on primarily. Propane is produced from petroleum natural gas non-renewable.

The petitioned use may kill or injure other species living in rodent burrows including predators of pests and threatened endangered species. Whole eco systems depend on these burrows. Use of propane also poses threats to humans. The use of propane oxygen explosion devices also poses a physical safety risk to the operator. The use of propane to explode mammal burrows is unnecessary, although we heard that many people would like to have this certainly, there is some question concerning the effectiveness of collapsing rodent burrows as ground squirrels easily find and reopen old burrows.

This is a reinfestation issue we were talking about yesterday with the developer of this product equipment. The TR mentions a number of practices to control burrowing rodents, trapping, natural predation, increased predation through improved predator habitat, shooting rodents, flooding burrows and ecologically-based rodent management. The use of propose to explode mammal burrows is incompatible with a system of organics and sustainable agriculture. It has devastating impacts on biodiversity by wiping out whole underground communities including some threatened endangered species.

It destroys predators of pests. It is meant to control in the case of free soil, is impaired and soil organisms are killed. We received comments from CCOF, OTA, MOSA, Beyond Pesticides, and a number of growers and other interested individuals including the manufacturers. Beyond Pesticides and other commenters gave detailed comments on the impacts. The company that makes the Rodentator said there is no evidence of any collateral damage to worms, insects, or other types of

species in or around the tunnel system, and has had a concussive force applied to it.

A number of people said that while some controls available to organic operators work in certain situations, they do not work effectively for all. Crops and environments, a number of commenters thought that odorized propane is a necessary tool used in combination with or when alternative controls such as the others are not available, and several people mention specific pest problems. On the issue of essentiality, CCOF says the traps are effective for gophers, but they are time consuming to use.

The amount of time needed stated by CCOF in the petition is one to two hours per acre, which compares to the time needed to use the Rodenator in the Prairie Dog study included in the CCOF petition, 3.4 to 4 hours per acre. Beyond Pesticides commented that according to the University of California, exploding burrows ranks in the lowest category of efficacy and the highest for cost of materials and labor, and this chart shows you that the Rodentator -- or the burrow exploder, I mean, generically, is among the least efficacious and among the most costly, and among the most labor intensive.

This was for ground squirrels. Compatibility, controlling rodents by essentially bombing their habitats is widely inconsistent with organic principles, ideals of minimizing environmental impact, encouraging beneficials natural interactions, there are alternative methods of managing damage from burrowing rodents that promote and enhance biodiversity, biological cycles, soil bog, biological activity, and while the use of propane to explode rodent burrows does the opposite.

The alternatives use management practices to do what this petition proposes to do with all farm inputs. Thank you.

John Foster: Thanks, Jay, again for a good summary. Questions? I've got Tina and I believe Calvin after that.

Kristine Ellor: Thank you. I was talking with members of our community about this last night, and one thing that came up, and I wanted to ask the NOP about this, reading from the CCOF comment, we'd like to say at the outset that we believe this should not fall under the scope of the national list as this is actually a physical control method as are other practices that use fuel such as tractor, tillage and flame weeding.

For instance, it would be far more appropriate to add a clause to 205.206 (b)(4) for concussive device than to add a substance to the national list. That's one point. And also, I understand that this was once allowed and now no longer is, and I'd kind of like to get the back story on that.

John Foster: Miles, does the program wish to weigh in on that?

Miles McEvoy: First of all, in terms of the back story on this, I don't think the program made any particular statement one way or another until it came up during an NOP training -- I'm not sure what year that was, but it was stated in a training -- in a question and answer session that the use of odorized propane, or these types of devices was the application of a substance and therefore was prohibited, and that's where it came from.

It's not specifically in the program handbook that's it prohibited, but that's been the longstanding position of the program since that training when that question was answered. So that's where it comes from. Prior to that time I believe the number of certifiers were allowing those kinds of devises to be used. Not great process, but we're making changes to that.

In terms of the petition use for propane for rodent control, it involves the direct application of a synthetic substance to the soil, therefore the substance would need to petitioned to section 205.601 of the national list, and if approved, would be listed on 205.601, not 405.206 (b). It's different than flaming. Flaming is that there's no application of a substance when you're flaming weeds.

You are bringing the propane out in the field, and it's igniting and causing that flame then to burn the weeds or to impact the weeds, Let's see. So there are other mechanical devices on 205.601, sticky traps and barriers under 205.601 (e), nine insect traps and sticky barriers are also one of the categories listed in OFPA. So it's more appropriate to have it on 601 than under 206. It's also a much easier process to amend a national list citation than to amend a practice standard like 206.

John Foster: Thank you. Calvin?

C. Reuben Walker: Two questions for the group as it relates to odorized propane. I like the part on the public, the written comments. I always think that is great that we consider those. Two questions. One would be, overall, how would you all characterize the written comments that was provided to the group as it relates to this particular material, and part B of that question would be are there any possibilities, based upon the written comments

and maybe what we heard here in Georgia, that there may a possibility of some modifications?

John Foster: Overall characterization, growers want it, consumers don't, in general. Those are -- that is an overall characterization, which I know is what you asked for, in general. As for modification, I don't want to speak for the Committee, having not discussed that, but knowing the Committee, if there's the will to look at that, the Committee is open minded and I would assume consider that, you know, on its merits. Okay. I had more hands go up. I saw a hand over here. No? Okay. Jay?

Jay Feldman: I just wanted to add to your, you know, characterization of the vote. I think there's this distinction between the farmer feeling a need, and the ecological. I wouldn't classify that as consumer per se, but more an ecological concern or college's concern so that we put that into perspective. We heard from the Wild Farm Alliance on this as well as a concern, given the impact on other species and other organisms.

John Foster: Thank you, Jay. Calvin, you had a follow up to that?

C. Reuben Walker: Endangered species, could somewhere share what type of endangered species that could be affected by the use of this product?

John Foster: Jay, I know you're loaded for bear as it were on this one. Go ahead.

Jay Feldman: You know, actually that's a county-by-county determination, and, you know, I mean, there are all kinds of endangered species that, as you know, live in the -- yeah, in the bunkers, in soil, and in various areas. We didn't put together a list of endangered species. Presumably, and I don't know how this would work, but presumably there would be a mechanism for collaboration at some point with the certifiers to determine those counties in which there are endangered species and that would be prohibited.

But, you know, it's an area that I was trying to some clarity on yesterday when I asked the developer of the equipment, I'm sorry, I forget his name, whether he had any studies on the collateral damage associated with the use, and his response was mostly focused on efficacy of the product. So I don't think there is a lot of data, at least that I'm aware of in the realm of specific endangered species. It's more of a general statement.

John Foster: Wendy?

Wendy Fulwider: I would expect that there would not be a lot of demand for this product, but I would expect where it's use would be very advantageous would be on livestock farms because we have a lot of grazing going on, and an animal with a broken leg means a lot of suffering and a tremendous loss to a farmer.

John Foster: Thank you, Wendy. Other unheard voices so far? Just want to make sure we're allowing for that. Jay?

Jay Feldman: I actually had a question about that, Wendy. I'm glad you brought that up, because there was some statements from livestock producers mentioning this. And given the nature of the explosion, and you all -- I have a video on this if you want to see it that is pretty descriptive, it shows you, and then you can watch the "Caddyshack" movie after that. But seriously, the -- what I'm trying to get at understanding is this is not a preventive measure, obviously.

You know, these are burrows, they're there, you explode the burrow. How does that protect the livestock in the sense that you've now disturbed the soil, you've created presumably depressions in the soil. I'm not quite sure how you connect the dots on this one where the damage has already been done as a result of underground burrows. You're now exploding parts of that burrow, you may be exploding, I don't know, 50 percent of it.

Jay Feldman: You're still left with some burrow, but you're left with disturbed soil which is obviously, it's an explosion, so you're creating depressions and other things. So I'm not sure how this -- I read that comment, and I was interested if you had any insight on that.

John Foster: Go ahead, Wendy.

Wendy Fulwider: I don't have any experience with this Rodentator myself, but, you know, I do know that you need to get those holes taken care of, you know, otherwise you're gonna have more broken legs, and you need to get rid of those animals that are under there. So it's not an easy thing, but this would be one tool that people could use to protect their livestock.

John Foster: I would just again, as a user of this in the past, and I used to observe it on quite a few -- actually, I saw it more in perennial like orchard and vineyard crops as an inspector, more than I saw it in livestock, but it's -- you might have a moment where that -- you might have a minor depression, but generally speaking, the tunnels that collapse are far enough down. You don't get canyons in the field because of this.

You're decreasing the number of new holes, primarily aeration holes, because they gotta breathe down there, so most of the holes that gophers are -- from gophers, squirrels, are to provide aeration, and emergency exit opportunities. So it's not so much -- it is on that score, Jay, it is preventative in that you are reducing the number of future holes. That's where it would be most relevant for livestock in my observations. More questions? Calvin?

C. Reuben Walker: I think to add to the livestock piece, my first question would be is, when these holes are exploded, is it a large depression made? Because I can see from a livestock advantage, if the holes are exposed, that is good because it allows the animal to what, to avoid that particular depression that could injury or the loss of an animal.

John Foster: It's not my observation in the field. There's far more gopher holes than there are depressions as a function of this. In fact -- well, and there's gonna be -- there's lots of videos one can show, but there's more videos of very uneventful things. The videos aren't taken if it's not eventful, right? So it's not really a fair comparison there. The media, you know, there's not opportunity to take a picture of flat ground with nothing happening. It just doesn't happen very often. Please, more discussion, more voices?

All right. We'll wrap this up then. Thank you. Good questions. Moving on. Jay, you lucky person, you. Moving onto copper sulfite. This is now -- we are, for everyone's reference, we're moving into sunset 2013 materials now.

Jay Feldman: Thanks Lorraine. Okay. This is -- this is -- I'm gonna run through this probably too quickly, but I have a lot of slides I want to show you. Again, we're dealing with the sunset 601 synthetic substances allowed for use in organic agriculture. There are two uses we're dealing with, the algicide as you heard yesterday, and aquatic rice. Copper for use an an algicide in aquatic rice systems is limited to one application per field during any 24-month period.

Application rates are limited to those which do not increase baseline soil test values for copper over a time frame agreed upon by the producer and accredited certifying agent. And then the other use is a tadpole shrimp use. This is 601 (e) as insecticide for copper sulfate for use as tadpole shrimp control in aquatic rice production is limited to one application per field during the 24-month period. Application rates are limited to levels

which do not increase baseline soil test values for copper over a time frame agreed upon by producer and accredited certifying agent.

This is the history on it. Copper sulfate -- actually, does somebody have -- I don't have it right in front of me, the vote on this in Committee? I should just give you that. I'll get to it if you don't have it. It's in the slide later on. But copper sulfate as algicide invertebrate control in rice was approved in '01 as an allowed synthetic. There were three (inaudible) reviewers at the, one in favor of approval, two against.

There was an annotation adoption, one application per field per 24-month period, not to increase baseline soil. Then when the sunset came around in 2007, there was an 11-3-1 vote, 11 for, three against materials still needed in organic aquatic rice systems. No compelling new information presented to warrant removal from the list. Here's a -- sorry. I apologize. This was the tadpole shrimp annotation there. And the -- there was a summary of NOSB actions on the original decision.

NOSB approved amending the existing national list usage to add only with documented need as an algicide and tadpole shrimp control and aquatic rice systems not to exceed one application per field per two-year interval used in a manner to minimize accumulation of copper in the soil and water systems. This material was previously determined to be synthetic. We received a comment from PCO. There's another listing on copper sulfate. I'm sorry, this is historical comment at the time from PCO.

One for algicide use, one for tadpole control, both listings do have the annotation about using once every 24 months. I think this is being used so that people can use it once every year. Now that wasn't clear at the time, as you could see from the previous annotation that I cited, but according to Jerry Davis, copper sulfate for use as an algicide in aquatic rice systems limited to one application per field during any 24-month period.

Application rates are limited to those which do not increase baseline. That is section 205.601 (a)(3). It is also listed in 601 (e)(3). This is quote from Jerry. "Copper sulfate for tadpole shrimp control in aquatic rice systems" with the same identical wording after that as I just read it. So I just want to give you a sense of the history that this idea that it is used every year doesn't conform to the history that is in the record on this.

And there was some question as to whether in my mind, and we can discuss this, but as to whether the original intent was to use it every -- once every two years, every 24-month period. The Crop Committee recommends that copper sulfate be relisted both as an algicide and to control tadpole shrimp with the following annotation. When it is determined that weather conditions prevent the drill seeding production practice is limited to one application per field during any 24-month period.

Application rates are limited to those that do not increase baseline soil, which is the same -- the rest is the same as currently exists. Test values for cooper over timeframe agreed upon by the producer and accredited certifying agent. We received comments, and John, do you have the vote there? I don't have it in front of me, but it was -- I think it was 5-1 or something like that. Comments were received from CCOF, OTA, Beyond Pesticides, California Rice Commission, Wolfe DiMatteo and Associates, PCO, 16 rice growers and two other individuals.

Many growers in CCF suggested the relisting of copper sulfate for control of scum disease, algae and tadpole shrimp and rice in the same annotation as the rest of the copper products. Copper sulfate substance must be used in a manner that minimized accumulation in soil which is current practice. Alternatively, renewing the listing with the existing language of once every two years is the next best choice.

Wolfe DiMatteo and some growers suggested renewing the listing without change. Beyond Pesticides suggested that the use for algae at least be dropped. New data. Now, this is the new -- this always comes up, what new information do you all have? One, although there have always been concerns about the use of copper, particularly in rice because of its toxicity to aquatic organisms, new information was used by the Committee in making its decision. There was a new technical review.

Citations contained within the TR and additional sources consulted by the committee. Some commenters have stated that the Committee had no new data, but in fact the TR was new. Many of the sources consulted were not published before the last review, and other sources that had been published, were not considered by the Committee at that time. Environmental hazards, there's a large body of research concerning the impacts of copper sulfate on aquatic plants and animals.

There is no doubt that copper poses more ecological hazards in an aquatic environment like a flooded rice field, than in a terrestrial

environment like a bean field. One element that the Committee focused on was the fact that concentrations of copper that would be found in a rice field are high enough to be toxic to amphibians, which may contribute to biological controls of both algae and anthropods. Quote -- this is from the TR. Tadpole shrimp are not a problem in transplanted rice, and are in fact encouraged as a method of biological weed control.

Japanese literature has many references to efficacy in use of tadpole shrimp. This of course is after it reaches the chlorophyll stage. One approach that -- that's why it's transplanted at that point. One approach is that is possible is to transplant rice seedlings instead of direct seeding, obviously labor intensive. Since transplanting rice is labor intensive and American rice production is highly mechanized, so we felt we were unable to consider this alternative. We had several references to a drill seeding system practiced by the Lundbergs.

We've heard from Erik that supposedly it makes copper sulfate unnecessary. Now, this is currently disputed, and we'll talk a little about that, but it was originally documented in the National Academy of Sciences book (inaudible) "Alternative Agriculture" and an ATTA publication "Organic Rice," and a citation that we had that I asked Erik about yesterday on the Lundberg website. The website said no pesticides were used, it now says only organic pesticides are used. This is only for the organic rice.

Obviously, Lundberg is doing a lot of other experimental work as eco-farmed rice as well. All of these publications present the drill seeding system as a success, and one requiring no inputs for shrimp control. Algae are not mentioned as a problem in any of these publications. So I actually -- it says we contacted, but I actually spoke with Bryce and Erik, and we had what was a friendly conversation -- I hope we're still friends -- who told us that the system does not always work in wet years.

This feedback was built into our recommendation. Wet years -- I should have said wet years and higher temperature levels. This -- obviously the weeds come in quicker in that setting. This feedback was built into our recommendation which aims to reduce the use of an environmentally damaging material by requiring that it only be used when a proven method with documentation going back to 1989 is not feasible.

That was the intent and spirit of the annotation. Obviously we're getting a lot of feedback on that from rice growers that say that drill seeding is

unpredictable, undependable, most rice in water seeded in order to control -- most rice is water seeded for the weed control. Tadpole shrimp, algae, and scum can be problems in water-seeded rice. Drill seeding doesn't work in alkalized soils.

We have received many comments from rice growers including the Lundbergs who are, to put it mildly, outraged that we are prescribing a planting method. It was not our intent to prescribe a particular planting method, but to restrict the use of copper sulfate. We are particularly confused by the reactions of those -- I should I am particularly confused by the reaction of those whose methods have been so widely documented and promoted on their own website as well as other places.

But that's what this process is about, right? To get the information out, and we're now getting the feedback, which I hope everyone takes as a positive. Related to the essentiality comments, CCOF and others said that it does not make sense to put an annotation in place concerning a seeding system, when such cultural practices belong in a grower's organics systems plan, and I think, John, you made that point during our Committee discussions.

They said that certifiers will determine whether adequate alternatives have been considered and tried before an input is used, as is clearly stated in 206, without have to be added to a listing on 601. Sodium carbonate peroxyhydrate (sodium percarbonate) was approved by the NOSB in 2007 because it promised to be an alternative to copper sulfate for algae. Commenters who have used it have given it mixed reviews. Some growers cited a study of alternatives for algae control as support for the claim that sodium percarbonate is ineffective.

A study that also said that copper sulfate is ineffective. Okay. Export issues. One grower said that the organic rice treated with sodium percarbonate is not approved for export. In the comments received in response to the ANPR, CCOF said that most organic rice is exported, and none of the countries receiving CCOF certified exports recognized copper sulfate for shrimp control, they asked for a change of algae to scum in listing to match international usage.

Yesterday, responding to a question on this, CCOF indicated that they do export with the allowance of the scum listing is the way I understand the response to the question yesterday, because algae leads to the scum problem. However, growers use algae and scum to denote different

things in their comments. This makes is unclear as to how any rice is being certified for expert when copper sulfate is used. I think we got clarification on that yesterday.

Beyond Pesticides commented that the impacts on cooper sulfate on biodiversity is a problem. California Rice Commission cited research showing a shift to algal species in rice fields from green algae and diatoms to blue-green algae, and noted that the two main reasons for the 27 percent in the use of copper sulfate for 2000 to 2009 are price, which is increasing, and efficacy. We learned from the 2001 TAP, you can go back and read the TAP if you want.

Research, this is one area where we have agreement. Everyone believes we need research in this area, and I think there's some analogy here to the antibiotics. This should not be used in aquatic environments. We need serious research on alternatives, and, you know, I would like to see more research on terrestrial crop uses as well. Thank you.

John Foster: Tracy?

Tracy Miedema: Mr. Chair, John Foster of the Crops Committee, I would prefer all of the Committee Chairs choose a representative to present who represents the majority opinion, rather than for instance a single antagonistic member on a vote. I had a very hard time understanding and making sense of the fact that this -- the Committee voted 6-1, and aligning that with the information that was just presented right now.

So just for the purposes of alignment, clarity, understanding how the Committee arrived at its decision, I would prefer we get some voices from the Crops Committee to kind of flesh out the whole picture here.

John Foster: Thank you. Crops Committee members, any fleshing? Tina?

Kristine Ellor: As far as fleshing goes, I mean, it's more a matter of this is the information we used to vote, and the vote that I have is actually 4-0, three absent, in favor of this. But personally, you know, since we have additional information, I would certainly, you know, change how I deal with this, but I thought that would be more appropriate for Friday discussion.

John Foster: Yeah. I was one of the absent on this and I, you know, no surprise to anyone, I do find growers' perspectives compelling generally speaking, so I would weigh in accordingly I think at this point. Other voices? Calvin.

C. Reuben Walker: ...eluded to that. The vote was four yes, zero no, and three absent. So the question I had was the three that was absent, how do they fall as it relates to this particular material. But Tina, you asked that there may be some changes in the Committee.

John Foster: Yeah. I -- based on what I -- I was one of the absent. I find the existing structure, not just the annotation, but the context that it fits in, I find that to be functional and as an observer, as an inspector for many years, I think it's working. I would have voted for status quo for sure. That's me. And I'm sorry, I don't recall who else was absent, so I can't speak to that. Sorry. Nick.

Nicholas Maravell: I'll just comment. I believe I was absent, that I find the public comment on this to be worth considering in terms of our final deliberations as we've heard from the major producers, and this might be a situation where I think our intent can still be clear, but I don't think we need to restrict the activity in such a way that we're not giving the growers an alternative.

John Foster: Steve, I think you were the other absent. I just want -- I don't want to put you on the spot with a pecan tart in your hand, but -- oh, you were there, I'm sorry. Other absent member? Okay. Okay. All right. New voices? Tracy?

Tracy Miedema: Thanks for the clarification on the vote.

John Foster: And we're gonna be taking a break after this topic is done, for those of you who are waiting a lot. I see a lot of this going on. Jay?

Jay Feldman: I just feel I need to respond to Tracy, John. You know, this did reflect the thinking. I was trying to share with the full Board the process we went through both in terms of looking at the TR and the literature, the current producers, reaching out to the current producers, and then trying to convey that to the Board with some feedback, an assessment of the feedback that we're getting through the written comments, not the -- obviously the spoken comments.

I tried to ad lib on that. So I think this process works myself. I think it was helpful for me to go back and look at the process we went through to justify and decision, and I would endorse this similar kind of process going forward. Thanks.

John Foster: Thanks. New other thoughts on copper sulfate? All right. I have official time of 10:45. We'll take an exactly 10-minute break. Back in our chairs at 10:55, and we got I think some rapid -- we'll be able to move through the remaining materials a little more rapidly. Famous last words, I know, but I have faith. 10:55 start time.

[BREAK]

Male: Board members, please start to return to your seats. Members of the Board and program staff, please make your way back to the table. We're gonna going to go ahead and get started now, we have a quorum at the table. John Foster will resume the crops discussion.

John Foster: Thank you, and thank everyone for being -- sticking to that 10-minute rule, appreciate that. Appreciate that. We're gonna move on quickly. Last three materials for Crops Committee, taking first, ozone. Tina, I believe you were head point on that.

Kristine Ellor: Yes. I'll try to do this in three minutes or less. The listing is ozone gas for use in irrigation system cleaner only. The Crops Committee voted, I think, unanimously amongst those present to continue this listing as written as it is far more environmentally friendly alternative than a lot of the chlorine products available. It is being used. We had comments in favor of relisting, and no comments against relisting, and that's pretty much all I have to say unless there's questions.

John Foster: Thank you, Tina. Questions, particularly from non Crops Committee members first on ozone, how it's used. Are we good? After the materials this morning, this is a refreshingly consensus-building material I find. No questions. And please correct me if I'm wrong, I don't remember any comment yesterday about ozone, spoken comment, is that correct?

Kristine Ellor: There was no spoken comment on this so far. We might hear something on Thursday, but we had comments in favor of relisting from Beyond Pesticides, Tammy Baldwin, CCOF, WDA, and OTA, that I could track down.

John Foster: Thanks, Tina. Katrina? No. Okay. Other thoughts, questions, concerns? All right. I'm -- all right. Colehour? (sp?)

Colehour Bondera: I -- sorry. I just wanted to say to the Crops Committee people who were absent at the vote if they had any comments since there were three of the seven were not present for the vote.

John Foster: I believe I was one of the three, and -- no? Steve?

Steve DeMuri: I believe I was absent for this vote, but I would have voted to relist.

John Foster: All right. Moving on. Thank you, Tina. Next sunset I'll take ozone. Just kidding. Next up peracetic acid, and Barry, I believe you were point on that.

Barry Flamm: Peracetic acid is presently on the national list allowed for use in crop production under A as an algicide and a disinfectant and sanitizer, including irrigation system cleaning. It's -- and it's also for disinfecting equipment, seed and asexually propagated planting material. It's also under a different listing as a plant disease control for use in control of fire blight. Just a little quick history, a petition was received in 2008 to remove the annotation for the use of the peracetic acid which would have expanded the use.

In other words, those limitations that were just listed, you know, only for fire blight control, and only for the use of sanitizers and disinfecting equipment. At the -- the Committee essentially and the Board ended up rejecting the petition, but at the same time, the Committee recommended a change in the annotation for both listings as follows. Permitted in -- the annotation read that permitted in hydrogen peroxide formulations in concentrations of no more than five percent.

And a similar annotation for the use for fire blight control. And this was a pass by the Crops Committee and pass by the full Board at the November 2009 meeting. Subsequently, the NOP concurred with the NOSB recommendation, and that was in April of 2010. But there never has been a rule implementing this proposed change. So the listing that's in the rags remains the old one without this change in annotation that was recommended in 2009.

In reviewing the record, the Crops Committee this time around recommended adopting what the Committee -- the Crops Committee and Full Board did in 2009, and this was approved by the -- where'd I get my vote? The vote in Committee to continue to accept the 2009 vote was a yes five, no zero, and there was two absent. We received -- during the -- this of course was published in regulations.gov, and there were comments received from the Concord Grape Association, Wolfe DiMatteo, and the Juice Products Association.

Anyway, all the comments favored the continued listing of paracetic acid, but did not necessarily specifically comment on what the Crops Committee had recommended in 2009. In the subsequent comments, we received written comments from Beyond Pesticides and Richard (inaudible) -- excuse me for mispronouncing his name. Beyond Pesticides raised some new questions about the environmental impacts of paracetic acid. Well, I shouldn't say -- anyway, they raised questions that wasn't in the previous record, and I don't believe were considered in 2009.

In addition, the comments -- we had comments that perhaps what we had done now and in 2009 may have violated OFPA that went beyond authority in terms of specifying those percentages. This was something that EPA should have done. Anyway, we had those comments. Other comments were that paracetic acid was needed and was being supported, and we had several comments like that. This turned out to be a little more confusing than I expected.

It started as a point, Emily has done -- from NOP, has done some -- did some additional research, and conferences within NOP and the latest thoughts that I have received anyway, and I think a few members of the Crops Committee may have seen this, but not all. So this was not part of the deliberations or the vote, but I can just -- I'll just summarize and read quickly what she said.

We think that since the Committee is not proposing to change the recommendation from 2009, that it's not necessary to revote that motion at this time as it still stands. For purpose of sunset review, the committee can simply vote to review its current listing. Now we haven't discussed this in the Crops Committee, and I'm not sure how I feel, because we would be presenting two choices, and there's a lot -- the Crops Committee back in 2009 did give a lot of consideration in coming up with that annotation.

So I'm not, you know, I don't know -- I'm not ready to back off of it, yet, but I wanted to just lay that out. The other thing is -- I failed to mention, we had requested a current TR back when -- earlier in the year, to -- for paracetic acid, but that was not available, and I think there was thoughts in NOP it wasn't necessary because of what we did in 2009. I think 2009 did base its judgment on not a real current TR.

So I don't know if more information and TR would clarify these points or not, but anyway, that's where it is. A little bit messy now, but just in

summary, what the Committee voted and ended up passing was just -- was to endorse what was done in 2009, which had been at that time also subsequently supported by NOP, but there's been questions raised since, which I've tried to explain.

John Foster: Thank you, Barry. Yes. It did get confusing there at the last -- at the wire there, but we'll I'm sure have time to discuss that as a Committee most likely tomorrow. Other questions from the Board? Katrina.

Katrina Heinze: So despite the messy, how I understand is that the Committee is recommending that we relist as is, and then the annotation changed from 2009 is a totally separate topic which you may or may not address at this meeting, is that...

Barry Flamm: No. I knew I wasn't being clear, sorry. No. What we voted on was not only to -- in 2009 what was voted on was an annotation change which put this five percent limitation. And what the committee voted, you know, in sunset, was to accept paracetic acid with that annotation. But under our new procedures, it would -- well, that's part of the question -- procedural question.

Katrina Heinze: So how I read your recommendation is that you took one vote to relist paracetic acid as currently listed, and then you took a second vote -- oh, to change the annotation as written in the 2009 recommendation. So how I interpreted that second vote was that you were reaffirming the annotation change that was made in 2009, so you wanted the current listing change to include that original recommendation?

Barry Flamm: That is essentially correct.

Katrina Heinze: Okay. So one vote to relist as it currently stands on the list, nothing to do with the annotation, and then a second vote, which as I understood your presentation, we may or may not do depending on how the committee talks, that has to do with the annotation; is that correct?

Barry Flamm: You know, in sunset, we don't do those two separate votes. Remember this -- now we're in sunset. So all we were doing was take a vote, and what we voted on was endorse -- now, if we were doing -- in 2009 we didn't have this two-step procedure, so the Committee didn't do this two step procedure in 2009. Today we do what you're describing.

But in sunset, we don't, you know, we either approve it as is, or we -- if we were making a change we would, but we were just endorsing this, so I think we really only voted once as far as I remember.

Katrina Heinze: You did two votes in your recommendation.

Barry Flamm: Sorry. Good thing I have all these people looking over my shoulder that corrected me. Thank you.

John Foster: Tina.

Kristine Ellor: Maybe to add to confusion, but I think to clear it up, I think what Emily's point was is that as a Board, we don't really need to vote on the annotation. That's a done deal. All we really need to act on as a Board is to renew the listing, right, Emily?

John Foster: More questions? All right. Good enough. Moving on to I believe the last item, which is a 602 material, Colehour you we heading this up -- let me get through my screen here, sorry, on calcium chloride. Ready to present on that?

Colehour Bondera: So here is the last one of the crops thing, and I thought it was gonna be super fast and simple before the break, so let's make it super fast and simple anyway. So yeah. It's a sunset 25.602, non-synthetic substances prohibited for use in organic crop production with an annotation it's -- it is natural and prohibited for use except as a foliar spray to treat physiological disorder associated with calcium uptake. Briefly go through the Committee summary.

So we did request a TR, but did not receive one. We reviewed the 2001 TR, we also looked at the 2007 sunset recommendation as it was adopted. Let's see what else we can skip through here. I think that there were -- there was discussion, you know, one of the things that it says that I think is worth reminding ourselves, you know, goes back to some of the foundational truths.

It even says that they're the foundational soil fertility and crop nutrient management practice standard, which is a producer may manage crop nutrients in a manner that does not contribute to contamination of crops, soil, or water, by plant nutrients. So respecting this and looking for that, and, you now, we also -- like I said, we looked at the public comment on the previously considered annotation, you know, from those records, and I've included those here.

But I think it's, you know, it's not irrelevant, and we did discuss it, including even one of the suggested annotation changes on genericizing the chloride subject area which we did not do, however, and we do -- well, I think -- I'll honestly admit that this whole thing happened as this new process was going on where it was still confusing to me at least where you can change annotations during this process, and so this was one of those learn how this goes processes.

So, you know, nonetheless, we did not seek to make such a change. Our recommendation we worked on was to retain it onto 205.602 (c) non-synthetic substances prohibited for use in organic crop production with the annotation reading as I have it there, calcium chloride brine process is natural and prohibited for use except as foliar spray to treat a physiological disorder associated with calcium uptake.

Our Committee vote was six yes, zero no, one absent. We had not abstentions or recusals. I'll comment briefly and quickly on the written public comment. We received seven comments in written form, five of those comments supported what we presented, one pointed out the error regarding annotation change issues and sunset processes, and one of the comments said that it's not -- it has no appropriate place in organic systems.

Further, one of the supporters, you know, wrote out, you know, that it may have detrimental impacts on soil and ground water, that there is no demonstrated need to apply calcium chloride to the soil in organic agriculture as there are alternatives such as rock salt, I'm not reading, but calcium gluconate, sodium choloride, magnesium chloride. Application of calcium chloride to the soil is inconsistent with OFPA. So I think from my perspective, that summarizes what we did, and I'm happy to at least attempt to entertain questions on this topic.

John Foster: Thank you, Colehour. Questions, concerns, clarification? Again, a lovely unifying material. I'm happy to see those. All right. If no discussion, then I will turn it back over to Madam Chair.

Tracy Miedema: Thank you, John. That concludes the presentation of the Crops Committee. We will now move into the Livestock Committee presentations, with Dr. Wendy Fulwider. Wendy, go ahead and take over.

Wendy Fulwider: Okay. Thank you, Tracy. Lorraine's pulling up the PowerPoint. Okay. We've been very busy since the last meeting at the Livestock

Committee. The first presentation I am going to do here is responding to questions that the Board submitted to Temple Grandin, and so all of the pictures in this presentation are mine. Temple's part of this presentation, the words are all hers. So introduction. We worked very hard at trying to reach a consensus, and as you know, we were not successful.

But at the last NOSB meeting, Pat came with the ACA, very graciously offered to put together a livestock issues working group with stakeholders, and so we met weekly for several weeks and discussed, you know, all the different opinions on what an organic poultry operation should look like, and we learned that there is an awful wide variety of opinion on how that should be. So we took our questions from that to Temple.

So the agenda today, the first part of this is going to be the presentation per Dr. Grandin, and then we will go into the animal welfare recommendation, the animal handling, transport, and slaughter recommendation, the species specific guidance, the dairy score card and the outcome score tally sheet.

Some of the questions that we put to Dr. Grandin were, how is welfare best measured; what would be required to ensure good welfare; what must be in regulatory language, examples would be mortality list or space requirement; is it humane to day-old chicks for organic production to be routinely beak trimmed or de-beaked; from an organic viewpoint can an animal perform its perform its full range of natural behaviors without touching the ground or soil; is there anything in the regulatory language that should be moved to guidance, for example, the space requirements for poultry.

So Dr. Temple said, organic versus welfare. Many of the questions address a fundamental issue of what should be organic. Should organic be narrowly defined as being free of artificial chemicals, or should organic have a broader definition. Chickens can have an adequate level of welfare if they are kept inside, but is this truly organic? Basic amenities. Indoor chickens can perform all the basic hardwired instinctual behaviors if provided with the basic amenities which are nest boxes, perches and scratch areas.

Flapping space. The enclosure must have sufficient headroom for normal posture. Hens must be able to flap their wings without touching the sides of their enclosures. It is impossible to avoid touching another chicken during flapping because chicken naturally flock together. Ground floor

space. There has been much controversy about space requirements for chickens. If space requirements are totally based on the ground floor space in the building, this may have a negative impact on aviary systems. Aviary systems would require less ground floor space than floor systems.

Perch and roost. One requirement for a chicken, however, is that all birds should be able to roost at the same time up off of the floor. Welfare: Organic. I think there needs to be a distinction made between what is needed for welfare and what it really organic. For welfare, the birds can live inside, but this may be contrary to some people's ethical concerns about what organic really should be.

Indoors? Outdoors? Organic? The controversy about indoor or outdoor chickens is strictly an ethical one. Science cannot provide the answers. The committee will have to decide what organic really means. Minimum welfare requirements. For welfare in all species, I have certain minimum requirements. Health, low ammonia levels, good body condition, animals stay clean, be able to perform basic natural behavior, low levels of lameness, lesions, and injury, good coat or feather conditions.

I have further information in "Improving Animal Welfare: A Practical Approach," and that is one of the newest books that she has put out. Slaughter plant audits. AMI, or the American Meat Institute, has audits for pigs, cattle, and sheep. AMI does not have a poultry audit. A numerical scoring system needs to be developed for poultry. The slaughter plants should have an audit done per the AMI guidelines by a recognized third-party audit firm, a knowledgeable industry consultant, or an organic certifier who has been trained in how to do the numerical scoring.

Slaughter plant audits. PAACO, or the Professional Animal Auditers Certification Organization, certified audits are being done by two third-party auditing firms that train to that standard. They are Silliker Labs and Ford Safety Net. Unfortunately, several really good auditors are not PAACO certified. Several of them do extensive consulting to fix problems in small plants. Physical alterations. For best practice, beak trimming, or any other alteration, should be done before ten days of age.

So that's all of Temple's slides. Okay. If there are questions for Temple, if you would share those, I would happy to take them to Temple and get back to you. She was unable to be here because she's traveling.

Katrina Heinze: I don't have a question, but a thank you. The distinction between welfare and organic is particularly helpful for me. In some ways I wish we'd have that two years ago as we started on this journey that might have helped us get here faster, but very, very helpful. Tell her thank you.

Wendy Fulwider: Any other questions? If not, I will continue here. Animal welfare recommendation is the next part of this presentation. The Livestock Committee has been working on this since 2001. The NOP needs to hear from us. The alternative to not passing any of these recommendations on is the same as not starting at all. We need to show some progress. There will be a positive impact when we move ahead with this, because producers will be able to make plans.

They'll be able to develop facilities and purchase equipment that they know will not be banned from the organic industry. The animals will have protection that they do not currently have, and we will have consumer confidence knowing that there is an animal welfare component to the organic regulation. Hopefully we can minimize regulations for farmers and cut back on the number of farmers that are leaving organic due to the paperwork burden and increased certification costs.

And the small farmers are the ones that are least able to cope with all the regulations and increased paperwork, and it's been especially interesting for me, because I can go home to my son, who just got certified organic, and I can play some of this off of him, and it's real interesting to see his reaction to some of the things that we discuss here on this Board. So my personal observations, I have several from my farm which I will share with you as we go through here.

I was on my farm until I was 34, so I was a dairy farm on a diversified farm for a long time before I went forward with my education, and then, of course, I did my Ph.D. with Temple Grandin at Colorado State and so she and I have been discussing all of these issues for a long time. So I've done a lot of farm visits. I visited several hundred farms when I was studying with Temple from Canada to the deep south, and east coast, west coast, and overseas.

And of course, since I've been with CROPP, I've been doing animal welfare audits for them and farm visits, and so I've seen farms all across the country. So I feel like I'm in a position here where I hope I can help the industry. But the regional differences for housing and environments for livestock really make this difficult when we try to make a regulation that

fit everybody. The animals' needs in the winter and the summer, it's just difficult, and especially in the hog industry, and we'll see some slides were a prescription really doesn't work.

The Animal Welfare Program has to be set up so that it does not punish the good farmers, and that's really what happens sometimes. Because there are only a few bad apples, and those are the ones that these regulations really need to hit. We need to focus on what is needed for each species, and often the major issues are overlooked. And I know veal is not an issue in the organic industry to a great extent, and so that's a nice example for me to play here, I think.

You know, people get excited about they're tied up and they're in crates, but the fact that they don't have any roughage is the thing that is most problematic for these veal calves, you know. And so that's something that we all have to think about when we're making these rules. Outcome standards and really important, and I really favor those because it puts the least paperwork burden and certification cost to the farmer.

And we want to encourage farmers to make improvements. We want to encourage them to come into the organic industry, and want to keep them here once we have them. And a lot of these details could be a part of the organic system plan, you know, how to make the improvements, and what things need to happen. For laying hens, the Livestock Committee feels very strongly that they need to be outside. We all agree on that. Organic means outdoors.

Making -- going outdoors, easier for the birds and more attractive for the birds, is something that many of the producers need to work at, because we've all heard that, you know, maybe 10, maybe 20 percent of the birds go outside, so that's something that needs attention. We may need an intensive plan for outdoor areas, you know, for producers that are in the industry and they have a small area, only two square feet, they might have to do something intensive, you know.

The dairy farmers have learned how to do this. They do intensive rotational grazing and, you know, we could do late summer seeding, we could winter seeding, and of course, this is gonna depend on what area of the country you're in. This isn't easy. I'm not trying to say that, but the farmers need to work together, you know, and a lot of you that are successfully doing it have something to share with those that need to make improvements.

Basic needs. All of the birds needs to have perch and roost space to be up off the floor, and all of the birds need to be up there. And, you know, I -- we had public comment about how much space is that? Well, six or seven inches, you know, and it's a difficult thing, because at night all of the birds want to be on the top roost, you know.

And you so you'll have, you know, four inches per bird up there, and you'll have no birds on the bottom. So, you know, it's -- but we had a farm at Organic Valley, and, you know, we said, just try this, and he put in perches for all of the birds. We had six inches perch space per bird, and we raised the chicks with perches, and they came in and they got on those perches, and he had the lowest mortality rate he had ever had.

And so he was very, very happy from that perspective. And if you have a lower mortality, you have more eggs. Everybody won, you know. So it doesn't have to be complicated or difficult, and you put the perches where you can put them in your building. You put the roost where you can put them, and we have a lease prescription. All the birds need to have a nest, and you don't have to have a nest for each bird, you all have, you have, you know, I'm sure that's not a problem for any of you.

You need to have a scratch area or a dust bath space, and all of these things are well supported by science and on farms. Laying hens, when we go outdoors, we run into different issues, and people took the chickens indoors because it was safer in there and it made farming a whole lot easier. So when you get feed and water outdoors, then you bring the wild birds in and the rodents, and so that's why farmers don't want to do that, you know.

And so that's something we need to be conscientious about, and we need to be concerned about the farmers' problems with all these things. We don't want to have to deal with predators, and that's another thing. When you take the birds outdoors, we have to worry about that. You have aerial predators, you have ground predators, and so what do we tell the farmer to do? Is he supposed to bring in dogs or security cameras, or -- you know, it's not easy.

And so we all need to worry about that. And vegetation, you know, chickens like vegetation. We all want to see vegetation out there but there's some work involved, you know, and I think that's something that all of us need to do if we're gonna have birds in the organic industry. We have to have some vegetation out there. And of course, if the birds go out

and use it, it's gonna be gone at the end of the season, and so this is where enforcing it really becomes an issue.

And so this is something that needs to be in the organic system plan. If you go out there in the fall for the certification, and there isn't any forage there, you know, that's understandable. So how we're gonna make that work is something we're gonna have to work with NOP and the certifiers to decide how to do these things. Soil management, there was a public comment about all the manure in a small area and, you know, all the other livestock industries deal with that, you know, you just go in and you clean it out and you replace it, or you plow it up and, you know, that's an intensive management issue, you know, and it's something you're gonna have to figure out if small areas are gonna be part of this part of the poultry industry.

But the space inside and outside, alone does not guarantee a welfare advantage, and that's been the biggest crux here on the livestock committee is the space. That has taken the bulk of our time, and it does not guarantee welfare. It's not that easy. So that's why I think the outcome-based standards, and the qualitative-type standards are something we really need to focus on. More space is good. We certainly don't want to encourage anybody to provide less.

We need to minimize the regulation, we need to minimize the cost, and it's not just about the poultry farms. It's also about the organic grain farmers. The more farmers that we knock out by requiring more space, we take acres out of organic grain production, and that's not good. We don't want to do that. So we need to make some compromises a far as space for chickens. In response to public comment, the outdoor access for pullets at 12 weeks was a compromise.

We spoke with stakeholders, and there were several that felt that they could get them out at 12 weeks. There is no science to back this up, and this is a place where the Livestock Committee may need to make a compromise with industry because honestly, the poultry and the hogs that are available have not been bred for disease resistance. And I know a lot of producers let their birds out at six weeks, and many don't let them out until they're layers.

So -- and I can understand this because viruses come and I can speak from my own experience. I have poultry. I haven't had any major problems there, but I've had it with the hogs and we've vaccinated for

everything like you're supposed to do, and we got hit with a virus that wasn't on the list that the veterinarian provided that we needed to vaccinate for, and you lose half of your stock. So whether you have poultry or hogs, it's an issue.

Birds going outdoors at 50 degrees, everyone seemed to be pretty amenable to that, and they were asking for a ceiling temperature when birds should be kept indoors. And I personally don't think we need to regulate that. I think that when it's hot outside the birds are gonna go back indoors. I don't think it's an issue. Beak tipping, trimming, debeaking, a lot of public comment about doing it at 10 days or less, and Temple agrees that that is the right thing to do, so I think we will need to discuss changing that.

This answers a lot of the questions that we get about beak tipping, beak trimming and debeaking. The top left shows a bird where the top beak has been tipped. It is not shorter than the bottom beak which has not been trimmed at all, and that one is listed as tipping. The other ones are -- have more severe trimming or are trimmed -- the bottom beak is also trimmed. So that is the difference. This is the perspective, you know.

We prohibit cages, we prohibit antibiotics, you know. And if you don't feed antibiotics, you can't do pigs or chickens in this kind of an environment. And I had I think one of the nicest public comments I saw from a pork producer, and he said, if you prohibit crates and cages, you've got it. Because if you try to keep these animals in a tight environment, and not outdoors, and you don't rotate where they live, you need antibiotics.

The hog issues, the hog industry in organic is very, very small and it's rapidly growing, and we want to keep it growing. And so we want to stay away from prescriptive regulation, because that discourages farmers from coming in, and it discourages them from staying in organic. These are mature hogs on my farm. They do graze, they do enjoy pasture. This is the perspective. These are gestating sows. The spend the majority of their life here.

And when we prohibit antibiotics and promote production and want to be efficient and not have to worry about mothering ability, this is the place. And when you're organic and you can't keep these animals in a cage, you have to have good mothers, and you have to have good stock, and you have to have excellent stockmanship and you have to have a good farmer,

or they're not going to be farming in organic. Sows and piglets, here's a farrowing hut.

This is where I come in with size and space belong in guidance. We cannot regulate this because the hut is for the protection of the piglets, and sows grow from the time they're born until the leave the farm. The first time a sow farrows, she's at 300 pounds. The last time she might be 700 pounds, 800 pounds, she gonna need a bigger hut. And if you give them a choice of huts, the little sow will go to the little hut.

It doesn't matter how much bedding you have in it. The big sows want the big huts. They just destroy and flatten the little ones. This is the farrowing crate. The conventional sow goes from that gestation crate to this farrowing crate. That's her entire life going back and forth from these two crates, and she does not need to have any mothering ability. When you are on an organic operation, and you don't have this crate, she better be a good mother or you won't have any pigs.

I speak from experience. Hogs need roughages for rooting. In the wintertime, deep straw, corn silage, haylage, baylage, whatever you have. As long as they have roughage they'll be fine. They won't fight, they won't bite each other, they won't tear tails off. You'll have a great looking bunch of pigs. Hogs need shade, sprinklers, wallows or other cooling in the heat of summer, and this is one of mine, and they dig these wallows on their own.

And if you don't have water there for them, they will chew a garden hose in half because they know it's in there. This is what happens when you have finishing pigs, and I explain a finishing pig as a teenager, and they're busy. They're full of energy, and this is what they do to a beautiful pasture. They don't need to be here very long.

It takes a long time to finish pigs when they're on a pasture like this, because they burn off all their energy running around and digging out all the vegetation. So it's not necessarily a wonderful thing to provide a big pasture for these critters. Ammonia. Ammonia and housing is a problem in the wintertime, and that's when with poultry or hogs, or any other species, when you try to bring them in and keep the water from freezing, and keep them warm, particularly with piglets, you know, they like to be 90 degrees, you know, they're babies, they don't have fur, they need protection.

Keeping the temperature where they need it and you have a great big space, a great big building, it's very difficult. So, you know, there needs to be allowances for this. Ventilation has to be there, you need to heat the building and you need to suck the heat out to get the ammonia out. So we need to let the farmers farm. We need to not regulate this too heavily. Yeah. So we need to minimize paperwork and costs.

I would like, you know, to really go with the outcome-based standards as much as we can, and request that the NOP place no more regulation than necessary, and have the farmers address issues in the organic system plan. We should have a place in there for continuance improvement, attention to the details that really matter in organic. With regard to the minority opinion, you know, I absolutely applaud what they want, I just don't want it in regulation, you know.

And we want to encourage all the farmers to provide as much space and as much vegetation as they possibly can. We absolutely want to encourage that, but we don't want to eliminate all of the farmers that have worked very hard and tried to do what they thought was right and went in the direction they thought the Board was going. Next up is the animal handling, transport, and slaughter document, and the organic community needs more certified local processing plants and, again, we need to do this while minimizing the paperwork and the cost.

And my response to the public comment is that this document is only about handing and transport to slaughter. So we're not talking about moving calves, and we're not talking about taking birds from the hatchery to the farm, You know. It's only about animals that are going to slaughter, and all the measures in here are already industry standard, so we're not proposing anything new or above and beyond, and the annual inspection would be on slaughter day.

We're not suggesting that a certifier would need to be there on every slaughter day. The intent of this is to make note of any issues and make sure that they are corrected. We want to minimize the pain and suffering to the livestock. Next is the species specific guidance and the outcome based score card and tally sheet. We have the species specific guidance for bison, poultry, and sheep. I expect that we will have the swine and dairy at the very least at the spring meeting, and hopefully some of the other species as well.

The outcome based score cards, these all cover the important health measures for each species. This is to be used as a reference tool on the farm. There were questions about the different breeds of dairy cattle that are on the card, but if you're looking for something more specific, that's something that would need to be part of a manual, and we can certainly provide references to such things. This is the score card that we put together. It covers the locomotion scoring.

It shows an example, and you also have the verbal, and this is a tool that I use when I go on farms to do audits. It's nice to just to have that there to help explain or farmer or whoever you're working with. This one covers the hock lesions and the cleanliness for the dairy cattle. And this is the scorecard that we use, and I have a lot of extra wording on here. The top row is about body condition and it's extremely thin frame obvious, good fat cover, well covered, and obese.

And as you go down, then the next one is hygiene and locomotion or lameness, hock condition and there's -- the next row is about mange and lice, broken tails, ammonia odor. So those are the big things for dairy cattle, and I'm not suggesting that a certifier would do every cow, you know, and you wouldn't even have to do any of them if the farm is well-managed.

But this is a great tool to use on farms where there is a problem, because you can score the animals and show the farmer. We're not asking anybody to score an animal to 1.2 and 3.4 on body condition. That's not what it's about. It's about the big picture. Discussion?

Robert Stone: First, I won't feel right making any comments without thanking Wendy tremendously for the amount of work and effort and just watching her go through that presentation and all the thought that has gone in this for the last years, but especially in these last months as you're trying to pull this together, so thank you very much for all that you've done for the organic community, and working outside of the Board, and pulling the information together. So thank you very much, Wendy.

In reference to the conflict of interest thing, real briefly, the conflict of interest for me as a poultry farmer is that my competition is with my birds and the predators and the feed cost and all those things, not the actual potential conflict is the rules changing that we do, whatever form that takes, will actually encourage those that sell organic eggs to produce them

more like I do, so it's gonna drive their cost up and their taste and the quality of their product is gonna go up.

So actually the conflict is the other way around. So recommendation, there's the history of my reason for concern of this board, the pasture rule is overly prescriptive still in my opinion, and I really hope we don't go down that road again, and there's way we can try to prevent that. I think the ACAs are capable of developing an outcome-based evaluation tool.

Then there's a -- it's incumbent upon us as an industry, as a group of certifiers, as a program that we institute it in a way that provides unilateral interpretation of the rule through training and through education, and that's what's leading to a lot of this is various interpretations of the same rule. So it's an implementation of whatever we kind of come up with. I think Temple's notes there about ammonia levels and whatnot, that's a pretty good start down this path of what these evaluation tools can be.

As a former member of the APPPA Board, American Pasture Poultry Producer Association Board, we sells lots of models of outdoor access that you can get the rotation around the barns, you can provide these things in various ways. Give people the ability to use the tools of electric netting and flight netting and all sorts of things. I think these aviary systems have a lot of potential. Apparently Europe is using them.

If you give the birds, encase the birds, you give them a bathroom, you give them a kitchen, you give them a bedroom, they can find it, they can roost, they can get off the ground and get away from each other. There's way that we use the tools. One of the most compelling public comments for me was a farmer and organic inspector in Iowa that said we don't want to keep us in the 1800s, we need to allow us to use the tools that modern agriculture is developing, and let organic modernize itself as we go along.

So I think there's plenty of tools out there. I don't know how long this transition time is to get some of this implemented over time, but certainly it can be done. So just because there was previous interpretation that allowed some of these less organic looking facilities if you will, but frankly to me they wouldn't pass the kindergartner field trip test. They're not gonna look any different than our non organic partners might have.

So I think that I would recommend -- I would hope that we would send a recommendation to the program to move the ball down the field, let professional paid staff, not a group of volunteers that are in committee

meetings, on the phone, and sitting in airports and all of that, let professional paid staff take our recommendation, craft the language working with -- closely with the committee and ACAs to develop language and then as I said, force or foster a unilateral interpretation of what we've come up with so that's uniformed across the country, across climates, across species to where then we can develop a product -- and I base a lot of this on every spring when we go to the farmer's market, our birds are on pasture 12 months out of the year, if there pasture.

If not, there's snow. Otherwise it's green grass or clover. It's not the gold standard. When it's really cold, the birds are really cold. When it's really hot, the birds are really hot. Some of these climate control systems can provide a better environment than I can with all the square footage they want. But I feel like that we need to move it down the field, but working with the program, working with ACA as we can develop an outcome based system for all the species and then implement it in a uniform way. Thank you again for all your work.

Wendy Fulwider: Tina.

Kristine Ellor: What he said with ears on. The people on the Livestock Committee are well aware of all the work and discussion and this is the first time since I've been on the board that I've seen so much outreach from the committee into the community, and it worked really well. It was a good model for that. As everyone probably knows, I'm not a livestock geek, I'm a mushroom geek, and I've learned so much, and I really would like to see this move forward as Mac said, So that we can move the ball down the field and get some of this in progress.

And one -- a couple comments that really struck me that we got is, I don't want to punish the good farmers, because there are really good farmers out there working well within the parameters that we've set up in this recommendation, and I'd like them to continue to be able to do that, and to bring other people into the fold to, you know, to make progress. So I really do hope that we will kick this can over there.

C. Reuben Walker: I would like to begin with a quote. I'm paraphrasing. Animal standards should be set high enough to make the organic industry -- I changed one word, organic, but just the animal industry. Let me just say it the way it was quoted. Animal standards should be set high enough to make the industry improve, but not so high that people will either say it is

impossible or fight conforming the standards. So in other words, organic livestock should not be similar to industry standards.

Do anyone know who made that particular quote? Correct. The answer is Dr. Temple Grandin. In other words, organic livestock standards need to be real. They should not be similar to industry standards. I concur. I don't normally quote Reverend Jesse Jackson, but he used another word is -- phrase, we all are on the same tree, but different branches. The minority opinion was not to be meant as a standalone. It was designed as a means to try to move the process of livestock forward.

Ten years is too long, and we hope that before the vote that the majority and the minority, not me, even though I have a minority, but minority as it relates to this committee, can work out some issues that are at the core of essentiality for livestock production. And we concur that space alone is not the answer, but space with other parameters like vegetation cover need to be considered. And third, we need to kick this can certainly to NOP.

I read all the comments, and the last time I checked this morning, I still had my wife. I spend a lot of time reading all the comments, and I was particularly struck by the one from OTA. It said we've dealt with this too long. And I think and I hope that the majority and the minority can get together and work out something that we can move forward to the program.

All of these six documents is not ready for prime time, but the welfare and the transport document out to be ready to move to those who have the expertise. I serve as a program leader for animal science, plant science, and agriculture economics. We are pigs, chicken, beef, goats and all those. But certainly with the time that I have, I cannot put together documents as the NOP have, the expertise to do that.

So I hope that the majority can agree to move these things forward, at least a couple of these items. Voting, as it relates to the public comments in October, I just want to give you a little summary. There was a total of 257 commenters, October 2011. Two of the respondents prefer the majority report. Two out of 257 commenters. 188 preferred the minority report. 30 gave no determination. 32 supported (inaudible) and five gave no opinion.

So in essence, 73 percent liked some aspect of the minority report, and only one percent liked the majority report. So it seemed like we ought to work and come up with a compromise that we can give to Miles and his team to further finish. Because the longer we deal with this, animals are suffering. And as Dr. Temple Grandin says, science cannot answer animal welfare. Science is all over the place as it relates to livestock production.

So as a member of the minority on this -- on these livestock documents, I believe that after Thursday's meeting, we ought to -- if it takes us all day, all night, and let us come to a compromise on something that we can agree with and move some of these documents onto the program. And certainly I commend that the chairman, because she has put a lot of time in -- it's like herding cats sometimes, and we know -- those who deal with livestock, you can't herd cats.

You can herd cattle, but it's hard to herd cats. So you did a tremendous job, and we just want to be able to move something that is meaningful onto the program for further perfection and public comment.

Wendy Fulwider: Thank you, Calvin. Any other discussion? John?

John Foster: Thanks Wendy. Well done. That's a lot of work and I've appreciated not -- being able to kind of not have to pay attention to it every day, and I know you have, and so thank you for bearing that for me. So I have a couple general thoughts, and then some specifics. General, I agree with the outcome based standards, far preferable. I think that allows many ways to be compliant, many ways to be humane, and allows many scales to achieve the intended outcomes.

Anyone who's listened to me in the last several years knows I'm not a big fan of numbers in regulation, and I haven't changed. In part because I think it's make compliance and intent too mechanical. I don't think we should -- I don't think we should be relying on numbers to demonstrate our intent or our convictions. It should be more systematic and systemic just in general terms. If they are required, I think they should be in guidance, not regulation, and only when they're supported with some data that's relevant to commercial production, realizing that commercial production happens on many scales.

Not everyone likes it on all scales, but it's happening on all scales. So the numbers, the data need to be relevant to commercial production on all

scales. Large, small, and everything in between. To do otherwise I think is kind of irresponsible. I think we need to keep moving forward. It won't be perfect every time, but it will be better, and that's pretty good.

To the extent that you and I talked about this on the phone earlier, to the extent that other regulatory programs or market programs are in place, to what extent are those mandated, and that's a question I'd like to hear more about either today or not. What overlap is there already in mandatory regulatory programs, either state to state or federal, or marketing based programs that are de facto in place. How widespread are those features and what requirements do they have?

Only that if there are mandated production expectations from those, don't put redundant things in place on top of those. If they're mandated, they're mandated, and if another agency or another entity is not doing their job, that's important to know, but that's separate. We should rely on existing agencies to be doing their jobs, and if they're not, let's have that conversation, but let's not try and make up for every agency who may not be perfect.

Limited beak trimming to infrared, I think that's too limiting right now. Now, I'm getting a little more specific. Comprehensive -- I'm very sensitive to the recordkeeping burden of growers, particularly smaller growers, smaller operators, and I think for example, list of all mortalities, where they went, why they went, all that in -- I'm not sure -- I don't understand the value of that, certainly not relative to recordkeeping requirements, and I think that would be terribly burdensome for some species and some growers.

And then scorecards I think are a great idea. It will require training of inspectors to a degree that I don't think is consistent right now, but I think it's -- that's okay. We should be pushing inspectors just like everybody else. And then lastly, this -- those of you who know me know I'm really fascinated with this concept of natural behavior, and what is natural. That's a great question.

I don't know that it's appropriate to use that phrase without people qualifying what they mean by it, because my observation is a lot of people mean different things, and that's a source of a lot of contention. So I don't know -- I don't think I have the answer, but I know a lot of other people have different answers and we should take time to clarify that. In large part, because most of the species we're talking aren't natural if you mean natural to be mean unchanged by the hand of Homo sapiens.

These are not those kind of species. These are -- just like broccoli is not natural by the same definition. Lettuce that we eat is not natural by that definition. So when we -- when some use the term natural, animals should be allowed to express natural behavior, that's great, but what does that mean in the context of a species that has been modified genetically, classically bred to be a certain way, that would have a hard existing in a truly natural environment.

There are exceptions to that, but by and large, if you let chard recede, it reverts back to its origins over time, same thing with lettuce, same thing with broccoli, same thing with animals if you give them enough time. So we bred a bunch of traits that are questionable natural. So it's hard for me -- it's hard for me to have that dialogue without qualifying what we mean by that.

That's really important, and I think if we did that as a community we could head off a bunch of disagreement actually. So I just want to call out that different between natural behavior and normal behavior. People use them differently, and I think we could all benefit from probably making a concerted effort to be clear about what we mean when we use those terms. That's it.

Wendy Fulwider: Barry.

Barry Flamm: Thank you, Wendy. I have to join the chorus of complimenting you on a great job. I thought your presentation was magnificent, and I can see the passion, but you also -- you're experience, both academically, but your personal experience was very valuable for me to hear. I think I join also the chorus of favoring outcome based standards. There are just so many variations of eco systems you might say that organic farmers are dealing with.

And I just had the pleasure over Thanksgiving, visiting a neighbor not far away that I think is sort of for me a poster child example of raising eggs, and it's a family operation. And I don't know how he meets the standard, he pointed out things like his birds when it gets -- he's quite an environmentalist too, and they conserve energy, they do all the things you could think of, they try to do. And if they're doing it and you tell, they'll be doing it.

But, you know, they don't heat their barn, so the body heat of the birds, they were telling me in the wintertime, he says, he's got to get them close

together. Anyway, those are just details. But -- and I certainly liked what Calvin had to say also, and I hope that's possible, but to me, you know, one of the, you know, one of the big concerns is it's not over these people like I've just described and you've described which are most of the community and good guys trying to do best, it's what's happened, or at least -- if it's wrong, I don't know, but the perception or the reality of these factory farms and -- that are selling as organic, but they don't meet any of our concepts of organic.

And whether you're talking about dairy, or you're talking about eggs, those are ones that -- poultry. And I guess whatever road we decide to take, I hope the road has in it a way of getting on top of this problem, and I don't know if you want to address that, but that's my feeling. We must get on top of this problem. It's a big one, it's out of control, and one reason for moving forward is because we failed to move forward years ago for good reasons.

But, you know, this problem has grown, and until we get on top of it, we can't hope to not have a, you know, the outcome that I think most people in the organic community want. Thank you again.

Wendy Fulwider: Thank you, Barry, and we're gonna have a livestock meeting, and I think we can find common ground. Other questions? Katrina?

Katrina Heinze: I'll keep my thank you short. Amazing. I have a couple questions and then maybe a thought. So I'll ask all three questions if that works for you.

Wendy Fulwider: One at a time.

Katrina Heinze: Okay. One at a time. So we've heard several folks on the Board, as well as public comment that some folks prefer outcome based standards, and you do as well, so my questions is, are the recommendations outcome based?

Wendy Fulwider: We have a lot of outcome based in them, and we are gonna focus on that, you know. There will probably be some things that are not outcome based, but that's okay.

Katrina Heinze: That's helpful. When you present on Friday, maybe you could highlight where those are difference since that's something that folks care about. Okay. My next one is, we heard a public comment yesterday that there's some folks who would prefer to see qualitative standards versus

quantitative standards. A little bit in my mind I think that sounds like outcome based, but maybe you could highlight that.

I guess my question is, so having sat on this Board for five years, and having heard about this topic for a really long time, it seems like we keep going in circles, because I think you had qualitative standards at one point in this evolution, and we heard a ton of public comment, I'm kind of thinking from a lot of the same people who today are saying we want qualitative standards, that they wanted quantitative standards.

So you took your marching orders from the public and you went off and started working on that. So it feels a little bit like we've come full circle. So since I'm not as close to this as you are, perhaps you could talk about that a little bit.

Wendy Fulwider: Sure. I think, you know, we go do one path and then we get public comment and, you know, and then it gets closer to being a reality and then people get scared, and they're like oh, God, that's not what we want, you know. Maybe the other thing would be better. So I think that's where it primarily comes from.

Katrina Heinze: Okay. So my last question, and then I have a comment. So my last question is, this is a lot of documents. There's a couple recommendations and a couple guidance documents. Could you help me understand whether those all need to happen as a package to the program, or what are the most -- or if they aren't a package that needs to be sent to the program, are there key ones that need action so that we send a very clear message that this is an important topic.

Wendy Fulwider: The animal welfare document and the handling, transport, and slaughter documents are ready to go to the program. The other ones, you know, they're here really for the first time, and we need, you know, to do more work on those. I wanted to get public comment on them so that we know how to proceed, you know, for the next meeting.

Katrina Heinze: So the guidance document ones? Okay. So my comment is, having listened to this for so long, we're never gonna get it perfect. It's never gonna work for everyone. I'm really concerned that if we don't send anything -- well, let me say it the other way. If we send something as imperfect as it may be, as, you know, there's gonna be things that the program has to figure out, we're sending I think a clear message to the bad apples that they need to change.

If we don't do anything, I think we're sending a message that we're not gonna figure it out. We haven't figured it out for four years, we're not gonna figure it out, you know, why another four years, maybe things -- we're gonna figure it out, and I think that sends a message as well. And if what we really care about is the few bad apples, this is a case, and I usually argue for perfect first, but this is a case where it maybe doesn't matter if we all agreed. Doing something is more important. That's it. Thanks.

Wendy Fulwider: Thank you. And I do want to say that the bulk of the farms that I have visited, organic farms are stellar, you know, and it is really the bad apples that we need to be concerned about. Tracy.

Tracy Miedema: I have a question for the NOP. Throughout the publication of our documents, and the public opinion that's come in, the NOP has amassed this body of material. Regardless of what the vote is, or whether we're able to reach consensus on a vote, my question is, could the program take the totality of the evidence and move forward, have listening sessions, kind of a similar path with pasture, and produce a proposed rule?

Miles McEvoy: That's a very good question. Very interesting conversation that you're having here. First I just would like to respond to the idea of these bad apples out there. I think that everybody that is certified organic is in full compliance with the regulations as they currently stand, and one person's bad apple is another person's shining example of a great organic farm. So I think that's really a disservice to the certified organic community to call certain operations bad apples.

Now, you're trying to provide some guidance, some recommendations on animal welfare, a very, very important issue for the organic community that is very contentious. There's a lot of different options out there, and from the program's perspective, it's -- we would rather have a consensus-type of recommendation that's very well done from the Board. It's gonna be very, very difficult for us to move forward if there is not that sense of the Board having a common vision of what that recommendation is.

So we have a number of recommendations that have been made by the board on animal welfare over the last few years. Those are -- that we have to utilize to move forward. We're looking forward to additional recommendations from the Board, but it would be very challenging for us to move forward in certain areas if there's not a clear recommendation from the Board on these various contentious issues. So if you do not

reach consensus, if you don't have recommendations that come out of this particular meeting, we will continue to move forward.

We've been directed by the OIG audit that there needs to be more clarity and consistency around outdoor access for poultry in particular. So how will we get there? Hopefully with you, and with your recommendations as a basis for that. But there's other ways that we can continue to get more public input. We can do and advanced notice of proposed rule, we can do a poultry symposium kind of like the program did the dairy symposium many years that really led to some consensus or some clarity in terms of where the organic community wanted to go with the pasture based standards for ruminants.

So I'm not exactly sure where we would go. We're looking forward to this group, this Board coming together to provide clarity, and we'd rather have a clear well-written recommendation from the Board. If you need to go back and do more work, that's okay by us, but good luck.

Tracy Miedema: I have one follow up then, and this is really to anyone who's championing a votable item here at the meeting. There's absolutely nothing crass about rounding up the votes and understanding where things stand before we get to Friday, because we need to reach consensus like Miles is talking about. So let's make sure we're talking to one another, and if compromise needs to be built in, do so, and let's just get there.

Wendy Fulwider: Thank you. Mac?

Robert Stone: I think my previous comments were more from the producer point of view. Wearing the certifier hat, some certifiers are asking for some numbers because it's the only force of action that they may have with some of these operations, that if there aren't numbers, then it's hard to enforce or it could be argued that the birds are feathered up fine, and the egg production looks good, and they could argue against their certifier's opinion that it's not suitable under the new recommendations.

So there is that aspect of needing some numbers. That same certifier might also say, yeah, but the paperwork is gonna be so unruly and so hard that then you're gonna put a burden on me, my staff, and the producer. So that's where this rub is of how do we force the hand to correct some situations that are out there without the undue burden to

everyone within the system, and that's the rub that we're having for your other committee members. That's the rub.

Wendy Fulwider: John?

John Foster: All right. I'll spend my second chip here. That I understand, having been in certification for a long time, totally get that. The two -- and for me, what overrides that is that if certifiers and therefore inspectors need to be upgraded, then so be it. That -- and I think that's a related, but it is also an independent issue. And I think the answer to that is yes. I think everyone needs to be continuously improving. It's pretty good, it's getting better, and that's how it should be.

The second part about numbers is that every time we put numbers in regulation, we get farther away from process-based standards, and philosophically I don't want to go there. I really believe that -- I really believe that how we do -- how we make what me make, grow what we grow, raise what we raise, how we do that is the most important thing. And every time a number goes into regulation, it takes us farther away from that.

And it's not unlike -- here I go, I've one of my hair-brained analogies. Those of you who know me, the more traffic lights in a city, the fewer people know how to navigate a four-way stop. It's good to know how to navigate a four-way stop, who goes when, what the rules are, like you gotta make eye contact, you gotta be considerate, you gotta know the rules, right?

But you go to a town with a lot of signals and people lose the ability to be discerning about well, is it left or right goes first, I don't know. Well, it's the right. And I don't want to see that degradation. I want to see people being critical thinker and critical growers, and if, you know, critical inspectors, critical certifiers, critical program, critical NOSB, and I think we all benefit in the longer term the more judgment we have to exercise.

I do get, and I'm sensitive to the variability that comes from that, but I think on the whole it's better to expect more of ourselves in that way. Thanks.

Wendy Fulwider: Katrina?

Katrina Heinze: I want to turn to the animal transport and slaughter document for a sec. That seemed to have more agreement. There was one no vote. Could you highlight the reasons for the no vote?

Wendy Fulwider: Mac.

Robert Stone: Simply as it's been stated, it's an imperfect document. There are some technicalities within what FSIS and their audit and inspection, what they provide, what the federal government provides on audits, welfare audits and state inspected facilities that can be certified organic, don't necessarily fall under some of FSIS guidelines, and so there were some imperfections in the recommendation. So it was simply to let everyone know it was not a perfect document.

Wendy Fulwider: Calvin.

C. Reuben Walker: I'd like to also add to that, based on the numbers that I looked at, Katrina, as Mac has said, the transport seemed to be in better shape compared to those who responded. When I looked at the numbers it was four that essentially said no, and 75 percent -- I just assumed it was okay, because it just made as Mac mentioned, you know, some slight suggestions, so certainly that one seemed to be in a whole lot better shape.

And I'd also like to mention, since I have the mic, if it's okay, is that to answer -- to respond to John's issue on the numbers, I concur that when you lock in numbers it can be difficult. But at the same time, as it relates to livestock, we do need to have some level of minimum, because if you're requiring me as a pig producer in guidance not to have no -- if you give me no number, chances are I might not -- guidance doesn't have the force of the law, and I would probably do whatever I feel.

So some level of minimum is certainly needed. And I hope that as the Chair mentioned, that we could get some consensus on some of these items, because with the U.S. Canadian equivalency that was signed in 2009, it states, agriculture products derived from animal must -- not shall, but must -- be produced accordingly to livestock stocking rates as set out in the Canadian standards. So that means to me is that the numbers that we have do not rise to that particular level.

So I remember one group from I think it's W -- it's the group from the state of Washington, WSDA, has stated in their public comments in October, their concern was some of their producers was interested in this particular issue, but based upon what we have now, if it's not -- what, 1.8, indoors, that's using portrait as an example, and 2.7 outdoors for birds, if you're not

using those numbers, you can't sell your products, you know, in the Canadian market.

So whatever do, we certainly at least want to equal that, because it did say it is a must that the stocking rates need to be at least those of the Canadian numbers.

Wendy Fulwider: Thank you, Calvin. And with that, if Miles has a message to the Board on the livestock documents, we'd like to hear that, and then we're back to Tracy.

Miles McEvoy: I don't have anything else to add at this point. Thanks.

Tracy Miedema: Thank you, Dr. Fulwider. It sounded like the welfare discussion was winding down. I will make one last call. It is time for us to recess for lunch, and it would be nice to transition to our next committee presentation, kind of a clean break from one topic to the next. So any objection with closing out our Livestock Committee discussion? Okay, then. With that we will recess now for lunch. We're gonna take a bit longer lunch today. We'll resume at 2:00 p.m.

[LUNCH]

Tracy Miedema: We're back in session. Thanks everyone for settling in here for our afternoon session. We will begin with a presentation by the Handling Committee. I'll give just a moment here for everyone to get settled in. Chairman Steve DeMuri, please proceed.

Steve DeMuri: Thank you, Tracy. If you refer to your agenda, it says at the top that there's supposed to be a nutrient vitamins and minerals presentation for 15 minutes right now. We are gonna postpone that until tomorrow morning when we have somebody from Food and Drug here to -- not here but by phone just to give a presentation to us on some background on infant formula and other activities regarding vitamins and minerals. So be prepared for that for tomorrow.

Next we go into the petitioned materials recommendations, and we're gonna make one little agenda change there, it's very minor. Since ARA and DHA are very closely related, we're going to take those together one after the other. So it'll be annatto extract first, then ARA, then DHA and then beta-carotene, and then everything else should fall in line. Before we move to the first material, I'd like to thank the Handling Committee for the tremendous amount of work that you all have done the last few months.

No surprise to anybody that we had some very important and complex issues to discuss over the last few months, and you all did a wonderful job of coming up with recommendations that we could bring before the full board, so thank you very much for your hard work. So the first petition material today is annatto extract, and Katrina was the lead on that material, and like the Crops Committee does, and most committees on the NOSB, we assign a lead person to each material.

They're responsible for fully vetting everything that is related to that material including looking back through old records, old TAPs, old TRs, reviewing petitions, if it's a petition material, and fully investigating and evaluating that material for the committee, and they bring that information to the committee where we discuss it at length, and then make a recommendation. So the first material is annatto extract, and Katrina, I'll hand it over to you.

Katrina Heinze: Thank you. I hope everyone had a nice lunch. Annatto extract, this is a bit of a storied material. It has some good history for us to think about as we go through it. The petition that we are evaluating, and for which the Handling Committee made a recommendation is a petition to remove annatto extract color, water and oil soluble from the national list 205.606. So I think rather than going through the full evaluation checklist, I'll cut to the chase and then explain our recommendation and take questions.

Okay. So annatto extract color, water, and oil soluble was added onto the national list in 2007, and then recommended for relisting a year ago for the 2012 sunset. When annatto was originally listed, it was listed because there was a lack of availability of organic annatto seeds, so it wasn't commercially available as organic. Today those organic annatto seeds are available. When we did the 2012 sunset review, we received public comment that annatto color was available in a liquid form, but not in a dry form.

So it's very important for folks to understand that annatto is used in those two different forms, so some market examples for you, Colby cheese or cheddar cheese is typically orange. That's because of the use of a liquid annatto. Similarly, if you go and buy a macaroni and cheese product, that is orange, that is because of a dry annatto color that is used.

So when we did the review in 2012, what we heard from the public was that a liquid form was available, but a dry form was not available, and there are some technical reasons for that. And that was supported by an

informal market survey that we did. At the time, annotations changes during sunset was not an option, and because of this, oil and water soluble annotation, we couldn't figure out how to relist the liquid form, or the dry form, but relist the liquid form, so we chose to relist both.

Since then, we've received this petition to remove all forms. The petitioner is a manufacturer of organic annatto color, and they introduced a dry form about a year and a half ago, and they've had a liquid form for several years. So similar to the process that we did during sunset, an informal market survey was conducted. So just for transparency, what that looks like is Katrina going to a couple of her grocery stores, my favorite natural foods co-op and a larger national retailer, walking up and the aisles and looking for all the oranges foods, and seeing what colors they have and how it's listed on the ingredient deck.

So what I learned was that again, everything that is orange and you would expect to be using a liquid color is using an organic annatto color. For dry products, so mac and cheeses, other dry dinner kind of things, some, but not all, have converted to an organic annatto color. So based on that, the handling committee believes that there is sufficient evidence that exists that both forms of liquid and power forms of organic annatto are available.

Where the Handling Committee has always struggled with 606 materials is there are a lot of different ways that handlers use ingredients, and we don't want to prematurely take something off the list and unintentionally cause a market disruption. Unfortunately, getting a technical review is not the right way to get us that information. The uses of ingredients is not typically publically known, so we really need to rely on handlers to provide that information, which leads us to the recommendation that we made.

So we made a two-part recommendation. The first was to change the annotation for annatto color from oil and water extracted to liquid and powered forms. So we did that to make it more closely match what's available in the market place. So that passed with a vote of six yes, zero no’s, one absent. And the reason we did that, is we wanted to then have the flexibility to list to remove or not remove the forms.

Our second vote then was in reaction to the petition which was a recommendation to remove annatto color with all annotations from the national list 205.606. So that would have the effect of removing both forms, and that also passed with six yes, zero no, and one absent. After great debate -- or some debate on the Handling Committee, given that we

did feel there was sufficient evidence that both were available, we voted to remove.

We also wanted to send a clear signal to handlers that if they had a use of these materials, that -- of which we were not aware where the organic form did not function, that they needed to bring that to our attention, and a vote to remove is typically the best way to galvanize getting that public comment. So -- okay. So based on that, I want to summarize the public comment. So we have -- we received only two public comments on this material.

One suggested that if we were to remove, that we provide sufficient transition time for handlers to reformulate their products because we know there are a number of products in the market place that are not using the organic form at this time, and they suggested that a two-year transition time was their suggestion of what was needed. They also went on to say they were not a handler, they were a certifier, and that we should do a survey of handlers to find out how much time they needed.

The other public comment was that they supported the annotation change, and they supported removing if we received no public comment saying that it was necessary on the list. So at this point we have not received that public comment. So I think the handling committee decision would still be to remove. So that is annatto.

Male: Now that you've -- well, assuming we don't get public comment on this before the vote, would you propose changing the recommendation -- simplify it and -- because the way I -- do I understand this correctly, you did it in this way so that you could elicit comment and if comment doesn't come in, wouldn't it be cleaner just to rewrite it to eliminate from the list?

Katrina Heinze: We haven't talked about that. My own personal inclination would still be to take the two votes so we have a record to clean it up the right way, you know, in case something happens during the rule making. It looks like that's it.

Steve DeMuri: No other questions for Katrina on annatto? Okay. The next two items we'll take together. It's ARA and DHA. Tracy and Mac took the lead on these two items for us, so I'll hand it over to Tracy.

Tracy Miedema: Thank you, Steve. And I'll hand the gavel over to Joe Dickson. ARA and DHA were petitioned by the same petitioner, so we are going to, like Steve said, take them together. They are both nutrient substances.

So one note I would like us all to consider is that we may have -- as an individual, we may have a personal opinion that food-based nutrients are best. In other words, let's get our nutrients from fish or plants or breast milk.1

But organic food has been fortified since the beginning, so I would ask that you leave that personal opinion if you happen to have a general predisposition against fortifying food, because you're absolutely -- that's your right to have that opinion, but when we look at materials, let's do consider what the history of organic food has been. So these two materials, ARA is an omega 6, DHA is an omega 3. DHA is often used by itself.

We get plenty of omega 6's in our diet through lots of oils. In infant formula they are used in conjunction with one another because you need a ratio of omega 3s and omega 6s. These two materials, plant-based DHA and ARA have been used in organic food lawfully since 2006 approximately, and they took off like wildfire. Organic consumers endorse them with the way only Americans can endorse something, with their pocketbook.

These materials have been growing by leaps and bounds, and these are organic consumers buying very well labeled organic food products, supplemented or fortified with DHA and ARA. So for those of you who may not have been tracking this material closely, in case you are maybe on the other side of the planet in the last four years, there's been a little bit of news about these materials.

And on April 26, 1010, the National Organic Program announced that they believe they had made a mistake and were wrongfully allowing these two materials and several other materials that we could deem loosely accessory nutrients, that those would no longer be allowed under the 205.605 listing of nutrient vitamins and minerals. And the program announced that they wished the NOSB to make a recommendation on nutrient vitamins and minerals in general, and they called basically an all-points bulletin for petitions for these materials and said, you know, if you're out there and you're using these, or you're making these, they need to be petitioned individually.

They're no longer going to sit under this umbrella of nutrient vitamins and minerals. So shortly after that, the NOP received petitions. They actually received a couple of addendums to those petitions as well, and I would

say the petitions languished a bit. That was about 16 months ago. They were approved by NOP pretty quickly. They got in the cue of the Handling Committee, the TR took a while for us to formally request the TR.

Then we formally accepted the petitions that NOP had validated and we made the TR request. TR took a long time -- TRs. So we did finally receive those pretty late in the summer time this year, and went about evaluating these materials. Now, you know, we've never been in this position as a Board to evaluate materials that are widely used and endorsed by organic consumers. So that's really the only thing that's new about these materials.

The -- you know, everything else about this is we know how to analyze material, but I gotta say, because of this reversal of the program, there has never been a brighter light shined on materials, and the writing and the level of depth of the petition, and the technical reviews, and the reviews by this committee has never had more depth or precision or thoroughness. So I would say the review process has been extraordinary.

We have a lot of vitamins and minerals in organic food today that we don't really know much about. We say vitamin C, I don't think there's many of us around this table here today that could see what the other ingredients are in them, or how they were made or exactly what's in them, even whether all excluded methods are truly deeply in the supply chain being excluded. But these materials are different. These ones have been -- it's open kimono. That's what we call it in -- and true organic integrity.

I mean, these materials are pretty -- it's been pretty extraordinary to learn as much as we've learned about these materials. So without further ado, let's go into what we have learned and what we know. So first of all, the technical review has deemed both of the materials non-synthetic, and we accepted the findings of the technical review for our listing, and we as a committee voted on DHA seven-zero. We voted unanimously to list the material.

For ARA, we had six yeses, one absent. Like I said, there's never been a more transparent and thorough record on materials. I think we time in Q and A to get into the technical details, but I'm not going to belabor the technical information. I will list it through to make sure people are aware of some of the materials that are laid down on the record. So we have the two petitions, we have the two supplements, we have the two technical reviews.

After we performed our technical review, FDA produced a letter that refuted the claim that we had been hearing up at this podium for years that there had been GI disturbances for infants and had concluded that there was absolutely no scientific basis to support finding of any GI adverse effects. So that was something that we believed to be true, but it was nice to have that endorsement from the world's leading food safety organization after we had already voted on both materials.

Some of the other materials, we have the checklist that as a committee produced, and then you all started giving us some great feedback through the public comment process. We received approximately 30 to 35 -- 32 by my count to be precise that aren't repeats. I think there was three versions of the NOC letter. Accepting that 32 comments just the straight tally, which I don't put too much emphasis on tallies, but there were 20 yeses and 12 nos.

I don't think anyone parsed out DHA from ARA, so these materials kind of ride together in the analysis. Running through additional important documents related to -- if we just call it the docket here of materials related, again, very deep record on this material, unlike anything else we've ever had as a board. We received a memo from the program -- again, I mentioned it in my opening remarks, on November 15 that the program wished for us to delve very deeply into -- I don't think they used the words very deeply, but delve into other ingredients, and spell out what we mean when we're approving a material that this a material that's compose of many components.

So, you know, pretty 11th hour to tell you the truth, but we buckled down and we showed our work to make sure that we were abundantly clear for the record lifting out from the OFPA and the regulation, the criteria that do already exist today to review those other ingredients. So we produced an addendum. We made that available in copies at the back of the room today this morning for anyone who wanted to take a look at that.

I do -- since this is very new information, I do want to go ahead and read those additional criteria that are used for other ingredients, so that that is officially in the record as of today. Just a moment, please. It's going to take me -- it's going to take me about two minutes to read through this whole list, so please bear with me, but I think it's important that we get it on the record since the program specifically requested this information from our committee and when an executive committee call us that we apply this thinking to these two materials very directly.

Number one -- so let me preface this by saying other ingredients or components of compound substances that are petitions that are allowed are those that are authorized for use in food by the following criteria, and we're going to make them very explicit here. One, they're on the national list 7 CFR §205, 600 - 606, or mandatory federal requirements 7 USC 6519 (f) for FDA grass or otherwise infant formula, food additive, colors, et cetera 7 USC 6517 (c) and 7 USC 6519 (f) or EPA 7 USC 6517 (c) and 7 USC 6519 (f) or any other federal regulatory agency with primary jurisdiction over that substance 7 USC 6519 (f).

And any component or ingredient would be disallowed. Now, again, this is the analysis we had already used to review these two materials. This is making it abundantly clear, the laws that are on the books today that we used in our checklist process to look at these two materials, and any component or ingredient would be disallowed if it was prohibited by federal regulatory action 7 USC 6517 (d) or -- again, this is our seventh criteria, the direct product of excluded methods under 7 CFR 205.105.

Number eight, or contains any toxic heavy metals or toxic residues, 7 USC 6510 (a), and lastly, the component or ingredient was not disclosed in the petition, 72 Federal Regulation 2160 2168. Thank you very much for bearing with me on that. That was very late comer information. I think it's important to give as much transparency as much abundant transparency as there has been throughout this entire process.

Today grocery stores shelves across America are stocked with products that contain DHA and ARA, and that don't contain DHA or ARA. Consumers can walk in and they can pick one up, they're very well labeled, and they can choose it or they can choose not to. We've learned, as of yesterday, that this is a segment that's growing upwards of 30 percent. We know that dairy farmers are raising more cows, selling more milk because of these materials.

So my question for the 14 of us, because we're the deciders here, is that who are we to second guess three million Americans? Who are we to second guess FAO that has deemed these materials to be essential micronutrients for children? We continue to hear these rebuttals that it's better for consumers just not to have these products anymore, just better for them not to have them anymore. Who are we to second guess FDA that has concluded these products are safe for a food stuff that is the most regulated food stuff we have, infant formula.

New moms are label readers, and lots of other consumers are label readers as well, but new moms do their homework. The information that has been propagated and even propagandized over the last four to five years is abundantly clear to new mothers that are doing their homework. So they catch the controversy, no doubt. Three million homes, these are organic shoppers, have these products.

I've spoken with most of you about your opinion on these materials, and I know that we need ten votes for these materials to remain in organic, and I know that it's very close how this is going to come out. I would ask that you please leave your personal opinions at the door. We have a statutory responsibility to use science. We have a statutory responsibility to leave those personal opinions behind.

I also would ask that you please keep an open mind as we listen to public comment for, you know, all day tomorrow. There's no sort of moral high ground granted to one opinion. I would ask you please simply because of an organization's tax status, we've already heard many of the facts that were propagated refuted. And in fact, for years we had people stand at this podium talking about this GI issue with this material, and how horrible this was for babies. This was a waste of our time.

That has been refuted. Please note that anyone who wishes to purchase products without DHA or ARA can do so today, and will be able to continue to do so if we allow this consumer choice for organic consumers to remain. If we remove this from organic, we are going into people's homes and we are snatching out product from their refrigerators and their pantries, products that organic consumers have chosen, well-labeled products that they have chose to buy. So let's do preserve that consumer choice.

Steve DeMuri: Thank you, Tracy. Anybody on the Board have any questions at all at this point? Jay?

Jay Feldman: Thank you. Can you explain to us what exactly we're approving if we were to approve this material?

Tracy Miedema: Yes, I can. These are the generic versions of DHA algal oil, along with the other ingredients that are listed in the petition, and the process that was used to make that material. Same with ARA. Now, with ARA, I would entertain a friendly amendment to call the material on the national

list ARA fungal oil, as opposed to ARA single-cell oil. So what we are approving, let me just restate this.

The generic version of these two materials with the other ingredients that are listed in the petition and the process used. And there's your recipe book for any other processor that wishes to make that, there's your processing line, all of the corporate secrets laid out there in the petition. You can make it, or you can make it another way, as long as it's not pulling in other ingredients that aren't listed, or other ingredients that don't fit the nine criteria that we just listed.

So we made this abundantly clear what it is that we were approving. The NOP really pressed us hard to be clear. Now, it's never been done before. There's all kinds of things on the national list. Miles, I'll ask, you could back me on this, do we know what is in say every form of vitamin C today or how it's made?

Miles McEvoy: No, we don't. That's the purpose of the memo is that that needs to be clarified by the Board and by the program so that we can have consistency in terms of what substances are allowed. But it's been the practice of certifiers in the trade and the program to accept these other ingredients in 605 materials. It's been widely known that those other ingredients are there. It's been talked about in the technical reports and the TAP reviews that have been conducted over the history of the program.

So it's not really a secret, it's just that the Board has not explicitly addressed these other ingredients in the background to your recommendations, and that's what we're asking you to do to acknowledge that those things are there, and we're no longer silent on these other substances, and then the task in front of the Board is to develop a comprehensive policy on these other ingredients so that there can be consistency in how they're reviewed by the trade and the program and certifiers.

Tracy Miedema: I don't make that comment about vitamin C to indict anything that's on the national list today. I say it make it clear that the bar has been raised or the parameters have been changed, so we were asked to do some things in our analysis here that had never been asked of the Board before.

Steve DeMuri: Jay.

Jay Feldman: We should note that this happens over the history, and it has happened over the history of the Board where previous decisions reviewed as needing either another look or improvement or additional scrutiny, and that does have the affect perhaps of implicating previous decisions as being perhaps inadequate or needing modernization if you will. So I don't have a problem with the departments looking back at the history of an analysis and indicating that the Board should consider looking at new factors and so forth. That doesn't bother me.

I think it's part of this issue of continuous improvement that we all talk about when we talk about organic, but that's not my question. The NOSB, in the Martek document comment of Martek Biosciences, says, the NOSB would need to be aware that its annotation alteration in Martek's manufacturing process would result in a materially different infant formula ingredient, thereby triggering an analysis by infant formula manufacturers where the use of the new version constituted a major change in its product under 2 CFR 106.30 (c)(2).

Do you believe that the changes you have indicated the Committee wants to adopt would change Martek's manufacturing process resulting in a materially different end product?

Tracy Miedema: The criteria that we used to not alter the product. What I thought I heard at the beginning of your comment was if a manufacturer made this product differently, would it still be safe and available, and that would -- the onus would be on the manufacturer to check on whether something was allowed in infant formula. That's completely outside the scope of our Board or this analysis.

Steve DeMuri: Jay.

Jay Feldman: With all due respect, I don't think that's accurate. We have a petition in front of us that is requesting a very specific manufacturing process that we've heard testimony has been allowed by FDA, and then you have said, if I'm hearing your correctly, that you are proposing to change the annotation associated with this petition, which according to Martek's own -- I'm not -- these aren't my words, these are Martek's words, which could -- and I'm asking you the question could it -- and this is the quote, "result in a materially different infant formula ingredient, thereby triggering an analysis by infant formula manufacturers where the use of the new version constituted a major change in its product."

I'd really appreciate an answer on that because it's a very specific question. It's not my opinion, I'm reading from the Martek document. Thank you.

Tracy Miedema: We're not proposing an annotation. There's no annotation on the table right now. So I'm still -- sorry, I'm confused by your question. We produced an addendum to show our work and the criteria used that already exists on the books today for looking at other ingredients.

Steve DeMuri: Jay.

Jay Feldman: Thank you. I thought you said something about changing the language on ARA to fungal -- I don't recall what exactly it was but -- single cell.

Tracy Miedema: Single cell is the -- it creates the acronym that makes the material fit into a box of being a branded product, and there is no good reason for us to ever put something on the national list that is a brand name. Now, this isn't -- there's more than one company that makes these materials. I did a Google search, I found a company called Lonza in Europe that's making DHA algal oil today.

I have no doubt that there are innovators out there that can make ARA from fungal oil, if they're not already, and I didn't happen to find them. So that's all I wanted -- that's all I was suggesting in the friendly amendment, is making sure that the listing -- we preserve that cleanliness of the national list and don't put something on that even an acronym form is a brand name. I think that's important.

Steve DeMuri: Jay.

Jay Feldman: So it's your opinion that this language would be approved by FDA for use in infant formula. Or I guess is ARA used in infant formula, or just the DHA?

Tracy Miedema: ARA is used in infant formula, and we're not proposing a different material. This is what it would be called on the national list, referring to this petition and all of the criteria of the other ingredients. You know, I think this question would best be asked of the petitioner whether they're -- we have petitioners that have asked for materials. Again, we threw the doors wide open, all comers, to petition these materials on the national list, and perhaps we'll have an opportunity to ask whether that listing would be appropriate to the petitioner.

Steve DeMuri: Jay.

Jay Feldman: This is my last question. Thank you, I will do that tomorrow. And I just want to make sure I understand, we are -- if we approve this, we are approving a process that used hexane extraction and a process that includes enzyme extraction? Or are we approving both or one or the other?

Tracy Miedema: Both, and it's a good question. Hexane is not allowed in ag products. This is non-ag. And as for what I've learned, because it is confusing why there's a hexane extracted and a non-hexane extracted form of DHA, and what I learned is that FDA, world's leading food safety body, let's just all make sure we're on the same page there, has only approved the hexane-extracted version of DHA.

The non-hexane extracted version is the one that's typically used in liquid milk. Now, if I've misspoken, I'm sure our petitioners and experts will correct me on this, but I believe I'm right.

Steve DeMuri: Katrina was next, I believe.

Katrina Heinze: Thank you, Tracy. Two questions, so tell me if you want both at one time or not. The first, is we received at least one public comment, maybe a couple, suggesting that we list these instead as microbial oils from algae or something to that effect, so I wanted your thoughts on that. I haven't wrapped my head around it, and I know we haven't talked about it as a committee yet, but I just wanted to have that out there.

My second one is maybe if you could clarify that I'm understanding our vote the right way. On these other ingredients, voting for this is not voting for our policy on how we're going to handle other ingredients, that's gonna come second, and presumably whatever the handling committee does come up -- or recommend for how we handle other ingredients would then back flush and apply to everything on 605. So there could at a later time be changes to how the other ingredients for these be considered, but it would be consistent across the list.

Tracy Miedema: Okay. I'll take these reverse order. On the question of whether we're setting precedent with this criteria list for other ingredients, the answer is no. I've already asked Miles about that. We're not going to create policy on the fly. That's why we were a little -- like I said in the opening remarks, taken aback that we would be asked to create a criteria

what would be used going forward, and at the same time being asked to develop a policy.

I asked Miles how concerned he was that we were consistent with what we present today with what we do in the future, that was not the overriding concern because the policy still does have to be developed over time. Miles, please correct me if I mischaracterized that.

Miles McEvoy: No, that's correct. You have it just right. Thanks.

Tracy Miedema: On the question of microbial oils, I saw the two or maybe three comments suggesting that that would be a more appropriate listing. I was a little surprised, especially to see OTA do that. A little bothered because they are advocating for the importance of the process and the openness and transparency, and I believe the listing of microbial oils opens it up wider, and that we need to keep this narrowly focused on what was petitioned as a generic, but not some more broad class of microbial oils.

Steve DeMuri: Follow up, Katrina?

Katrina Heinze: Perhaps tomorrow we'll hear some public comment, and then maybe the handling committee can regroup if we hear something different.

Steve DeMuri: Nick, you had your hand up.

Nicholas Maravell: Yeah. I don't know if this is going to help at all, but FDA does approve DHA and ARA with regard to infant formula, and they also have a different process for just looking at DHA and ARA. So I was a little confused when you saying that a hexane-extracted version, that is the only one that FDA has approved. I believe they've approved that for infant formula; am I correct?

Tracy Miedema: That my understanding is that FDA has approved for infant formula only the hexane-derived version of the DHA algal oil.

Nicholas Maravell: And the ARA, which is also hexane approved.

Tracy Miedema: That's my understanding. This is a lot of facts to keep straight, guys, so if I missed something on the petition, then I expect the petitioner to set us straight tomorrow.

Steve DeMuri: And I'll mention again, we will have representation from the FDA tomorrow on the phone I believe, but that will be the perfect time to ask that question. Any other questions of Tracy on ARA or DHA? Barry?

Barry Flamm: Tracy, did you consider whether or not the two extraction methods ought to be considered separately, because it seems like there are different impacts from the two methods.

Tracy Miedema: It's a good question. They were considered independently. If I became conflated or muddled in looking at the two, the, you know, somebody will correct me on any errors that I've made, but the petitions were reviewed individually. The TRs were produced individually, the checklists were meticulously produced independently. So we didn't do kind of a master checklist. We went very carefully through the TRs for each one. So I would say the answer is yes, they were considered independently. It's just easier to present them both here today together.

Steve DeMuri: Barry?

Barry Flamm: I'm sorry if my question wasn't clear. I was talking about the two different extraction methods, the enzyme and the hexane. Were those considered separately, any consideration given to voting on that separately? I know your petition didn't seem to clarify that, but it seemed like the impacts are different.

Tracy Miedema: If one of those extraction methods was removed, my understanding is there would be a completely different result in product. It's the material that's being put onto the national list. So I -- we didn't have a technical review by the experts on a material produced without the use of this solvent. Is -- unless somebody knows something I don't know about this, and I may be mishearing your question still, Barry, so feel free to, you know, clear it up for me.

Barry Flamm: Maybe it's my incomplete understanding that's making the question difficult. But I understood that there was two methods of producing the product, either through enzyme extraction or through the hexane process. Isn't that correct?

Tracy Miedema: They're both used, not one or the other.

Steve DeMuri: It looks like Nick and then Tina.

Nicholas Maravell: I got the impression that we heard in public testimony that the enzyme-extracted DHA was used more in a liquid formulation, and that the hexane-extracted DHA was used more in a powdered formulation. I could be wrong here. This is what I thought I heard. And that the powdered

form was what was used pretty much exclusively in the infant formula, but please correct me if I'm wrong, because I'm trying to keep this all straight.

Tracy Miedema: Well, I will too. And so Barry, I was focusing there on the infant formula version. I'm gonna go -- I'm going into our checklist and into the petition right now. My understanding, and I really feel like reaching out to an expert here, is that on the infant formula version, both an enzyme action and hexane is used, and on the liquid milk version there is no hexane used.

So the question is, you know, are we going to eliminate, you know, if we're interested in not having hexane be part of the process, there would not be DHA available in a plant-based form for infant formula anymore. That's that going into mom's pantry, snatching it out scenario.

Steve DeMuri: Tina.

Kristine Ellor: No. I think Tracy just answered my question.

Steve DeMuri: The program just informed me that if the Committee would like, we could have somebody from Martek come up right now and try to help us through this question rather than wait until tomorrow while it's fresh in our minds. Let me take a quick poll of the committee and see if that's something we want to do. Nick? Good? Good? Okay. Is there somebody from Martek from here that can come up and just answer this one specific question? And please state your name and affiliation before you give us a brief overview.

Dr. Jim Astwood: Good afternoon. I'm Dr. Jim Astwood with Martek Biosciences. I'm the vice president responsible for scientific and government affairs for the company, and I understand you have a question.

Steve DeMuri: I think the question is can you explain to us briefly the differences between the enzyme and the hexane extraction for both of those substances, and into what products those two go into.

Dr. Jim Astwood: Certainly. I'd be happy to. As you are aware from the petition, there are essentially two algal oils that are used in the marketplace. The infant formula version and the food and beverage version. The infant formula version is derived from a species that requires hexane in the extraction process, mainly because of the biophysical components of the cell wall are difficult to break. That's used for infant formula, and as we

heard correctly from Tracy, that's the one that the FDA has approved for infant formula.

The food and beverage version is a different species. It does not require hexane, because you can use (inaudible) to adjust the cell wall. Those (inaudible) do not work for that first species for infant formula. So in effect, there are two types of oil that are produced for those two segments. Is that clear?

Steve DeMuri: We probably have a few questions from Board members. Nick, go ahead.

Nicholas Maravell: Were you referring now only to DHA?

Dr. Jim Astwood: Yes. I was referring only to DHA. ARA is only used in infant formula, and that process is -- does not necessarily require hexane, but there are some processes that do.

Nicholas Maravell: So the ARA extraction does not necessarily require hexane. When Martek produces the product, do they use hexane or not?

Dr. Jim Astwood: I think I'm gonna have to defer that question for a few minutes while I double check on that. We didn't believe the ARA was an issue in the conversation. If I can take a ten-minute recess and come back to you with that answer. Mr. Chairman?

Steve DeMuri: Tracy?

Tracy Miedema: A note that was passed to me asked did the technical review, and this is going to test your knowledge of our technical review, whether it analyzed both the hexane and the enzyme extraction versions of the material for DHA.

Dr. Jim Astwood: Did the technical review evaluate both?

Tracy Miedema: Yes.

Dr. Jim Astwood: Certainly your petition included the description for both the enzyme-extracted version and the hexane-extracted version were disclosed in the petition. And so the technical review would have reviewed the petition materials. That's my understanding of the process.

Tracy Miedema: I'm going back to the TR 2, everyone should be able to pretty quickly lay my finger on the answer to that. I apologize that I don't have it (inaudible) .

Steve DeMuri: Any other quick questions? Is it -- are you up tomorrow in public comment?

Dr. Jim Astwood: Yes. I'll be here tomorrow as well.

Steve DeMuri: Okay. So if you have any questions between now and then, write them down and we can approach it again tomorrow.

Dr. Jim Astwood: Thank you.

Steve DeMuri: Thank you. Anybody else have any questions for Tracy? Nick?

Nicholas Maravell: I had a question in terms of the process. If we have additional questions that we would like Martek to address tomorrow, is there some way to make that known to Martek so they would be prepared to address those questions? That's all.

Steve DeMuri: Well, you'll have a chance to ask him directly tomorrow, but if you have a question that you want to put in front of him right now, go ahead and ask it, and he can work on it tonight. You're good? Okay. Any other questions for Tracy on ARA or DHA? Miles?

Miles McEvoy: I just want a process clarification here. The Board -- the public has the opportunity to comment on the first day and the third day of the Board meeting, and many people are signed up for that. But if the Board has specific questions of members of the audience, there's expertise out in the audience that you want them to come up and answer a specific question, you do have the authority in your process to ask them to come up and answer specific questions.

So don't spend too much time going around and around trying to figure it yourself. If there's people out in the audience that can answer your question, you've done that many, many times in the past, so please use the technical expertise that are out in the audience to help you out when you need to.

Steve DeMuri: Thank you, Miles. We normally have done that on the discussion day rather than the presentation day, but I think it's good to do it both times as available. Any other questions at this on either of those two substances? Okay. Thank you Tracy. Great job. Next is beta carotene.

We're going back into alphabetical order now, and Katrina handled that one for us.

Katrina Heinze: Thank you. Sorry. I'm just organizing my thoughts here. The petition that the Handling Committee reviewed, and for which we have a recommendation is a petition to change the annotation from -- for the listing of beta carotene on 606 from beta carotene extract color derived from carrots, cast number 1393-63-1, to beta carotene extract color derived from carrots or algae, cast number 7235-40-7. So let me give you some background on this.

I will start by saying that the recommendation passed the Handling Committee with a vote of four yes, zero nos, and three absent. So some background on beta carotene. Beta carotene derived from carrots was added to 606 during the post-Harvey 606, oh, my gosh, what's gonna happen. So at -- I think that was my first Board meeting. At that Board meeting, we reviewed a bajillion 606 petitions. It was like being hit by several trucks.

So in that process when we talked about beta carotene, as well as a number of other colors, the limiting factor for why this color could not be commercially available as organic, was the availability of certain varieties of carrots that produced a color in enough quantity in proximity to a manufacturing location where that could be turned into color. And so based on that, the Board voted to list the material.

Then in -- recently, that maybe a year ago, year and a half ago, the NOSB, so this full Board, passed a recommendation that added for all colors on 606 an annotation that those colors must not be produced using synthetic solvents and carrier systems, or any artificial preservative. And the reason for that was that certifiers had asked for some clarity on whether synthetic solvents could be used.

When those colors were initially reviewed, it was the intention of the Board not -- or the materials we reviewed were produced not using synthetic solvents, and so when we listed it, the listings were based on that review. So to add clarity, we added that annotation, which leads us to this petition for beta carotene. The petitioner claimed, and this was supported by the technical review that was done, that beta carotene extracted from carrots requires the use of synthetic solvents, and that it cannot be extracted, and there is no manufacturing process that allows that.

The beta carotene that is much more widely available is this beta carotene derived from algae which can be produced without use of synthetic solvents. So I just wanted to highlight that there are a couple different ways, or a number of different ways maybe to make beta carotene. There is beta carotene from microorganisms like fungi, yeast, or bacteria. There's beta carotene from algae. There's extraction from plants, and then there are some synthetic methodologies.

So the extraction from plants is currently on the list by restricted by the annotation that it cannot be done using synthetic solvents. We also have a petition before us which is not being considered at this meeting for listing of the synthetics, so that's not the purpose. So the only material that we considered was the from algae. Okay. So let me quickly take you through our evaluation. We found that this material met other criteria for impact on humans and the environment.

The TR talked about this being a much more sustainable method of producing beta carotene, and in fact, this is the method that is gaining in popularity because of the sustainability benefits. The material is approved by FDA or -- what'd we say for human health. Hold on a sec. It's recognized as grass by FDA. We know that there -- it passed the other categories. Let's go with that. So let me highlight some other things from our checklist.

There are the methodology to produce from algae can use synthetic solvents, but much more commonly does not. That's supported by the TR, and a note that with the annotation, those synthetic solvents would not be allowed with this recommended change. When we talked about commercial availability, because this is from algae, it would not -- an organic form would not be available, so based on that we felt it met the commercial availability questions.

So all that being said, the handling committee recommended the change in annotation to list derived from carrots or algae. I also wanted to address the cast number. The cast number that was originally included in this listing is actually for annatto. It was incorrect, so the petitioner asked us to correct that, and that's supported by the technical review. So finally, we did receive three public comments, all of which supported this change in annotation. We had no public comment against. Any questions?

Steve DeMuri: No questions for Katrina? All right. Oh, Colehour.

Colehour Bondera: I'll just entertain the process question just out of curiosity I'm not looking at it, but I looked at it, you only had four of your committee members vote for it, and the others weren't present, and I'm just curious if you got feedback on the others subsequently.

Steve DeMuri: I cannot recall who was not present for that vote, but if you know that you were not there, and have any comments, please let's hear them. Nick?

Nicholas Maravell: Yes. I was absent, and I concur with what Katrina said.

Steve DeMuri: John?

John Foster: I was also absent. I was actually absent for this one, and I would concur.

Steve DeMuri: Thank you. Any other questions for Katrina? Okay. Moving along. The next petition item is potassium hydroxide. Joe Dickson.

Joseph Dickson: Thanks. We're not doing chlorine, right? That's been moved?

Steve DeMuri: Couldn't hear you Joe.

Joseph Dickson: It looks like chlorine is next on the agenda.

Steve DeMuri: Choline. As I mentioned yesterday, we're not going to discuss choline at this meeting. We are deferring that to the next meeting because we didn't have the TR on time to consider that material. So we're not choline at this meeting. Thank you. Joe, you got potassium hydroxide.

Joseph Dickson: Apologies. I'm looking I think at a weird version of the meeting packet. I just -- you're seeing that too, right? It says chlorine materials annotation? That's fine. Okay. Let me just get to that right page here. So this is a petition to change the annotation from potassium hydroxide on 605 (b) from potassium hydroxide prohibited for use in lye peeling of fruits and vegetables except when used for peeling peaches during the IQF process, to the new annotation of potassium hydroxide prohibited for use in lye peeling of fruits and vegetables except when used for peeling peaches.

So what that does is it just -- it no longer restricts peach peeling just to the IQF process. It broadens the use of potassium hydroxide so it can be used in peaches that are going to be canned, in addition to peaches that are going to be frozen. The petition came from a peach canner who, you

know, laid out a pretty good argument for this. The reason that potassium hydroxide is necessary for peeling peaches has to do with the unique softness and delicate nature of peaches.

It is used to break down the pectin bonds that adhere the skin to the peach, and allows it to be shot off with water. My market survey, Katrina-style, could only reveal one commercial brand of organic canned peaches on the market now, and it appears that that manufacturer is actually canning previously frozen peaches as a way to get around this. And it seems that there really is no other technically viable way to peel peaches. So it's a pretty straightforward petition I think.

We received two public comments, one from the California Canning Peach Association in strong support of this recommendation, and another from a peach producer expressing their support as well. I don't know if -- does the Board want me to talk through the recommendation in any deeper detail?

Steve DeMuri: Probably not necessary unless anybody has any specific questions for Joe at this point. I'll mention that the Committee voted six yes, zero no, and one absent in favor of this annotation change. Any questions for Joe? Jay?

Jay Feldman: Is hot water a substitute for this, and if so, how or why not?

Joseph Dickson: Hot water works for peeling certain types of fruit, but the soft flesh, and the sort of soft skin and the delicate composition of the peach makes it so that just using water alone without loosening the skin first, using a base kind of obliterates the peach.

Steve DeMuri: The conventional canned peach guys used sodium hydroxide, and that's specifically prohibited in the NOP regulations, so potassium hydroxide is used for the frozen version. It makes sense that we would allow it for the canned version as well. Any other questions for Joe? Okay. Thank you, Joe. Moving along, the next petitioned item is silicon dioxide. John Foster.

John Foster: Thank you. I had quite a dioxide time this semester, so let's see, the silicon dioxide. Okay. We had a fairly novel kind of petition here to remove silicon dioxide from the national list because of the introduction of a wholly natural alternative. In this it happens to be an organic milled rice product that the petition put forward as having some of the properties, if

not all of the properties of silicon dioxide as it -- as silicon dioxide is currently approved under FDA.

There's several different applications that the FDA has okayed for silicon dioxide, and the petition was asserting that this alternative could sub in for that. We've had actually public comment for several -- actually several meetings on this subject. There was some discussion early about whether this could during a sunset review of silicon dioxide. For one reason or another, we worked out -- felt like this would be a better way to proceed on this material.

It had to do with the timing of information, some conflicting public comments, actually several conflicting public comments that we received. e felt as a committee that it wasn't in anyone's best interest to try and do this during sunset with an annotation change which was itself a fairly new practice at that time. So we encouraged the petitioner to follow through with the petition. He did, and has in the last -- I believe it's the last three meetings, received various public comment for and against.

The -- like I said, there are several different applications, a binding agent for dry materials, a defoaming agent, a material to absorb flavor components. It has a number of industrial uses as well, but we're just really honed in on the food aspect here. It's allowed internationally for various uses in conventional and organic in the EU under Kodex (sp?) , Canada, Japan, and I believe for ifoam as well.

It was 2010 that we voted to relist silicone dioxide under sunset knowing that a petition was in process. We did that very deliberately. The public comment that's been put forward has -- like I said, was conflicting for a while about the applicability and suitability of the number of the places where silicon dioxide is currently used. There's public comment put forward that this alternative is quite suitable for most, if not all of those, and public comment, again, also for manufacturers saying that it wasn't a suitable alternative.

And my level of technical prowess with these two is such that I need to rely on manufacturers to tell me what the deal is, so that was a little -- that was challenging to try and absorb all that. Nonetheless, we went forward, continue to work on this, and got a lot more good information from the petitioner, including public comment yesterday. We, I believe, did a very good job at considering the need for the current material, and the -- kind of

the spirit of the regulation relative to trying to find alternatives to synthetic materials where possible.

And we forged a little new ground I think, in part because the checklist that we might often use for petitions is really not designed to be used to remove materials. So we had some good discussion about the checklist and how it functions in removing materials from the national list. We worked through those, ended up with a motion to -- oh, hold on a sec. We did -- I'm sorry.

We did two votes on this, one to remove the following substance, this would be to remove silicon dioxide from 605. The vote on that was zero yes and five no and two absent. And then we had a -- voted on a motion to amend the annotation of the following substance. This would be 205.605 (b), synthetics allowed, silicone dioxide, providing sufficient evidence showing natural alternatives are not commercially available for a specific product or process is presented. The Committee vote there was five yes and one no and one absent.

Steve DeMuri: Thank you, John. Questions? Jay?

Jay Feldman: As you know, OTA suggested changing the word natural to non-synthetic, is that something that you're considering?

John Foster: I haven't conferred with the committee chair on that, but knowing him, he would be open to consideration.

Steve DeMuri: Jay.

Jay Feldman: I'm interested in the Committee's reasoning on introducing an annotation that identifies commercial availability which seems to be inherent in the act -- or in the rule itself, and the act. Why, if you believe -- it sounds like, and from what I've read, it sounds like there's pretty convincing evidence that the alternative is there, and therefore we no longer need the synthetic material that performs the same function, thus the essentiality of that synthetic material can no longer be supported, why not just go directly to delisting?

John Foster: How did I know you were going to ask that? On the -- as for commercial availability, yes, that's a common feature, however, not on 605. So is that -- is that enough on that part of it? We're not used to dealing with commercial availability on 605 materials. So -- and then with respect to essentiality, the -- like I had said, there is a lot of apparently sound, valid

information that said in some -- one commenter said, you know what, I've used this alternative, and I've tried it in all of my products, and in fact I can substitute 95 percent of the silicon dioxide with this product, but I need that five percent.

Or there were a number of other comments that said it works in this application, but not -- it works in application A but not C. And someone else would say it works in C but not A. And what the petitioner yesterday had given in public comment was some examples of application -- the breadth of application. I thought that was very, you know, that was useful, however we didn't have that at the time we were deliberating on this. So I'll leave it there.

Steve DeMuri: Jay?

Jay Feldman: Okay. I thought I saw some comments, I can't find them now, that there was some concern about certifying to this, and some difficulty associated with that. Where are the certifiers on this issue of being able to make that determination as to availability and percentage availability, et cetera.

John Foster: I can't speak for all certifiers, but in general, it is a -- this would be a challenge for them as I understand it, that it's been called a number of things, but among them, down in the weeds, and a very hard thing with limited or uncertain value actually. However, the Committee was feeling that there was enough momentum to put it forward to the whole board and get a larger discussion on it.

Mostly out of respect for the intent of using natural, or in this case, you know, nicely enough an organic alternative for a synthetic. We wanted to move it forward and this was what we could come to given the information we had at the time, which was back in September or early October as I recall. Yeah.

Steve DeMuri: Jay.

Jay Feldman: Yeah. So just to follow up, it was PCO, there may have been others, and it's not just a disagreement, it's as you probably know, it's a dire warning. So it's something to look at I guess.

Steve DeMuri: Katrina?

Katrina Heinze: I think it's important question that you raised, Jay. As we've talked about this over the last couple years, and in particular for this recommendation, we looked at three different options, so one option was to add an annotation saying that silicon dioxide was only allowed for certain applications. So that's similar to what the petitioner talked about yesterday where it would add only as a defoamer. We did have evidence though that there are other applications where the organic alternative does not always work in the other applications.

So we were leery of a whole hog delisting knowing that it's on the market, but that there's products on the market that use silicon dioxide that could not use the organic alternative. Then another action we looked at was limiting the amount of silicon dioxide to a much lower percent because we had had, as John eluded to, we had had public comment that says I can replace most of the silicon dioxide with the organic alternative, but I need a little bit in there to boost.

We explored that but couldn't figure out how to technically get that right. So then this was our third alternative, because I think, and I'll let the other folks speak for themselves, but we wanted to reward innovation that got us to an organic alternative, and so trying to find that balance between rewarding innovation in getting to an organic alternative is I think very, very, important, but yet not punishing folks who aren't quite there, and how do we bridge that gap.

So I think this is where we ended up knowing -- and we talked about the fact that the certifiers were not gonna like this. But hopefully it would send a message that would maybe get us over that other five percent.

Steve DeMuri: And it's the Committee's hope that this will spur additional development so that at some point in the near future we'll get another petition to completely delist silicon dioxide because there are organic alternatives for every use. So that's our hope. Any other questions for Katrina? Mac? Or I mean -- Katrina, for John. Mac?

Robert Stone: John. Does the annotation capture not just commercial liability but applicability that it suits the purpose in each of those applications? I know that makes it even worse for certifiers.

John Foster: So we tried to lift as much of the language from the existing commercial availability language that is applied elsewhere which does speak to the utility in that application or in that formulation. Certainly that is our

expectation that much like we wouldn't say that if you can't find organic tomato seed, go ahead and plant lettuce instead. I mean, you know, it's got to be suitable for the intended use.

Steve DeMuri: Any other questions? All right. The last petition item on the agenda for today is sulfur dioxide, so I'll hand it back over to Mr. Dioxide, John.

John Foster: Thank you. Got to switch screens here. Let's see. Another novel petition. We received a petition for an annotation change with -- to change the annotation of sulfur dioxide from its current listing, which requires a made with organic claim to be made on wine, and the petition -- the request for the language change was -- the listing would be changed to sulfur dioxide for use only in wine, provided that total sulfite concentration does not exceed one hundred parts per million.

This would effectively allow an organic label claim to be made on wine, which would previously have only been allowed to say wine made with organic grapes. We received a few public comments on this, I mean, many public comments on this. The -- this was a fairly long discussion. We were in Committee waiting for quite some time for our TR. We decided to proceed with the TR on silicon dioxide that was created for the Crops Committee initially, hoping that a TR for a handling application would come through.

It did, and we were able to make a fair amount of use for that. A lot of the information from the new TR was exactly the same relative to manufacturing, relative to other uses, industrial uses, and so on. So we got a real nice head start on the Committee recommendation. Let's see. There -- a lot of the public comment has been focused -- this is no surprise to anyone who's been listening, a lot of public comment received about concerns over the allergenicity or sensitivity to sulfites.

There's been a lot of public comment about the kind of perspectives that the consumers will have on the integrity of the label. A lot of public comment questioning the essentiality of sulfur dioxide independent of label claims. There's been a lot of public comment about the utility of it, and the necessity of it, necessity being independent of essentiality. A lot of conflicting historic descriptions about whether or not it has been used, and if so, for how long.

I learned a lot about early agriculture because of this. That was a useful thing. I'm trying to think of a class of public comments, if -- I've forgotten. I don't believe so. But I will say a lot -- the petition was for a change in the allowance of a label claim. That's the petition, and that's really what we focused on at the end of the day. Because the volume of public comment, again, for several meetings now over several comment periods has been quite voluminous, we've been thinking and pondering this for quite a while.

But at the end of the day, the petition is allow a change in the label claim. I will say a lot of public comment came in that appeared to think that sulfur dioxide was not currently used, because the public comment said don't allow sulfur dioxide and was not specific about a label claim. So I'm not sure whether that was just incomplete comment or whether it was implied about the label claim. That was -- I couldn't figure that out.

But there were quite a few folks who at least the black and white of it, appeared to think that it's not currently allowed. I will point out in the public comment, this is a great example of people looking at the same issue with completely different perspectives coming into it, and seeing very different things coming out of it. There's probably been no better example. I can think of one other one, but a few good examples of the various opinions coming into a discussion, and a very vigorous public discourse about it.

It was very rewarding to be a part of. At the end of the day, the petition was for a label change allowance, that was it, and we looked at it as such. We did vote for -- let me read it here to be clear. The committee made the motion, a substance to be added as allowed to the national list 205.605 (b) synthetics allowed, sulfur dioxide for use only in wine, provided that total sulfite concentration does not exceed one hundred parts per million.

For whatever reason I don't see a vote count on here. Sorry, I do. There were five yes and two absent, zero nos, and zero abstentions.

Steve DeMuri: Thank you, John. Any questions for John? Jay?

Jay Feldman: Thanks John. Was there any consideration to, or did you discuss expanding this beyond wine? Why the limitation on wine, is that historic and related to the history, or why the limitation on wine, and did the committee discuss broadening this to other allowances to other materials or products or beverages?

John Foster: FDA does allow it conventional, other beverages, other foods, dried fruit is a common one, but a lot of other beverage and food items. We did briefly discuss that as a possibility, but we're not wanting to go there at all. The use in organic has been limited to wine, and we wanted to -- we saw no need to expand beyond that, as far as I recall. It was -- it was a very short discussion. No one on the committee said we should go beyond that.

Steve DeMuri: Jay.

Jay Feldman: I guess I'm wondering if we were to be petitioned in the future, what would be the basis for saying we don't want to go beyond that. There may be some limitations in the rule there, but I don't -- I'm not sure about that. In other words, from a scientific perspective, impacts on health, necessity, essentiality, what would be the justification rationale for not allowing expansion of this use and expansion of this market in organic -- in food certified organic down the road?

Steve DeMuri: I believe somebody from the program has an answer. Miles?

Miles McEvoy: Yeah. OFPA only allowed sulfites to be -- it specifically says under Section 2111 under handling, for a handling operation to be certified under this title, each person on such handling operation shall not, with respect to any agricultural product covered by this title, sub (3) add any sulfites, except in the production of wine of nitrates or nitrites. So OFPA restricts the allowance of sulfites to wine. So you'd have to amend OFPA to expand beyond wine for the use of sulfites.

John Foster: And we definitely weren't going there.

Jay Feldman: Just checking.

Steve DeMuri: At least not until I'm off the Board. Any other questions for John? Mac?

Robert Stone: So just yesterday we heard testimony that it would also carry into balsamic vinegar and things, but with that definition they couldn't carry this -- further process the wine into these products, right? That would be precluded because of these definition in OFPA, right?

Steve DeMuri: That would be my understanding, yes. Any other questions, John?

John Foster: This will of course relate to no doubt a hot topic for tomorrow's public comment of other ingredients. Very much so it'll bridge over for good or for worse, but at some point we're gonna have to have a conversation

about two what extent the labor requirements for formulated ingredients impact where we go with allowability of those ingredients. For example, if you buy a chocolate chip cookie, it'll say, ingredients, flour, sugar, chocolate chips parenthetically, cocoa butter, et cetera, et cetera, and those little parentheticals are things that go into make up that chocolate chip that is itself an ingredient.

John Foster: The ingredient is a chocolate chip, but there are some, I'm sure there's implications relative to FDA ingredient labeling that would play into the example you bring up, and that is beyond my skill, my experience. I would definitely want to defer to FDA on that.

Steve DeMuri: Tracy, you had a question?

Tracy Miedema: I was one of the yes votes. We -- everyone who was on the call that day was a yes vote to this change, and my reasoning behind it, and I want to be fact checked here, is some unintended consequences of the labeling, and it's -- we had a public comment yesterday that this was a wine seller, and he said the labeling is so clear for organic wine, and I believe what he was referencing was that the label had become -- the seal had become synonymous with non-sulfite, and that was the clarity part.

Because, again, please check me on this, my understanding is that you have two -- let's say we have two bottles sitting next to one another. One bottle is made with 70 percent organic grapes, and 30 percent non-organic grapes, and less than 100 parts per million sulfites. It says made with organic grapes. Next bottle sitting right next to it has 100 percent organic grapes, go organic farming, it has less than 100 parts per million sulfites, it's also labeled, made with organic grapes.

And so the unintended consequence of the labeling is that we have created a disincentive to have hundred percent, because that hundred percent grape bottle is lumped in together with the 70 percent bottle, and -- am I correct in this unintended consequence? Did I ...

Steve DeMuri: Miles.

Miles McEvoy: Yeah. If you're gonna label your product as made with organic grapes, then all the grapes in that product would have to be organic as per the regulations and the training and labeling requirements by TTB on this. If you're gonna use -- it's a little bit confusing, but if you look at the information that TTB provides on wine labeling, wines do not have to disclose the ingredients that are in them, but for a made with organic wine,

you can have two different varietals, one that's an organic varietal, and one that's a non-organic varietal, but you have to clearly disclose that on the label if you're going to do that.

So, I think it's a very uncommon situation where that is happening. What we seem to find is that made with organic grape wine contains 100 percent organic grapes and just has added sulfites. So if you're gonna use mixed varietals, one that's organic and one that's non-organic, then you have to disclose that on the label, and I think there was some public comment that said that someone was using the same varietal, and if that's true, then that's not in compliance with the standard and somebody should file a complaint.

Steve DeMuri: Nick and then Katrina.

Nicholas Maravell: I thought I read a comment that said, and I'm paraphrasing here now, that it is legal and indeed a wine is carrying this on their label, 71 percent organic Merlot, I don't know if that was the variety or not, 29 percent non-organic Merlot, and that that was perfectly legal under NOP guidance, and I did not bother to fact check that, but I remember reading that. Do you have any comment on that?

Miles McEvoy: Well, I would like to see that particular wine label and we'll run it through with compliance and with TTB to see if that's been approved, and if so, we'll get that corrected. But if you take a look at the label information on the NOP website in terms of alcohol labeling, you'll see that that is not permitted, to have the same varietal, both organic and non-organic grapes.

Nicholas Maravell: Thank you.

Steve DeMuri: Katrina and then Jay.

Katrina Heinze: So I, like Tracy, voted yes because we heard public comment in Davis where they showed us a bottle of a mixed varietal where it was not clear on the label that one of the varieties, the 30 percent, was not organic. Now, I did a Google search here last night after our conversation and couldn't find examples of that.

So one question for you, Miles, do you believe that since we saw -- got that public comment in Davis maybe labels have gotten better, and then maybe just a comment for the public, if you're aware of examples like that

it would be helpful at least for me personally as I think through this topic to see examples of a mixed varietal and how it's labeled.

Steve DeMuri: Jay, you had a question?

Jay Feldman: John, it would be really helpful if you could just briefly describe the committee's thinking -- or the majority of the committee, I guess it's three member -- half the committee's thinking on this necessity issue or essentiality of this material, and your thinking of that specific issue and how it applies to the position you came to. Does that make sense?

John Foster: So when I talked about this being a label deal, it's essentiality is if at all not, you know, little at issue. It's used in wine. It's used in -- it's already used, and the powers that be decided in OFPA to make the allowance to use it, sulfites in wine. The essentiality question historically has been do we need this material in this -- do we need this substance in this food product in the case of 605, and apparently we do. Congress said in OFPA it's there. That's -- so there's a fair amount of historic precedent relative to the regulation, certainly under NOP and even before that, but also relative to a fair amount of history prior to organic certification where -- I know there's arguments on the other side of this, but a lot of wine makers over the years have used this item.

I don't know, and this is the same of growers, I don't know a lot of folks who spend money and effort on things they don't have to. So over the years, say what you will about conflicting historical perspectives about what they did in Rome 2000 years ago, I don't know, I wasn't there. But I know that there's a lot of wine made with organic grapes that use sulfites and the operators claim that it's essential.

In the context of this discussion, there was less focus on that because sulfites are already in this product, and that wasn't the subject really. We're not petitioning the -- or the petition wasn't to add sulfites all of a sudden, it was just to modify what's on the package. The actual material relative to its use, its volume, it's -- yeah, its utility in this process hasn't really changed. It's what goes on -- the only change is what's outside the bottle. Nothing changes inside the bottle.

Steve DeMuri: Jay.

Jay Feldman: So you're viewing this as a label -- you used the word necessity earlier, that's why I'm bringing this up, in your discussion. But you're using the -- you're describing this as a labeling issue, that sulfites are already

there. Sulfites are not in wine -- were not added to wine that now has the label, the seal. So the question then in, when you put -- allow a synthetic into a product on which we -- this Board, allows the seal, are we answering that necessity question?

For me, you're crossing the line at that point. You're crossing the line of whether that ingredient or that process is necessary to produce a product that meets the standard of the label, and therefore gets the label. I don't -- I'm not sure how you separate the two, but it sounds like you're -- the committee or the majority -- half the committee believes that because it's already in the made with, this -- there's somehow a line that's been crossed that allows the label to be changed with the certification.

I see it just the reverse. That is, we as a Board are protecting that seal and questioning the need, the necessity for the introduction of synthetics to get that seal. And then in the process of doing that, as the committee has done -- the Handling Committee has done, I think a great job with the whole silicon dioxide discussion, which doesn't happen to be a particularly dangerous sort of thing, but nevertheless an important process that the committee went through in trying to create incentives for an industry to move away from synthetic, you know of synthetic inputs.

So here we -- it just -- doesn't it seem to you like we're going the other way with this decision, that we're -- instead of moving the incentives toward a reduction of introducing synthetics, we're actually encouraging the introduction of those synthetics, which many in the industry now say are not necessary.

Steve DeMuri: John, answer Jay.

John Foster: I don't want to speak for all on this point, for the others on the Committee. In all of our discussions about essentiality relative to ingredients, certainly 605 and 606 on the Handling Committee, essentiality has been a function of functionality in the manufacturing of the product. So we dealt with that consistent with past discussions. It -- the essentiality also has been historically, at least on the Handling Committee, has been -- what's the word, it's been a -- it's been a part of the dialogue of should we allow this into organic, into an organic product.

I see what you're saying, that line if you will, is kind of I guess embodied in that into an organic product. In this case though, the organic product, the composition, the formulation of the product is unchanged. It is -- its

essence, right, is organic right now, and this is my understanding. I'm sure we'll get more comment on it tomorrow, but for the growers side, from many vineyards side, they're using 100 percent organic grapes.

They have a very unique limit on their labeling ability, and because the petition asked what it asked, it -- like I said, in my kind of simple mind, I'm thinking this change is occurring outside the bottle. No change to the essence of the wine. People aren't buying the bottles for the bottles typically. Some buy it for the label, I know, but most buy it for the inside, and that's really that -- we focus -- that's why the essentiality question was not a primary question there.

Because its utility in the formulation of the product didn't -- really doesn't change, it hasn't changed anyway. That was the thinking, but I would invite others on the Handling Committee to weigh in too. I mean, I don't have all the answers.

Steve DeMuri: Jay.

Jay Feldman: Here's my last point. And this goes to a lot of the discussions we're hearing over this, you know, several days, and that is that by taking an action on a material, we are helping to grow the organic market. We are helping to, you know, we're being told that by many. We've heard it on various materials.

And what we've heard with sulfites is that we will grow the market, that in fact is has been stifled as a result of not having -- that's one of the arguments, not having this seal on the made with category. If that's the case, then we will see -- the action of this Board will, the end result will have been to increase the use of a synthetic, which is exactly contrary to what we're charged with doing, which is to reducing to the extent possible, the use of synthetics.

And it's all -- it hinges down to the argument that's being made that we are in -- by not acting, we are stifling the growth of a type of wine that has a certain ingredient. Thanks.

Steve DeMuri: Nick, I saw your hand up.

Nicholas Maravell: Jay, I don't know if this will help at all, but let me just say that I think we're facing a situation here that was introduced through an act of Congress, which permitted the use of sulfites in grapes. Second of all, I think that there was some discussion of essentiality and functionality, and I

think that the public comments that we have received here and through the written public comments, have a bearing on that in terms of how effective are non-sulfite processes in producing wine, and how well do those wines compete with made with organic wines or conventional wines made with sulfites.

So I think that in my mind anyway, these issues were not the focal point, but that we had -- we did consider them, and I think that we have gotten more information than perhaps we had available to us at the time that we made this recommendation. And so we, you know, we'll take that into account. I think we should take it into account.

Steve DeMuri: Any other questions for John? Okay. Thanks, John. Okay. That concludes the petition substances. Now we move into a few sunset items. The first one is animal enzymes. Animal enzymes is one of the original listed materials from 1995, so been around a while, and it's been through a few sunset rotations already. It's up for sunset on 205.605 (a) in 2013. This specific listing is for animal enzymes.

Enzymes were also listed in the same section from (inaudible) and from plant and microbial sources. But those are separate listings. This is only for the animal enzymes listing. They have a wide variety of uses in organic food processing, but probably most predominantly as you're most likely aware would be in organic cheese and sour cream dairy type production. We did have a TAP from 2000 on animal enzymes. We requested a new TAP because that one was ten years old.

We wanted to see if there was anything new in the literature or from new processes that might have been developed since 2000. We did receive a TAP, it came rather late in the process. We had already deliberated, voted, and posted our recommendation before the TAP -- or before the TR rather was given to us. But we did look at it, we deemed it to be acceptable, and did not see anything in the TR that would want us -- that would cause us to go back and try to change our vote at this point.

We received a few public comments, a handful of public comments. Nobody objected to relisting animal enzymes on 205.605 (a). This particular substance does fall into the category that the program has asked us to look into, in that there are stabilizers, emulsifiers, that type of thing, in enzymes that we're gonna have to take another look at once the Handling Committee comes up with a policy on those types of additives to listed products. So that will be on the work plan going forward.

We felt as a committee that it would be important to go ahead and vote for listing for this item knowing that that was going to take some time, and if we didn't take action on it now, animal enzymes could be B-listed, and that would leave the organic dairy industry in a big bind, because they would not be able to use it for cheese production. So the Committee is recommending that we relist animal enzymes. The vote was five yes, zero no, and two absent.

Any questions on animal enzymes? None? You let me off easy. Okay. The last two, we have two listings for tartaric acid. It's due to sunset off of 205.605 (a) in listing, and off 205.605 (b) in another listing, and Katrina handled those two for us. We'll take those in combination.

Katrina Heinze: Thanks. Okay. Tartaric acid. The history of this material is in our recommendation. I'm not gonna go through all that, but feel free to ask if you have questions. There are two listings of tartaric acid on 605. One is on 605 (a), and that is for tartaric acid sourced from grape wine. The other is on 605 (b), so a synthetic, which is tartaric acid from malic acid, and both are due for sunset.

So first I'll review the public comment that we received to the sunset listing, and then I'll go over more recent public comment. So in response to the federal register notice on sunset, we received six public comments, all of which supported the relisting of tartaric acid. So specifically, four public comments supported relisting the nonsynthetic, and one of those -- oh, and an additional supported relisting or moving it to 606 if there was some evidence presented to demonstrate that it could be produced organically in the appropriate form, quantity -- quality and quantity.

For the synthetic listing, we received four public comments which supported the relisting. We did additionally receive one public comment which supported relisting tartaric acid, but didn't say which listing they were supporting. So as we were doing the -- preparing the sunset recommendation in September of this year, we received a petition to remove tartaric acid from 605 (b), so the synthetic listing. That petition says -- and it's available on the petition database if anyone wants to see it.

The petition said that there are no functional differences between tartaric acid sourced from grape wine or from malic acid, and that there is sufficient tartaric acid sourced from grape wine. Additionally, the petition said that tartaric acid isn't from malic acid, but rather from maleic and

hydride. These materials -- I would encourage you, if you want some entertainment, to read the history.

Tartaric acid is this much maligned material that wasn't -- it was supposed to be on the list, it wasn't on the list, it got listed wrong on the list, it didn't have annotations, so it's not a surprise that perhaps in all of that there was a mistake on the -- on how it got listed. We had received a technical review. To be transparent, when we finalized this recommendation, we had not received the technical review, and so what we said was, we would not take a vote at this meeting unless we had received it, and we received it in plenty of time.

So I will review that for you guys. So based on public comment, the TR, and kind of past public comment we received, the Handling Committee believed that there was insufficient evidence to support the need for both listings. So we felt that only the non-synthetic was required. So we took two votes. The first one to renew tartaric acid made from grape wine on the national list. That passed with six yes, zero no, one absent.

Our second vote was to renew tartaric acid made from malic acid, and that failed with one yes, five no, and zero absent. I feel like I have a miscount there, sorry. Okay. So in response to this recommendation, we received three public -- written public comments for this meeting. Two supported relisting on 605 (a), and one supported relisting on both. That one specifically said that they did not support removing the synthetic listing unless we had a technical review, and asked us to defer until we had that technical review.

So I've had time to speak to that public commenter, who unfortunately isn't here, so you'll have to kind of take it on my say so. But they do not object given that we do have the TR. Okay. So what did the TR say? The TR said they supported the petitioner's comment that the synthetic should really say made from maleic acid and not malic acid. They also point out that in the Canadian organic regulations, tartaric acid is allowed, but the synthetic is only allowed with the non-synthetic is not available.

The EU regulation says tartaric is allowed in organic, but only from a natural plant source, so presumably the grape. And then they did talk about how there's two ways to make synthetic tartaric acid with one being approved by FDA as grass. And then it said that both listings meeting the criteria for listing, except when you think about these alternatives, because

clearly there's a natural alternative to the synthetic, since the natural alternative is also on the list.

There was no indication in the TR that the two sources lead to different functionality when used. Every indication would say that they are interchangeable, especially if you look at the Canadian and EU regulations, you know the Canadian would clearly indicate that they're interchangeable. So again, our recommendation is relist the non-synthetic and remove the synthetic. Just one closing comment on that is when I do gut check on this material, it makes me nervous to remove the synthetic because I worry about unintended consequences that I don't know about.

The reason for having the two listings is totally lost in the public record. I've reviewed this material I think now three times during my five years on the Board and I can't find it. No one seems to remember why we have both. So it's a bit of a conundrum. We don't have new information, right, and for sunset we're supposed to use new information. We don't have any new information that says that the synthetic isn't now needed. At some point a Board felt it was needed.

But on the other hand, a natural alternative clearly exists because it's on the list. So those are the things we weighed. When we weighed them, what the Board said was -- or what the Committee said was unanimous to relist the nonsynthetic, and then with five against relisting the synthetic. For the reasons I elucidated, the one vote for relisting the synthetic was weighing all those different factors and came out saying the synthetic should be relisted. That's it.

Steve DeMuri: Jay?

Jay Feldman: For now I only have one quick question, and that is, the listing on the national list says, you know, it says tartaric acid made from grape wine. So I ask you and John, is that grape wine with added sulfites or without?

Katrina Heinze: Okay. That's funny because actually the TR I think talks about that, but I'm gonna have to go back and get the answer because I don't remember. This is -- I think this is really made from the solids from the wine process, so I think it's before the sulfur dioxide gets added, if I remember. But I will verify that for you by Friday. But I'm sorry I gave you a headache.

Steve DeMuri: John.

John Foster: Unless I'm misguided, there would be -- it would be wine, whatever wine means. However we define wine, that's what the tartaric acid has to come from, and it could have sulfites in it, and it could have all sorts of other things in it, but it just is wine. It's about what it is, not it's allowance for organic. It doesn't have to be organic wine, yeah.

Steve DeMuri: Colehour?

Colehour Bondera: That was my question actually, and Katrina, I was going to ask it of you until now John chimed in on the same topic, which is that you referenced, and I didn't catch it completely, but you said something about somebody commenting about -- which I admit I didn't read, so if you could clarify, about -- and I wonder if you all discussed it, about the wine being organic or not. So I'd like you to address that topic at least additionally, and/or clarify what you did say.

Katrina Heinze: So first, you did hear correctly. We had one public comment that said if there's enough evidence would you move tartaric acid to 606 so that commercial availability would have to be applied. And then I'm not finding the TR right obviously, but there -- in the process, I think it can't be organic, which is why we didn't -- it cannot be -- the process of going from the grape mush that's used to the final product, I think in our classification makes it not something that could be produced in organic form, so it's non-synthetic.

But to be honest, I'm speaking without having the TR in my -- in front of me. So what I would ask is could I answer that on Friday so I get my facts right?

Steve DeMuri: Tracy?

Tracy Miedema: I think I can help. Just a reminder, 605 materials need not be made from organic agricultural ingredients unless it's stipulated with an annotation, and so what this material says is it's made from grape wine, and it may be made from organic wine or non-organic wine, it's just made from wine. Those may be organic grapes, they might be organic grapes, but we just -- that's not what the 605 list is.

Steve DeMuri: I think we're moving in the right direction on this material. You know, we're removing a synthetic, restricting it to a non-synthetic and the Committee's hope would be that somebody in the near future would petition the Board because they have found an organic version of tartaric

acid by using organic wine and a compatible process. So that's what we're shooting for. Any other questions for Katrina? All right.

Thank you, Katrina. The last item we have on the agenda for today is a chlorine materials annotation recommendation that John Foster worked on for us. You have to remember, this was deferred from the last meeting, and we thought we were close on it. We decided to take it back for another six months, take a look at it and resubmit it at this meeting. So John, take it away.

John Foster: Yeah. It's gonna take me a minute to get there. I'm still unbearing my dioxide comments here. Hold on a sec. There we go. Okay. Okay. Yes. Our old friend chlorine. We've had a number of conversations about this over at least two meetings. I won't go through kind of the summary of what it is. We were asked to try and align better the language of the annotation, so that it aligned with initially draft guidance and then from NOP as well as trying to align it better with other annotations for chlorine found elsewhere in 601 or 603.

We took some public comment at the last meeting, tried to absorb that in as much as -- as best we could. Coming up with a longer and kind of subdivided annotation that was our best attempt at getting that alignment. I guess I'll read it into the transcript. The Handling Committee recommends annotation of the following substance as follows. 205.605 (b) synthetics allowed chlorine materials. Chlorine materials open parentheses (calcium hypochlorite, chlorine dioxide and sodium hypchlorite) end parentheses, for disinfecting and sanitizing food contact surfaces, equipment and facilities.

May be used up to maximum labeled rates. Chlorine materials in water used in direct crop or food contact is permitted at levels approved by the FDA or EPA for such purpose provided the use is followed by a rinse with potable water at or below the maximum residual disinfectant limit for the chlorine material under the Safe Drinking Water Act or followed by other effective intervention or testing steps that would reduce and verify the residual chlorine levels to be four milligrams per liter or less on the product.

Chlorine and water used as an ingredient in organic food handling must not exceed the maximum residual disinfectant limit for the chlorine material under the Safe Drinking Water Act. The vote as I recall was six yes, zero no, and one absent. That's all I was going to say.

Steve DeMuri: Thank you, John. Does anybody have any questions for John on the recommendation? Miles?

Miles McEvoy: Yeah. We have some questions about this. It seems to be a change from the 2003 NOSB recommendation that the NOP used as the basis for the final guidance on the use of chlorine, and in particular, I'm not sure what the Committee means by an intervening event or the testing steps that would meet their intent. So if you could provide some information on what that -- why that was added to the proposed annotation and what was meant by that, particularly does the Committee expect that air drying is sufficient for organic products treated with FDA-permitted levels of chlorine.

And can that intervening event be used instead of testing. Can testing be used instead of an intervening event? So a few questions there.

John Foster: Steve, I need an assist here. So I was reading off the PDF, the annotation from -- that was in the recommendation, and then Miles when you were reading that portion of it doesn't appear in -- you said words Miles, that I didn't remember reading a minute ago. So I want to double check the versions that Miles you were reading versus what I read. And perhaps the recommendation here that I read from is different than the one you're reading from.

So I want to stop myself at the moment and make sure we're on the -- literally the same page.

Steve DeMuri: It should be the October 5, 2011 version.

John Foster: So what I read was at the very bottom under Committee Recommendation, right? And then Miles, what you read I think is from a paragraph at the bottom of page one of that October 5th; is that correct?

Miles McEvoy: Bottom of page three under (B) synthetics allowed, chlorine materials. You have three paragraphs there.

John Foster: I'm sorry. You said intervening event, and I know it sounds like a detail, this says intervention and my brain heard it differently. I apologize. Let's see. What we -- now, I need you ask the question again, now that I'm back on actually your page. I'm sorry.

Miles McEvoy: The question is, that whole concept of intervening event is not in your -- the Board's 2003 recommendation that we used as a basis for our

final guidance, and is not aligned as per what it sounds like the Committee wants to do is to align with the final guidance that the program put out last year and previous recommendations. So what is the justification or the reasoning behind that additional clause in your recommendation?

John Foster: Sorry it took me so long to get there. Yeah. We were trying to address the fact that not all uses of chlorine in that second section there for use in direct crop or food contact. There may be some materials or some food items that don't do well when rinsed, and that some other intervention that we didn't know how to provide an exhaustive list of that -- those options, some of which we may not be able to forecast, we wanted to provide some other opportunity there for the dispersion either by virtue of process, or in this case, some kind of testing step that could demonstrate that the chlorine had either volatilized or been oxidized or in some way was gone prior to getting down to the four part per million level that we're more familiar with.

Steve DeMuri: Go ahead, Miles.

Miles McEvoy: So what are you testing there? Are you testing the product, the carcass, or the water that drips off the material? What is the -- where are you measuring that four parts per million or .8 parts per million of chlorine dioxide?

John Foster: It would be the potable water. The potable water is -- the rinse with potable water. It wouldn't be -- well, the intention was that you'd rinse whatever it was, whatever you were washing, the chicken carcass or the lettuce leaf or whatever, and then at the start of the rinse it's potable water. When it passes the apple, or the lettuce, or the chicken carcass it's something else, and we would -- the thought was that we would be testing that rinse aid that was until that moment potable water. That was the intent.

Miles McEvoy: Okay. The way that it's written, it sounds like you would either do that potable water rinse where you'd have that potable water to test, or you would some other process that didn't include a rinse, so therefore, the question, what are you testing if there's no rinse?

Tracy Miedema: John? Oh, you go ahead.

John Foster: I just had to look at the words for a minute. All right. This is all about conjunctions. The intent was that if we were talking about the intervention, the intervention would reduce, the testing steps would verify. I know it's a

-- maybe the sentence structure is not preferred. But what are you testing, it would be the -- if you had water to test, if you had a rinse aid to test, that's what you'd test.

If you didn't, then you'd have to test whatever you had which would be the item. Because we're talking about the direct crop or food contact. We're talking about the item itself there.

Steve DeMuri: I don't know that we could cover every possible combination of processes and methods of chlorination in a document. It might be up to the certifier and the processor to work that out, but Tracy, you had a comment?

Tracy Miedema: Handling Committee, I believe we were talking about a swab of the product, or if appropriate, a portion, a sample of the product. If there's rise water, then the rinse water, and like Steve's says, there's a lot of different scenarios of a material that's testable after the rinse occurs. So I think those probably are the big three. It's either's that water, a swab, or the actual stuff.

And it's -- the important thing is that wasn't clear to you, and we need to make our intent be clear here, and I'm certainly open to suggestions if you had one, or other Handling Committee members.

Steve DeMuri: Does the program have any suggested language that you'd like to see in there that we could agree on?

Miles McEvoy: We'll have to take a look at it and get back to you shortly.

Steve DeMuri: Very shortly I hope. Okay. We have a little bit of work to do on that one apparently so we'll take that up in a late-night Committee meeting I guess. Any other questions for John on chlorine materials annotation? All right. That concludes that Handling Committee recommendations for this meeting.

Tracy Miedema: Thank you Handling Committee Chair, Steve Demuri. It's about 4:30. We were set to finish the Handling Committee presentations at 3:00, so we are a full hour and a half off schedule today. We're not going to stifle a conversation at all, but if we can keep it clipping along this afternoon after we return from the break, I'm sure everyone would appreciate it. So let's take a 15 minute break and come back at 15 after 4:00, and we'll get started right away with the Materials Committee. Thank you. Thank you, 4:45. 4:45.

[BREAK]

Tracy Miedema: NOSB members, please be seated. NOSB members, please be seated. I see ten of us which is quorum. We will now proceed with the presentation by the Materials Committee Chair, Dr. Katrina Heinze.

Katrina Heinze: I don't respond to that. But give me couple secs, I need to find my file. Okay. is everyone ready? So the Materials Committee left the last meeting prepared to head into year six of looking at classification. As many of you know, the program has taken that on as guidance document, and so as we relooked at our work plan, there was one item that we clearly had to start working on which was aquaculture materials, and Jay will be presenting that in a minute.

And then the second topic was -- or then we had some capacity, so we went and looked at our work plan, and came up with this topic about research and how could we encourage and sponsor research topics, and I will talk about that second. So specific to aquaculture, before Jay gets started, this Board has dealt with recommendation for standards for aquaculture, and similar to other very large complicated topics, that was a many-year effort, included a working group, and resulted in a recommendation for standards.

But left over from that was we knew that materials would have to come back to the Board. Because we haven't handled aquaculture materials before as Board, the Executive Committee decided that the Materials Committee should come up with a process for how we as a Board would review these materials, and we are very grateful to Calvin for joining our committee during that part of the discussion, and we appreciate his joining us for that.

Both the documents that you're going to hear are discussion documents, so this is the only time that you'll be hearing about them. Our goal as having them as discussion documents is both to solicit public comment early in our process, but also to get comment from the rest of the Board. So please, if you do have comments, bring them up today so we can include them in future work, or have some conversations so that we're informed in our work. So thanks. So with that, Jay, are you ready?

Jay Feldman: Yes, ma'am. Thank you.

Katrina Heinze: Thanks.

Jay Feldman: Thank you, Katrina. We convened, and just to give you a little bit of background, we acknowledged the past work of the Aquaculture Task Force and the recommendations that have been adopted by the NOSB including these that are listed here, aquaculture standards in '07; aquatic plants '08; net pens and related issues '08; fish feed, fish oil and fish meal and related issues in '08; and bivalves in '09. Now, these are recommendations.

If they were to become regulations, they would establish new sections of the national list again listed here. Synthetic substances allowed for use in organic aquatic plant production, non-synthetic substances prohibited for use in organic aquatic plant production, synthetic substances allowed for use, and non-synthetic substances prohibited for use in aquatic animal production. The Materials Committee learned from application for carbon dioxide and vitamins, the following, that we need different criteria for open as opposed to closed systems.

Petitions need to include the use pattern of the material, quantity, how it is added to the system, et cetera. Aquaculture specific information, for example, on environmental fate, interactions with other substances and organisms, and under aquaculture specific references, to applicable laws and regulations. We learned from applications as well two additional things. A petition should cite references that are relevant to the use of the material in an aquatic system, as well as petitions and TRs for crops and livestock.

And that we need to deal with specific materials, not categories, at least until we get our materials evaluation process worked out. Further committee thoughts include the review of aquaculture materials need to align with NOP's drafting of proposed aquaculture standards. Petitioners may submit petitions to the NOP for a review of aquaculture materials by the NOSB, however, the NOSB will defer requests for technical review until the program publishes proposed aquaculture standards or until NOP otherwise notifies the NOSB to take up these petitions to coordinate with rulemaking.

The Materials Committee will continue to develop and propose -- I'm sorry, to develop the process of evaluating aquaculture materials through the review of two trial balloons submitted by the aquaculture working group, and the Materials Committee proposes that a separate aquaculture committee overlapping in membership with crops and livestock be established to evaluate materials. We received comments on this from

Food and Water, Beyond Pesticides, Center for Food Safety, National Organic Coalition, and George Lockwood who headed up the agricultural working group.

Here's a question we're putting out there. Are there international bodies or organizations with a good material review process? We didn't receive comments on this, though some of the Ifoam criteria were mentioned. Another question we asked was how do we ensure that our organic agriculture material review process is viewed from and aquaculture lens, while not compromising organic farming and environmental principles, and in this area, these are some of the suggestions.

Use principles of organic production handling. Organic aquaculture should depend on the underlying ecology to feet plants and animals. Synthetic materials are non-routine inputs, not for system functions and we need to look at unique aspects of the aquatic environment and ecology. On the question of how can the review of aquaculture materials proceed cautiously while not compromising consumer expectations of the organic label, three points focus on materials use in contained recirculating inland systems, establish a strong set of criteria, avoid antibiotics, hormones and synthetic antimicrobials, parasiticides and fungicides.

The question what criteria is specific to open systems and closed systems? Materials decisions depends strongly on whether they are used in an open or closed system. And then secondly, some offer the opinion that it may be impossible to certify open systems as organic because of the difficulty of preventing impacts of materials used in the system on the surrounding aquatic environment and preventing pollutants in the surrounding environment from affecting the organic agriculture system.

On the question of which evaluation questions in current crops, livestock evaluations are relevant to aquaculture materials, two points. All of the evaluation questions that apply to crops and livestock should apply to aquaculture. These are recommendations. Plants and animals with some modification equating soil organisms to organisms supporting the aquatic system.

And secondly, questions must be interpreted to include impacts relevant to an aquiculture system such as bioaccumulation, oxygen depletion, chemical changes that could lead to the need for intervention, and depletion of ambient nutrients as well as impacts on non-aquatic

organisms attracted to a water source. What new questions need to be asked about aquaculture materials? Commenters stressed the importance of bioaccumulating chemicals as ingredients or contaminants, particularly in systems involved carnivorous fish.

What information needs to be considered in assessing the essentiality of the material in the context of cultural practices as applied to water instead of soil system? Commenters stressed the importance of bioaccumulating chemicals as ingredients or contaminants, particularly in systems of -- I already said this. That was a repeat. Sorry about that. Do different questions need to be asked about carnivorous and herbivorous fish. Sorry. Commenters stressed that bioaccumulative toxic contaminants in food and other inputs are especially important to consider in the case of carnivorous fish. Good thing it wasn't herbivorous fish.

Other comments. The aquaculture working group requests that the NOSB proceed with processing petitions for aquaculture materials as petitions are submitted, rather than waiting for the adoption of aquaculture rules and that's it. Thank you.

Katrina Heinze: Any questions? Okay. I have one final comment on this. Part of the reason that we just -- that I wanted to bring this document as a discussion document is that by the time that this Board, you guys, start reviewing aquaculture materials, there will no one on the Board who was here when the standards were approved by the Board. So when the four of us who are leaving started, we worked on aquaculture, it felt like that's all we were working on, that and sunset.

And that has -- that living historical record will go when the four of us go. And this is a very complicated topic that was hotly debated. The standards reflect, as do many of our standards, a balance of varying perspectives, a balance of public comment. It is going to be very easy -- and we saw that as the Material Committee took this topic up, that we were revisiting prior board decisions.

So I would very much encourage you -- so this is my like, I'm leaving and I get to get on a soapbox moment. You need to go read the standards. You need to understand what those standards were that were recommended. You need to go read the transcripts. You need to understand that historical record when you evaluate these materials, or it's gonna be another ten years.

You cannot revisit every single decision, so make sure you understand. So specifically, open net pens, we spent months on open net pens, on that debate. Make sure you go read the debate and understand the compromise that the Board made, because that is directly relevant to whether or not you choose to approve materials.

So that's my soapbox. Please go understand that record, and rely on folks -- we had folks on this Board who spent so much time on aquaculture. Wall them aback. Ask for their help. We have a couple of them, with us at the beginning of this process with the materials group. They are willing and able to help, so make sure you use them. Mac then Jay.

Robert Stone: So closed systems can be organic?

Katrina Heinze: I believe that the recommendation that the Board passed had standards for both closed and open. Go ahead.

Robert Stone: And what about were aquaponics part of that discussion as a closed system that has animal manure floating in parts of it?

Katrina Heinze: I'm not gonna remember the specifics enough. This is exactly why you need to go read all that recommendation.

Robert Stone: I'm afraid I just became the father of those recommendations.

Katrina Heinze: Calvin too. Jay?

Jay Feldman: So it sounds like there's at least a good possibility that we will be approving materials before the guidance comes out, or the regulation comes out of the department on this; is that correct?

Katrina Heinze: That's not my understanding. The program has asked that we align with them in the timing so it kind of parallels. My point was get ready for that. I believe in their presentation they said either 2012 or 2013 was kind of their timing. You've got like five years of documents you need to read, so start now.

Jay Feldman: Our goal would be to have a policy brought to the next -- if you were continuing on would you be bringing a policy -- a proposed recommendation to the next NOSB meeting?

Katrina Heinze: If I were continuing, we would get the response -- so what we did with these two trial balloon materials is we've responded to the aquaculture working group that their petitions are not sufficient. We have

encouraged them to get us responses so that their petitions would be sufficient. We have a call with them December 13 to work through that. We would get that. Hopefully the petition would be sufficient. We would then request a TR. Presumably there will be a couple more rounds on the TR, so I think we'd have an update at the next meeting.

Once we figure out what a sufficient TR looks like, then we would go into the review. I think if I were continuing, I would hope that we could bring those two materials to the Board, so we've taken two materials all the way through the process, we understand what the entire process looks like, so then we're ready when the standards come out to take the rest of the materials through the process. Does that make sense, Jay?

Any other questions? Thank you very much, Jay, both for drafting the document and for presenting. And again, thanks Calvin for joining, but it sounds like maybe Mac has some interest too. Welcome to the Materials Committee. Okay. The next topic is this research framework. So as kind of a preface to this, at our last meeting, many of you will remember that we had some good discussion on tetracycline and streptomycin, and pretty much unanimously everyone said boy, I wish we had more research on alternatives.

I wish we understood, how could we do that? And we heard public comment at that meeting, and I had a lot of folks in the hallway, you know, where the real work happens, say we really, really need the materials committee to come o up with a way that the NOSB can champion research. So we started talking about this as a Materials Committee after the April meeting, and it was a bit slow going, because I'm not sure we all understood really where we wanted to go.

But the more we talked about it, I think the more the Committee got really really excited about this idea of how we could do this, and this was a fun consensus-building project to work on. So that's the background. Again, this is a discussion document, and it's really our current thinking on a process to collect, prioritize, and maintain research needs related to organic production methods and materials on the national list, or being petitioned for listing on the national list.

And then we have some questions at the end that we wanted public comment on. So maybe scroll down to background. Just for the sake of time, I'm not gonna read the whole document. Go do to the part that -- keep going. Stop. Get to -- so where all the bullet points show. There

you go. Okay. So we started -- we went through this process where we said what problems are we trying to fix, what would success look like, who are our stakeholders for this?

We tried to really think broadly so we could develop this framework. So some of the things we saw was that the NOSB continues to receive petitions to extend listing dates for materials, so think methionine, but that because there isn't enough research, or the research isn't moving fast enough, we keep having to move that expiration date. We want to see more resources invested into priority areas. There's such a need for research in organic, that we'd like to see that prioritized so we get the biggest bang out of that research.

You know, and then to be honest, some materials that we review have widely different perspectives related to kind of the benefits and the risks and the alternatives, and we want to get ahead of that and be more proactive. And then today there really isn't a public forum for publishing. Here's all the research needs and there -- and here's the community would prioritize. So that's where we feel that this is such a place where the organic community comes together. Maybe that's a need that we could fill.

So scroll down. So then in our document we listed kind of what our primary goals would be, so it's influencing where research dollars are directed, allowing the NOSB to be more proactive with regards to problematic or controversial substances, highlighting research results that we think will satisfy different stakeholders and align various stakeholders on research conclusions.

So one of the things we talked about is, wow, if you could get great scientific research, maybe that could get these varying perspectives and stakeholders with different perspectives all aligned in one direction, and wouldn't that be great for the organic community. So reducing disagreement. Increasing the amount of research being done as it relates to organic agriculture. We were really heartened by the NOP getting the research dollars for I think Oregon State or University of Oregon on fire blight. That's great, and it was highly needed.

We need more of that. And when we wanted to encourage publication of field level work. We heard a lot of anecdotal evidence. When you go to these farmer conferences -- we have farmers doing really good research, and they talk about it in the halls, but they never publish it so it's not

always available to everyone else, and that could be slowing use of alternatives in the industry. So that's what we're hoping to get out of this.

So we built a framework and really our intention was to get feedback from you and from the public on this framework. So the idea was that the materials committee would keep a list of research topics, either that the public sent us, NOP sent us, NOSB committees had, and we would just have a running list. And then after every meeting we would review those research topics to make sure that we had a list that was current, and then that list would include a description of the research, and how the research needs to apply in an organic context.

So it's more than just a couple sentences, but really what are we hoping to get out of the research, what does it mean in organic So there's some meat to the topic. And then on an annual basis, and so what we talked about it finding the meeting where you would have time for this, the Committee would review the list and based on criteria which I'll go through, would recommend kind of our top priorities. So we had a lot of discussion about is that the top five, the top ten, what is it?

And we said we don't want to pick a number because, you know, if there's six really great ideas, we don't want to have said five, but on the other hand, if there's only three really good ideas, we don't want to force two that are less important. But so the words we used is the select few. These are the really big ideas that are gonna have the biggest impact. We don't want a list of 100.

So we would come up with kind of those select few. It will be about five topics, and then we said, we're not going to rank them. We don't want this to be like some bureaucratic process. So we want a short list that would have the longest long-term impact on the growth and integrity -- this is about integrity, of organic agriculture. Then we would bring that list to the Board, and then give this full Board a chance to make additions, amendments, deletions, clarifications, and then we would publish it.

Because really the idea is to have a public process. So last thing. We talked about criteria, so how would we pick the select few, the big ideas? So we talked about persistent and chronic problems, things are really challenging, that are controversial, that are nebulous. It's hard to identify exactly what the research need is, but the need in organic agriculture is very clear. So improved methods of weed control for example.

It is very clear we need better methods, but exactly what to research is a little bit unclear. So kind of ironic, right, given our conversations this week. And then areas where there's a deficit of primary research, so where active research is needed. Okay. So then we asked four questions. They are, what additions or changes would you make to the process for collecting and maintaining the list? Are there other criteria that you would want the Board to consider?

And then added to that, what research needs would our proposed criteria have missed without the new criteria? Then we had a question about is an annual basis enough, not enough, and then finally, is this even something we should be working on? That's maybe the most important question. Is this a waste of time, or something that the community would like us to do. So we received two public comments. They both said, yay, we're thrilled that you're working on this.

This is a great idea, and then provided some detailed comment in response to our questions. So based on that, the Materials Committee will go back, maybe flesh out the process a little bit more, and what I would propose, (inaudible) Jay a question from aquaculture. If I were still the Chair for the next meeting, we would be back with a process and a list. So any questions or comments? Yes, Barry.

Barry Flamm: I wish to compliment the Materials Committee for undertaking this, because I think this is a great idea and very much needed. My only reservation is perhaps one of perception, since it's being done under the auspices of the Materials Committee, I hope people don't think we're only talking about product substitution from a synthetic to something else, because I can see from reading this, you have an ecological broader approach to it.

And on your weed question, that one strikes, you know, in a local area, eastern Montana, and that Montana State University is doing research on particular, you know, hot button weed problems that are -- that organic farmers are looking at. So I think some -- it wouldn't be too nebulous for them. They know just what they're going after. Thank you.

Katrina Heinze: I think that's an important comment. Yeah. This isn't just about materials. It's about every -- it's about organic aquaculture. Any other questions? Wendy?

Wendy Fulwider: I was thinking on a lighter note, but perhaps not, but will you be adding fish to the animal welfare list?

Katrina Heinze: I'm not answering that. I'm off the Board after this. Anything else? Thank you. That concludes the materials presentation, right on time.

Tracy Miedema: All right. It is actually 5:15, and we are set to start our CIC brief at 3:45. So we're still an hour and a half off schedule. A reminder to NOSB Board members that we have our annual Board -- or our biannual Board dinner tonight. We've moved the reservation to 7:00 p.m., I guess pending how the next span of time goes. Next up, compliance accreditation certification. Joe Dickson, please proceed.

Joseph Dickson: Thank you, Tracy. We have three items on our agenda for today, and we'll try to, you know, keep each presentation as brief as possible. The first of those is our recommendation on the evaluation and oversight of materials review organizations. On that one I want to first acknowledge the work of the CACC on this recommendation. It was our sole agenda item for many months during the summer, and we spent many Monday afternoons talking about the finer points of this really important issue, and it was a big complicated project, and I appreciate everyone's individual work on this.

I also appreciate the folks at OMRI for their collaboration with us on this. It must be awkward and uncomfortable to see a federal advisory committee come up with a recommendation to basically more tightly regulate your business or organization and I appreciate your willingness to work with us very productively on this. Quick background. We were asked by the tame at NOP about a year ago to provide advice to the program on how they should regulate the activities of materials review organizations.

These organizations which, you know, review specific materials and publish lists of acceptable materials and advise organic producers on the acceptability of various materials to the standard is pretty foundational in our supply chain, and, you know, we treated this recommendation with that level of importance. Based on the NOP's detailed request, we formulated a series of questions for the various stakeholders which we presented as a discussion document in April in Seattle.

We received about 13 responses in pretty deep detail to that set of questions from certifiers, from trade associations, NGOs, materials producers, materials review organizations. We took those detailed

comments, we -- I wanted to approach this in a really analytical way, and make sure we really took everyone's feedback into account, so I made a very gigantic spreadsheet with columns for the questions and rows for the respondents, and we kind of divvied up the questions and each member of the CACC kind of took charge of analyzing and hoping -- and recommending a sort of consensus statement for each of the questions in the key areas of the recommendation.

We talked through those syntheses about a dozen times before we started to kind of craft and mold that into the final recommendation that we published for this meeting. In the interest of time, I won't reread all of the questions that we asked. Those are all, you know, in the discussion document and attached to the recommendation for this meeting. But I will talk through what we arrived at as the -- our final recommendation.

Before I do that that, I just want to briefly, you know, a couple of certifiers responded, and other stakeholders that we sort of approached this recommendation in a very abstract way with very broad strokes, and left some of the details kind of up to the program, and that was our intention. You know, our goal here was not to write a regulation or a finished piece of guidance.

Our goal was to, you know, sort of collegially and completely answer the questions we were asked by the program, and defer to their expertise and authority in kind of dealing with the details. Knowing it might not be the last round of questions that they had for us, but that we did have substantive answers to make that were not in the form of, you know, final regulatory or guidance language.

The first section of the recommendation deals with how materials review organizations should be qualified, and our short answer to that question which did generate some substantial feedback was that materials review organizations should operate under the authority of the National Organic Program. Our first stab at that is that they should become accredited certifying agents and, you know, whether they technically become ACAs through the same process as the ACAs currently do or, you know, they become sort of accredited certifying agents of a limited scope which would restrict their activities to materials review.

Or if there is another mechanism by with the NOP, which I know they're exploring their jurisdiction and some of the legal angles of that, you know, whatever the mechanism, our point there is that it's critical that the

National Organic Program supervise materials review activities, because the consistency between certifiers and materials or reorganizations is absolutely critical.

Secondly, our second section is called materials review organization operation and review criteria, and this one -- OMRI made a really good point yesterday that we actually in a sense didn't directly answer the programs request. They asked us to advise on specific criteria and methodologies for reviewing materials and we did, actually, on reflecting looking back, dance around that point a little bit, and I'll talk about that a little bit when I summarize the public comment.

But in general, what we said there is that the materials review organization should use the OFPA, the standards, guidance from the National Organic Program and the national list as the base standards for their operations and activities. MROs should not make synthetic determinations except as guided by NOP materials, classification guidelines, and should be compliant with (inaudible) 65 standards which require the development of detailed review protocols and policies.

We did not get more specific than that as to the criteria that should be used. However, you know, and we will discuss this as a committee and we talked a little bit about it with the program. If more detail is desired there, we'd be happy to develop a further kind of companion recommendation to this that answers those questions. On the structure and consistency of the materials list, the recommendation that we made is that -- pardon me while I just catch up with the recommendation here.

The most effective way to ensure consistency between materials review organizations is to ensure that they are operating by a consistent set of review protocols and procedures, which would of course be facilitated by NOP oversight and the accreditation process. One of the critical details of that is that the materials review organizations make their decisions available, or report their decisions on specific materials to the NOP in an organized way so that they can actually monitor consistency between those decisions.

To that end, we recommended that the National Organic Program essentially maintain a dynamic real time list of both generic and brand name materials decisions made by the materials review organizations so that, you know, the information is available to the community and so that materials review organizations can also respect and acknowledge the

decisions of other organizations. Some of our public comment did note that, you know, or ask the question of whether that system would be realistic given limited sort of IT resources and support resources at NOP and, you know, this may be sort of more of an ideal world, blue sky kind of recommendation, but that was our best case scenario.

And I would expect the NOP would respond and let us know if that's not the answer you were looking for. The next set of questions that we asked for feedback on dealt with finance and oversight of materials review organizations. And our short answer there is that it really should be no different than the current structure for ACAs. Entities seeking certification or accreditation review would pay certification costs directly to the ACA or materials review organization or whatever they're called.

Accreditation would be financed through the existing accreditation structures that currently govern the operations. Oversight and appeals would also follow the same set of broad structures that currently work in the accreditation process of certification organizations. The MROs would only vary from other ACAs in terms of the scope of their certification activities, which would be limited to materials review.

The one section that we added following some feedback that we received in Seattle is a section on enforcement and fraud, which a number of commenters sort of commented on and we just, you know, again, clarified there that the process should hold the materials review organization clearly accountable for any mistakes and prescribe penalties for misenforcing the regulation just is as currently the case again for the existing ACAs. The NOP should pursue legal against against fraudulent manufacturers, and we believe that the NOP oversight of materials review organizations as ACAs is the most effective way to ensure consistency here.

So that's the basic summary of the recommendation. Let me dig up my -- go back to my notes here. To summarize the public comments that we received, as I pointed out, OMRI did mention that we, you know, may have avoided the original core question that we were asked by the NOP, and we will, you know, revisit that between now and Friday to see if there's language we don't want to add that kind of addresses that set of concerns.

Other public comments were overall supportive. The OTA requested that we define material review organization, which is a very reasonable request. They also asked that we addressed equivalency among

accredited MROs and that sort of mutual respect of each other's decisions in a deeper way, which we can do. And the recommendation that we ask that MROs rely on NOP guidance for both synthetic determinations and also ag v. non-ag determinations.

Multiple certifiers expressed concern that we're arguing for a new accreditation scope that they would have to apply for and, you know, be accredited under -- we could consider making that section less prescriptive, and I think, you know, the important part for us there is that if materials review activities are happening at a certifier, they happen in a uniform, consistent and monitored way, you know, whether that has to be a separate accreditation scope, or can be a, you know, simpler part of existing accreditation activities, probably warrants further discussion within the Committee and on the Board.

Another set of constructive pieces of feedback focused around our resistance to the idea of convening a task force now. We felt that, you know, due to stuff going on in the marketplace, it was really critical that we get this recommendation to the National Organic Program on a pretty timely basis, and we do within our recommendation, and I'll quote here, ask the program or state to the program, the creation of such review criteria and procedures by the NOP should necessarily be done in partnership with certifiers, materials review organizations and other stakeholders.

So we do, you know, ask the NOP to convene a task force or a similar set of advisors, of stakeholders as part of the process of implementing this recommendation, but we didn't feel that the timeline that we had and the urgency that we had was conducive to convening a task force to advise the NOSB now on this particular issue. And that really summarizes the sort of major contours of the feedback that we received. And that concludes my presentation. Are there questions from the Board? Jay?

Jay Feldman: Thanks, Joe. A lot of work. One of the things I saw consistently in the comments, I think this came up yesterday, was the requests from virtually everyone, the ACA, IOIA, and -- that there be a working group, and you guys considered that and decided not to have a working group, what was the thinking there?

Joseph Dickson: Our thinking is that it was extremely critical that we deliver at least a final recommendation to the program within a single, you know, semester basically. But we wanted to make it clear within the recommendation that

the NOP should consult directly with all of the stakeholders including the ACA -- the ACA, OMRI, et cetera. So we didn't feel it was within the timeline that we had as a Board to establish a formal working group at this point. Mac?

Robert Stone: I'll just comment that certifiers are time strapped, and there's so many products that cross their desk for approval, and it's easy for certifiers to say well, if certifier B approved it, then I'll approve it without further due diligence if it may or may not be necessary. That kind of thing. So there is some expediency there to be sure that we have clarity of what's going out there.

There is also from certifiers that if Farmer Brown wants to use a homemade product, that we not run that through this extensive time machine for approval, that they have some authority without trying to approve stuff, to go on a national international basis. So that's some of the premise that goes behind that.

Joseph Dickson: Yeah. And I think that's I hope a pretty clear feature of the recommendation is that, you know, membership on either a generic or a brand name list is never a prerequisite for the use of a product or, you know, it doesn't bar certifiers from making those decisions on the fly.

Robert Stone: Or that the certifier have a very extensive accreditation process in order to review some of those products.

Joseph Dickson: Katrina?

Katrina Heinze: I appreciate the quick work. It's a complicated topic to do that quickly, so nice job to the CACC. Since this was done specifically in response to a request by the NOP, my question is actually for the program, that does this give them what they needed?

Miles McEvoy: Yeah. It's a very well-rounded proposal, and it certainly gives us what we need. We certainly understand the need for the program to work with certifiers and with OMRI and the Board to continue to develop the criteria, the accreditation criteria, and the evaluation criteria, so we'll continue to work with the certifiers and the board and OMRI to take the next steps on this, but this is exactly what we need to move forward. So thank you very much.

Joseph Dickson: Great. Thank you, Miles. Any other questions from the Board, or discussion? All right. Well, moving on with the CACC agenda, next up in

inspector qualifications, and I'm gonna turn it over to John Foster who led the work on that recommendation and the one after that.

John Foster: Thank you, Joe. Let's see. In June of 2011, we got a request from the NOP to look into this subject. It's been kind of batted around informally as a topic in hallways and among certification and ACA, IOIA for a long time, and I think we just got to a place where we wanted to start moving the needle in a concerted fashion. So we got this request and there's some -- I'm gonna -- unless Joe -- unless you want me to go real detailed step by step, I'll do it in broad strokes.

Okay. There are a number of opportunities for variability to encroach in the inspection process, in the certification process, and a lot of that is healthy, but, you know, as the NOP has been maturing and developing, there's -- I think it's a good time to look at being more specific with respect to inspector qualifications and what makes them qualified to be the eyes and ears of the certifier and community, oftentimes the only face that the operators have of their certifier.

And there's a lot of variability as evidenced by differences in inspection reports. The same operation year to year, and there's been a, you know, an ongoing issue of concern at some points, but some of it's healthy as a lot of discussions around the inspector community have been pointing out that it's very healthy to have a different perspective, different eyes on these places over the years, and I agree with that.

So this was intended to be not a ceiling, but a floor of a recommendation, and to start the dialogue in a more concerted way. We brought up, oh, a number of different areas of the inspection process that had inspector qualifications in -- with respect to work experience, with respect to education, with respect to what kind of coaching or training they get ahead of time. There's not -- certainly not an absolute uniform need for training.

It doesn't have to be the same training for every person. Obviously every crop, every part of the country has nuances and qualifications of the inspectors should reflect that. There's a number of -- a number in the recommendation, it's fairly long, seven or so pages. We had a fair amount of discussion with inspectors, many certifiers. One thing that's come up in public comment a fair amount since we issued this, was that the NOP has asked IOA to look into a similar subject and we had this request and were moving on it well before that time.

So we did, and when we, you know, we were aware of IOA's activity in here, we see it as a positive thing that it's two independent voices that have worked well together for a long time, and that is provides an opportunity to see the multiple products of different entities, and knowing, you know, having faith in the program's ability to digest a lot of information from a lot of different places, we're quite certain that the optimum steps will be taken and the right balance will be struck.

In general, the public comment has been positive. There's been a few suggestions about changes relative to how many continuing education hours, for example, or what kind. How specific to organic production should work experience be. Those I'm sure are in the mix with Joe and whatever your, you know, meeting -- if you want to talk about that more, I'm sure we'll meet as a committee to do so. They all seemed very reasonable.

John Foster: It was very refreshing to me to see a lot of engagement on this subject, and very civil engagement. That was very nice to see. There's a lot of differing opinions about how these things need to be implemented, but there's general agreement that this is a good thing, and it will move the needle forward to the betterment of us all. There's baseline qualification criteria, continuing education criteria, expectations around oversight of inspector qualifications by the certifiers, and then a mandate for performance assessments.

Now, by saying all that, we recognize that there are many certifiers who incorporate all or some or most of those features into their inspector qualifications. This was provided -- this is -- the hope is that we can make sure there's a consistency across all certifiers, U.S. certifiers, foreign-based certifiers all the same. That's the hope. And we had six votes on it, all six voted yes for it, no no's and no absents.

So I felt like it was a very positive experience, and I expect we'll get a little more public comment on this tomorrow, and we'll incorporate that as we go forward.

Joseph Dickson: Thank you John. Any questions or discussions from the Board? Onward.

John Foster: Onward. Unannounced inspections. This was again -- the program requested back in June to have us take a look at this subject. What constitutes unannounced inspections are -- I think that's a -- we entered

into some of that conversation yesterday, certainly with some good public comment, and how to define it is obviously gonna be necessary, but how it works for certifiers and how it works for inspectors and operators is really at issue.

We're -- it's a very -- inspections are a very, if the not the most powerful tool. I see it that way, to make sure that compliance is getting done. As I said earlier, it's often the only face in person that an operator might have with their certification is with that inspector. It's a very important relationship. And the nuances of an unannounced inspection are particularly tricky. There's the element of surprise, and as many inspectors know, it's -- there are some folks who don't take particularly well to being surprised and scrutinized and certainly on an unannounced basis.

That's a little bit -- it makes for some interesting situations. But the value of it -- the value of this process to make sure that for some companies call it inspection ready every day. That's a good vision to be working toward, and that's the intention here is that most people can get ready for an inspection and be quite compliant on the day of that inspection. The unannounced process allows for -- I think when appropriately applied, it allows to get a better picture of the actual compliance on a daily basis.

And as we all know, inspectors aren't on -- they're not there every day. We're kind of taking a lot on faith and a lot on records, but on the whole, it's certainly my experience and those of my inspector colleagues is that surprise inspections generally find some things that you wouldn't have found if you had scheduled it well in advance. So this is again a tool that many certifiers are implementing currently. Some very programmatically, some hit and miss, some based on risk assessment, some based on random chance, some a mix of both.

I think to the extent that it is used, the return on that is pretty good, and in general, it moves that needle a little bit forward pretty consistently, so this was another attempt at trying to make consistent the use of that tool, and help that continuous improvement move forward again, across U.S. and international contexts. There's a -- we discussed the difference between, you know, unannounced or little announced or briefly announced, or what that means relative to the number of hours.

There's a good, I think, an emerging and really positive discussion around the need to balance what you get at an unannounced inspection versus

the value of -- the intrinsic value of it being unannounced. It's very common, particularly on farms that when an inspector shows up the records may not be available because they're in a pickup three counties away, and the systems needs to be set up so that that's okay.

That's a big thing, and certainly in the '90s and early 2000s, those certifiers trying the unannounced inspections ran up against this and really this communicated to me and other Board members, there was a little bit of a struggle about how much partial information was enough to constitute that inspection. I think that's an ongoing dialogue. It should be an ongoing dialogue, and that the question of getting what you get on an unannounced basis.

You got to be accommodating for the operator. You can't assume that all staff members will be -- or all farm crews will be available every day when you happen to show up. So there's gonna have to be some real good give and take about the content you receive when you get onsite. Let's see, we've got sections in the proposed guidance around just the requirement to conduct periodic unannounced inspections, which again, some certifiers put in play, some don't. But this is an attempt to get it more codified.

There should be representative operations in this program, not a select few, not the ones that are easy to get to, it should be representative of the entire group of certified operators. There's a portion that discusses the randomness or risk-basedness of the selection of these operators. There's a good -- it's point number four in the recommendation, that unannounced inspections may qualify for an annual inspection, and that's gonna be a really good, interesting discussion I think, because it gets back to that point of how much is enough to constitute an annual inspection.

I'm sure -- I'm looking forward to the discussions with the program and with IOIA and with certifiers on that. It does talk about the necessity of an inspection report for unannounced inspections, which when unannounced inspections are done all over the world, I found quite a bit of variability about the documentation of that. So this talks about the need to do that. It opens the door for, but does not mandate sampling at the time of unannounced inspections.

I personally have found high value in taking samples of various things when I'm there on an unannounced basis, and IOIA agrees with me on that. There is a discussion around when can an inspector show up unannounced, and what happens where there's no representative of the

company there. We talked a lot about trespassing and things like that. That got -- that's gonna be a real interesting part of the discussion.

And then training of inspectors to do this particular kind of inspection we felt was very important. It's a different context, and a different -- slightly different skill set I think is required. And then what happens when the inspector is refused access. That's another very interesting place to be. I've been there, it's very interesting. And the -- all of this is predicated on the assumption that the certifier has made every operator aware of this possibility, and that -- there's a lot of variability in the stated policies of certifiers about how likely or that these unannounced inspections are possible, and it was a very good discussion point that ACAs need to make sure that that potential is out there.

In whatever form makes sense, and this would -- I would assume be built into the quality management system of certifiers, but that would be a really important part of it so that there's no questions about who knew what when, and who knew what they were in for or not, so that was the last of ten points. We voted on this. Again, it was six yeses and zeros everywhere else. That's it. Questions?

Joseph Dickson: Mac and then Nick.

Robert Stone: Just from the certifier perspective, we do lots of partial unannounced inspections. It's not tying to be the annual inspection, but I don't want to say it's necessarily risk based,, but we're going by, we'll stop in and we know there's a buffer issue on this arm, or we know the logs weren't very well done last year, and just sort of stop in and frankly it's helped to good operations, or almost all of them now welcome it because they're proud of what they do.

They do all this work, they want to show off that they're doing it. So same with residue testing. It's like yeah, bring it on, you know. We'll stand up. It's made them better operations knowing that this is there, but it doesn't have to be seen as a punitive or a bad thing, because it's kind of -- doesn't play out that way from what we're seeing.

Nicholas Maravell: Yeah. From the farmer's perspective here, did the Committee consider small operations, I'm trying to get my hand -- I'm trying to beat the rain, and an inspector shows us unannounced. Do I have to stop everything I'm doing and usher around the inspector and answer questions and, you know, maybe loose five, ten acres of hay that's gonna

get hit by rain? I mean, that's a question. So did you consider how to handle that? I'm looking for diplomacy here.

And the other that -- from a farmer's perspective, is I noticed here that you say the ACA does not have to reveal the basis for which they choose to conduct the unannounced inspection on a particular operation, but I can just tell you, you know, it would be common courtesy to say hey, this is random, we got a complaint, or this is risk-based. And it would put a farmer's mind at ease.

So, I, you know, you put it as may, do not have to, but I guess what I'm asking is what's the expectation here. I'm trying to think of a situation where a farmer's gonna be put at ease here.

John Foster: On that last point, we did a discussion about that, that we didn't want to mandate how certifiers kind of communicate with their -- how they communicate, or that seemed to be more of kind of a business management -- and how it sets the tone, and agreed. I agree with it -- with all that, but we didn't want to get in that deep telling people how to do their business.

Joseph Dickson: Mac?

Robert Stone: I'll just respond, Nick. When we're sort of debating that, and the staff is deciding that well, we know it's raining, we know that you don't go to a dairy at milking time, and you sort of make these judgment calls of well, it's the first pretty day we've had in three weeks, so we're not gonna do it today. So you kind of take that into account.

Joseph Dickson: Other questions from the Board? Great. Colehour?

Colehour Bondera: I thought that comment about the partial inspection concept was really good, but I don't know where or how it fits, or if it does at all, and I'm curious if that can be at least commented on.

Joseph Dickson: Mac?

Robert Stone: Oh, to do a proper inspection does take a lot of time. You do -- you need to see records, you may have to get on the computer, you may have to go pull the log out of the visor of the tractor and do audits and all these types of things. So as we're moving into this policy if you will, we're sort of -- we kind of know where -- I was taking aback by the personal nature.

It's the -- we kind of know where the operations weak, so we're letting them know we know where the weak links are, and helping them to improve. It's more of an improvement learning tool for the operation than it is to trip them up and give them a noncompliance. That's the way we're evolving into this thing.

Joseph Dickson: Nick?

Nicholas Maravell: Yeah. I don't know if people realize, but I'm like I'm a small operator, but they're telling me it may take more than one day to do my inspections now. So it takes about ten hours to do my onsite inspection. So, you know, I'm sort of wondering about how this is really being envisioned in terms of partial versus complete inspection. I mean, is it anticipated that most of these will be a full annual onsite inspection?

Joseph Dickson: John Foster?

John Foster: We wanted to open the door to that possibility knowing that there's tremendous variability as, you know, on scale on location, et cetera, didn't want to dictate that one way or another, because as soon as you say it's gotta be this way, then 90 percent say it can't be that way. But there needs to be -- we gotta move in some direction, and this was the best way we considered to do it.

Joseph Dickson: Any other questions, comments from the Board? All right. Well, that concludes the CACC portion of the agenda. Oh, Miles. Sorry, I wasn't looking that way.

Miles McEvoy: All right. Yeah. Unannounced inspections, when I first started with WSDA in 1988, we did two inspections of every operation. First one announced, second one unannounced, and the unannounced inspections were the funnest part of the job at the time. Very relaxed, all the farmers just loved to see you because it's not a full inspection. It's -- you're kind of checking in on things that were brought up during the initial inspection. At that time we collected samples from every single operation, we collected a sample.

And it's -- in my experience, it's a great way to establish more rapport. It's more of a field visit, and it's not the same audit of all the records unless there is a specific reason to look at particular records. So it should be relatively uninvasive to the operation. We also have gotten requests from certifiers around unannounced inspections, that if they did an announced

inspection and they did a complete inspection, could that take the place of an annual inspection.

So there are certifiers that are already looking at that of utilizing that. So there is the possibility that with the utilization of unannounced inspectors that you could actually reduce the burden on operations and increase the -- kind of the oversight and the confidence in the whole system that the system is working. It's not just working when you announce when you're going to be there, but it's working at all times. And so there's some operations that are welcoming this kind of unannounced approach to auditing.

Joseph Dickson: Thank you, Miles. Nick, and then we probably have to wrap it up to move on with the agenda.

Nicholas Maravell: Real quick question. Miles, when you did this in Washington, did you increase the fees for those people who got the unannounced inspection, or was the inspection fee for the -- or the certification fee for the year kept the same whether or not you received an unannounced inspection?

Miles McEvoy: Well, this was a long time ago. The fees were $150 to $600 per operation. We had a $17,000 budget, so that was a long time ago. We did not increase the fees. The fees were included in the cost of the overall budget of the program.

Joseph Dickson: Thank you all, and I will turn it back over to Tracy.

Tracy Miedema: Thank you Chairman Joe Dickson. It's 6:00 p.m., and we are now to our last committee presentation, the Policy Development Committee. I will say we have entered our fatigue zone, so Board members, let's be succinct, tight in our questions, let's not like let our minds and our conversations start to wander too much as happens at this time of day. We do have dinner scheduled in 7:00. It'd be nice to have dinner tonight, and with that, I'll turn it over to Chairman Barry Flamm.

Barry Flamm: The Policy Committee has four recommendations, one discussion document, although the Committee members were assigned a time slot -- a time amount for their presentation, I've already asked them to keep it as short as possible, but they've done an awful lot of work on these, and we always work as a team, but -- and each one of these there's a point person, and Joe, if you would lead off please.

Joseph Dickson: And I was allotted three minutes for this particular recommendation, so I look forward to rushing through it, because it's very simple. This is a recommendation called administrative team, and it defines the term administrative team because it's a term we use a lot within the committee. The admin team is the Chair, Vice-Chair, and Secretary and Executive Director or Advisory Board Specialist, and we get on the phone every Monday morning and we make sure that there's no outstanding action items and, you know, just sort of plan the week and make sure that nobody's forgetting any big due dates or anything.

It's not an official committee of the NOSB. It deals strictly with Board operational issues and administrative and operational details. So to define this term that we often use in our conversations, we are recommending that the following definition be inserted into the policy and procedures manual. Administration team. The term -- and there's a typo there. It should be administrative team. The term -- it's my typo, the term administrative team describes a group consisting of the Chair, Vice Chair, Secretary and Executive Director.

This group may meet on a weekly basis, or as needed by teleconference or correspond by email in order to coordinate the overall logistics and operations of the Board, the office responsibilities noted above, and the overall support provided to the Board by the executive director. The vote was six in favor, zero no, no one absent, abstaining, or recusing themselves. No public comment was received as best I could tell on this one. And that concludes my three-minute presentation. Are there questions from the Board? Awesome. I pass it back to Barry.

Barry Flamm: Jennifer has the recommendation on Committee transparency.

Jennifer Taylor: Thank you for the opportunity to talk with you about the transparency recommendation document from the Policy Development Committee. This particular document came out of a concern and a request from stakeholders for more visibility and transparency of the National Organic Program, as well as the National Organic Program Board Meetings and actions. The people wanted to know how the NOSB decisions were being made, and people also wanted to access certain documents.

This transparency recommendation document represents our efforts to bring about a meaningful transparency for the NOP and the Board, stakeholder communities, as well as the consumer public. So as we sit

here today, and we're talking to each other and we're talking to our stakeholder public, it -- does this appear to be a transparent effort? Is it transparent? You have here the ability to hear questions, to answer questions, to see who's talking. We have here the ability to talk with our stakeholders.

They get to ask questions, and they get to interact in such a way as to enhance collaboration and awareness of the program and decision making of the program as well. So our efforts as we consider the transparency recommendation was to provide the same kind of clear information and experience for the stakeholders and for the Board. Let's see. So there were two issues, and their respective recommendations that came out of this evaluation or this development and implantation process.

One issue was to address our own minutes and the need to have a just reflection of the contents of the minutes, so that when we review the contents, we would fully comprehend the work that had taken place within the Committee. So this recommendation for this particular issue is the first recommendation which is section three, page 12. The role of the executive director is amended to include the following language.

Arrange, facilitate, and record the NOSB committee conference calls necessary to achieve the most efficient workings of the Board. Minutes are distributed to committees for confirmation of accuracy and approval. Committee minutes must fully capture the discussion, reflect the diversity of opinions expressed during the meetings, and provide context for those opinions by identifying their source. For example, the name and our position, farmer, grower, environmentalist, resource conservationist, and so in, in order that transparency exists, and the content remain useful for committee members, Board members, and our stakeholder public.

Our second issue was to address the transparency of the committee meetings and the public access to those documents. This recommendation made available an array of documents and committee meeting minutes for public inspection. The recommendation is stated as follows: Section three, page 13, role of the Executive Director is amended to include the following language. Maintain executive committee meeting minutes and committee meeting minutes, committee records, reports, transcripts, appendices, working papers, drafts, studies, agendas, and other documents which were made available to or prepared for or by the NOSB or its committees, and make such documents available for public

inspection and copying at the agency electronically, via the worldwide Web and/or upon written request in printed form..

These recommendations were approved and, we received several -- by six votes, so all of the committee members approved these two recommendations. We received several comments from the public, written comments, as well as several comments from the floor as we have held these meetings. All of the comments supported the concept of transparency. We received 12 comments, written comments. Ten of those comments supported the document as it was recommended.

Two of those comments from agencies supported the comments -- supported the recommendation with changes as they suggested changes. You could see that information as reflected in the comment documents. And I appreciate hearing other comments from the floor, and I appreciate the help. Thanks.

Barry Flamm: Questions from the Board to Jennifer? Tina?

Kristine Ellor: I'm definitely all for transparency, I just think that this goes a little bit too far. Like we do take meeting minutes, and I think they reflect what goes on in the Committee. To have to record them and to attribute everything to individual Committee members I think is just a little burdensome to the program to be honest, and the person who is looking up the Committee calls who has a challenging enough time keeping up with the discussion that's going on and I feel like at least the minutes that we get in Crops Committee and Livestock Committee really do reflect what goes on -- the discussion that goes on without, you know, getting too burdensome, and, you know, I don't see any reason why they shouldn't be put up in a timely fashion if that's not too burdensome for the public to see.

Barry Flamm: Katrina?

Katrina Heinze: I agree with Tina's comments. I have to admit that after leaving the April meeting, I was all on board with publishing the Committee minutes. I think it's a great idea. I think it would help the public understand our deliberations. I was surprised though to see after our discussion the publishing of individual names. I think that's something that I have heard concerns about, because we want to have those open discussions. So that's the one thing I was wondering if the committee was thinking of relooking at before we voted on Friday.

Barry Flamm: Any additional comments? Joe

Joseph Dickson: Thank you. Yeah. I'd also like to agree with Katrina and Tina. You know, after a lot of reflection on this issue, I absolutely support the full idea of transparency. I would support the publication of Committee minutes, but I do believe that the association of individual names with particular nuggets from those Committee meetings would have the effect of chilling participation in those Committee meetings.

I know from my own perspective, knowing that public records can be used a number of different ways and taken in many different contexts, and that one of the greatest benefits of those really fertile rambling Committee discussions where people take odd positions and play devil's advocate and, you know, sort of exercise ideas in a really free and productive and fertile way, that fertility and that -- the value of that process for me would be definitely curtailed by publishing names.

Barry Flamm: Tina?

Kristine Ellor: This is just a small detail, but often -- or not often, but sometimes we get on the phone and we don't have a quorum, so we don't take any action, but we do have very lively discussions. So, you know, since no official business is being transacted, you know, would that need to be recorded and whatever, published, and all that stuff. I think now when we don't have a quorum we don't keep the minutes because we're just talking on the phone.

Barry Flamm: Any additional -- John, excuse me.

John Foster: A couple things I was really -- in the public comment process, I was very intrigued with the I think it's pronounced Chatham (sounds like) House Rule. I think that's worth exploring. I was unaware of it before, but it makes a lot of sense to me. I like the sound of that. And then a number of comments, I'm wanting to make sure I'm not missing something that I should have as a propane person, but there's a lot of comments that were pro-transparency, anti-propane, and I just wanted to make sure I'm not missing something there.

Is there some connection there that I need to be aware of, or -- there were a lot. I mean, I'm mostly seriously, actually. There -- it -- I've been thinking a lot about propane, and I just wanted to make sure I'm not -- I'm not missing something there. That's all.

Barry Flamm: Jay, you have a comment?

Jay Feldman: Yeah. We -- actually, Beyond Pesticides put out an alert and identified those two issues, so I guess people picked on on that. But seriously, I think that it didn't haven't anything to do about bombing the NOSB or anything like that, so -- I think that to speak to the other side, which was unanimous at least initially in the -- at the Committee level, this is a stakeholder group, and the idea is that people who feel represented by the categories in which we serve should be able to track where we are as Board members.

You know, this is one of the most democratic decision-making processes I've ever been a part of. I mean, we do a lot of incredible things here, so I don't think we can fault the Board and the processes. The question for me really is how do we engage our constituencies or the interests that we are here to represent to a higher degree, and the only way I can think of that we can do that is to be as transparent as possible without stifling the discussion, you know, we talked about this.

So I think it's a mistake to treat this like the Chatham House Rules do, because that's intended to be a system that is widely applied across organizations and across institutions, but you have to look at that in the context of what the purpose is of this institution, and I would like to see greater engagement along the way, you know, as we're making decisions.

You know, the timeliness as you said, Tina, the timeliness if it's not too burdensome of getting the minutes up and making them public would help so that people are aware of what the discussions are, what's going on, and if we can figure out a way to engage or enable those people who have an interest to communicate to the Board or the Committee and get involved to some degree in the Committee deliberations, I think we'll have a richer debate.

I think we'll have aired some of the issues in a way that might appear less antagonistic, to read something in the federal register can bet quite jarring to people if they haven't been part of a discussion and don't really -- haven't felt they had an opportunity to weigh in. So that's the purpose I think behind the transparency, to give the public a greater inside into our thinking, the discussions that are going on, and to sue that as a platform to seek out additional comments from them.

Male: I was just wondering, therefore, right now we have a system of finalizing or formalizing committee recommendations. So if the Committee were to take a vote, and that's in our minutes, that would be released fairly quickly,

not as it's done now. Is that -- am I understanding this, or am I missing something?

Barry Flamm: I think the intent was to make it available sooner than later, and avoid maybe a Freedom Information Act process and that, but I think most of the time I was -- been on the Board until recently names were used in the Minutes. Not that every statement was attributed to people, but your name was at least scattered around in the minutes, so that was my experience on committees I've served on. Is there any other questions? Oh, excuse me, Tina?

Kristine Ellor: A couple concerns. Yes. I mean, the minutes are, I think, informal. They're very -- the Committee minutes, and they're very useful for us when we're going back over ground saying, okay, let's look, you know, I'll just look that up in the minutes and see what the discussion was. So if they're useful for us in that way, I think they would be used to our community in that way.

My concern about engagement, and I would love to have more involvement in engagement along the way, but my feeling is, we need to be able to engage everybody or nobody, because we can't be selective. So I guess I'd like to figure out some other form that these minutes can go out and there can be discussion back and forth. This work already takes up a tremendous amount of -- speaking for myself, a tremendous amount of time.

And to have an engagement like is going on here going on with every committee meeting would be well, staggering. So you know, I really think we need to consider very carefully how we proceed with that engagement. More engagement is good, too much engagement is gonna completely cripple work -- any other work we might, or lives, or spouses, or children, or anything else, jobs, yeah. There's the job.

Barry Flamm: As a point of clarification, this wouldn't change how the committees operate. We're required now that, you know, that these documents are gonna be made public if they're requested through Freedom Information. So we're just trying to streamline the process, make it a little more transparent, and make sure we have the things in the minutes that are relevant and which I think we've always pretty much have had. Button problems here. More -- sure, Miles, please.

Miles McEvoy: Yeah. We're certainly all for transparency and the idea of publishing the -- or posting the Committee minutes makes a lot of sense to us. We do have to maintain all that information, and it is foible and releasable as the Board learned over the last year that that's part of the process of a (inaudible) committee, that these are public documents that are created.

You just please understand that anything that you request to have happen kind of falls on us to actually make it happen, and so the more elaborate that you make it, then that's gonna take staff time, take us away from doing other important business. So our suggestion would be to keep the minutes reasonable so we can capture the information that is the decisions, the discussion items, keep doing what we're doing basically, don't make it any more burdensome than it currently is, and just make that publically available as soon as possible.

The other part of that is what's -- we gotta figure out the process there, because the minutes are written and then they go back to the committee for approval before posting, have to get get good at that process so that we can get this information out as quickly as possible to the general public. But I think we can work it out and we're certainly fully supportive of this effort.

Barry Flamm: Thank you, Miles. Any additional comments? If not, let's move on to conflict of interest, and Calvin, would you take over?

C. Reuben Walker: First of all, I'd like to thank Barry for the opportunity to, I guess put together -- or take the lead on this particular issue. It's certainly -- it's a complicated issue just like transparency, so I would like to begin by saying that this particular issue came about not from the committee, but it came about from stakeholders at the April meeting. Some of these groups consist of Food and Water Watch, Center for Food Safety, National Organic Coalition, Dr. -- I believe it's Dr. Jim (inaudible) , the former NOSB chairman, and Cornucopia, and there's several others.

I would like to kind of give the -- issue a statement as to what we have in our policy, and I'll read it right quick. I know we all want to go to eat. It says, members of the Board shall refrain from taking any official Board action which the Board -- which that Board member is or would derive direct financial gain. Board members shall disclose their interests to the Board and to the public, when they or their affiliated business stands to gain from a vote which they cast in the course of the Board business.

One of the last main sentences, it said under certain circumstances, the Board may determine whether it is appropriate for that member to vote. Again, under certain circumstances the Board may determine whether it is appropriate for certain members to vote. By way of public comments, we received a total of seven public responses. Of that seven, five agreed with the policy that was put out there with some tweaking, and some of these include Center for Food Safety, Cornucopia, Beyond Pesticides, National Organic Coalition, CCOF was among those.

And there was two groups that had an issue, OTA and Wolfe and DiMatteo. Two things there was their concern was that Boards such as NOSB are not -- shouldn't be governed by a conflict of interest policy. Two, it was said that the existing language as we have was sufficient. So those two that oppose essentially, made that statement. If I'm in error, I stand to be corrected. Just as a matter of the last time the Board did anything with the conflict of interest, I believe was in 1999, 11 years ago, and that piece that was read was a part of that.

And as we know, on October the 21st of this year, there has been concern as relates to fellow advisory committee acting. This particular bill based the House of Representatives, bipartisan support. The issue was that it was stated in that particular House bill that there was 1,004 (inaudible) . I didn't know it was that many, with 74,336 members, with an operating cost of $400 million.

We don't what's the fate of it in the Senate, but we do know that there's concern about transparency of Boards such as ours. In terms of a recommendation, I guess we capitalize them by saying there are three. One, we recommend that the existing three paragraphs that are in the manual remains. Two, we gave a definition to several terms that was not in the existing manual, such as the definition of a conflict of interest, potential conflict of interests, as well as an immediate family member.

And the last thing we did was primarily was outline steps which kind of as we did today. One of those steps was if there's a potential conflict, a person can recuse themselves. If not, declare it before the discussion, as we did today. I guess in a nutshell, is that this came up as from our stakeholders and the PPM attempted to address this matter. There was a total of six committee members, and at the time of putting this out, all six, Barry Flamm, Jay Feldmand, Joseph Dickerson, Colehour and Jennifer Taylor and I all voted in the affirmative.

And the plan is, based upon the public comments from OTA and Wolfe and DiMatteo, before the final vote, the Committee will get together and go over the concern that was raised by these particular groups. But the Committee has not met, so no changes have been made into the document, but hopefully in Committee tomorrow that we will go over these particular concerns that was raised.

Barry Flamm: Nick had his hands up first, and then I'll call Katrina, and then if there's time I'll call on -- sorry. I have more trouble with the buttons here. And then if we have time, let the Committee members make comments, but we do have to allow time for two more presentations.

Nicholas Maravell: Calvin, under the definition of conflict of interest real is defined as a financial or non-financial interest, could you just expand a little bit on what you're envisioning as the non-financial interest under that definition? I'm just not sure what it refers to.

C. Reuben Walker: Let's say it is I. That non-financial could mean that I -- if I am bias and vote for a particular matter, it may mean that I stand to gain something, it may not be cash, but maybe appointment to another board, or something of that nature that could be something other than dollars.

Barry Flamm: Katrina.

Katrina Heinze: I just wanted to go on the record. I was the one who said, no, I don't think that's what's OTA said, sitting next to you. I believe what OTA said, and maybe they can clarify if they have time for public comment tomorrow, is that we (inaudible) Board does have conflict of interest, but we shouldn't have the conflict of interest requirements for federal employees imposed on us. We should have the (inaudible) conflict of interest rules.

So if I've mischaracterized that, someone can correct me. And then I also wanted to say, I think it's a good idea to update our conflict of interest document. I'm not sure this one's quite ready. As I've told you privately, I would like to see the examples reflect real cases that we've had before the Board, so that they're real and can serve to guide decisions, and I think the particular procedure that you have lined out is not ready yet.

C. Reuben Walker: I would say I hope I'm not mischaracterizing those who are opposition, but I think the main opposition was that the existing policy was adequate. I know that is correct. But we know that there's -- it could be,

and it's up to us to say that maybe some aspect of it need to tweaked. What were the other two questions?

Barry Flamm: Tracy?

Tracy Miedema: This is an interesting topic and so, you know, fundamental conflict is this idea that we are appointed to the Board but we have a life outside of the Board and at what point do they conflict with one another. We're most definitely not put up here in these seats to represent the companies that we work for. So my question is, how do we guard against making sure that that never happens, and I realized what was bothering me this morning was an individual Board member's company who had produced a lot of public comment and that same Board member was presenting their company's comments.

And I wonder if this document addresses that to ensure that no seat up here at the table becomes a mouthpiece for anyone's company.

C. Reuben Walker: It is just my view the document does. The existing policy mentioned direct financial benefit. The way the issue came about was prior to any discussion or vote, and this document just outlined those steps. Not to come up or declare a conflict near the time of a vote, but prior to the discussion. It seemed like this morning I thought that was a good approach. The issue was raised, you as the Chair gave some remarks and asked individual Board members their view.

And Board members Tina, Katrina, and others and spoke to that matter of direct financial gain. So it was brought to the light, and it seemed like the Board at that time had no problem with that particular issue. So the process of the steps that are what we had sent out does -- has that pattern. As soon as there is a potential conflict, if you feel as the individual, not -- it need to be brought to the light, and it seemed like this morning that approach came about. That's just my view.

Barry Flamm: Tracy?

Tracy Miedema: The direct financial gain conflict was actually not the one I was referring to. It was the notion of one's own company producing public comments and then no arm's length relationship between the person being a representative of their company, and the person being a member of the Board. That line gets very, very blurry if an individual member delivers their own company's comments from this table. That's what I'm wondering about if anyone else on the Board has an opinion on that.

Barry Flamm: Colehour had a question.

Colehour Bondera: Thank you, but it's been sufficiently addressed. It was about the form and I think that Katrina commented on it. It was was acknowledging that form. Thank you.

Barry Flamm: Any additional questions or comment you want to clarify?

C. Reuben Walker: The new Board member that I'll be dealing with this to my last year and last meeting, and I appreciate the opportunity to take the lead on this, but it definitely is a difficult topic. If it were left up to me, conflict of interest and transparency, I would run away with it -- run as far away as I can. But the answer to your question is that the issue was brought up, which is a specific case, Katrina, as you mentioned, a specific case.

It was brought before the Board upon the request -- remark of the Chair. And each of us here had an opportunity to weigh in on that matter, and several weighed in and had no problem. So it seemed like to me that it is a real case, the Board under this circumstance has had an opportunity too to give a response, and it seemed like despite not being a vote, I was hoping that there might be a vote, but that's not under our policies.

But it seemed like as the Chair had mentioned, this was a real case, Board members had an opportunity to voice their opinions, which is already in the policy. So it seemed like that was adequate.

Barry Flamm: Katrina's comment, and I was hoping that was the last one, but I see two more hands. I know I'm waving off one, so Katrina?

Katrina Heinze: This will be my last one. I think I've used up my chips. I think Tracy brings up a great real-life example, and I guess this is my point about saying I think the document needs more work. I believe our current policy is adequate, but we need some guidance or some examples to help each Board member think through and help the Board think through these real life examples. So what I would advocate for is collecting some of those real-life examples.

You and I have talked about there could be a hundred. I think we could probably whittle it down to four representative, you know, fourish representative examples, and then have, you know, some guidance or some examples that elucidate how the current policy manifests in those situations. I agree with you. I thought we had a great discussion about Jay's situation today.

Jay and I had a second conversation at break, and I thought it was a great conversation. I appreciated the opportunity to do that. You know, I've been a great example. We've got two here, Tracy's brought up another. I'd love to see those examples in a document that bring our current policy to life.

Barry Flamm: Thank you for the comments. Just -- I think the current procedure of what we would say would not deal with this at all while what comment is laid out at least as a step in trying to address these broader things as asked for by the public so (inaudible) Anyway, we need to move on. The next and last recommendation before we get to our discussion paper, is NOSB member and leadership transition, and Jay, please.

Jay Feldman: Thank you Dr. Flamm. We basically took on this issue of leadership transition to address the period after a Board member or Board members are appointed and before they're seated. The process that we go through as a Board to ensure that they are fully integrated into the Board have adequate mentorship, that there are timely decisions made, and so we established through this -- through a discussion , a process that is pretty specific and adds to existing policy on other transition issues.

This was sort of a gap, how and when we make the changes relative to Board -- to Committee Chairs, how the process and when the process is conducted for appointments and shifting around on committees which we'll be doing here over the next month or two, and the overall effect of a schedule which is now being proposed under section five of the policy manual. This -- we're proposing to amend section five which is entitled procedures for the transition of Committee chairs, and the amplification comes in the form of an amendment that would change the title of that section to procedures for the transition of Committee chairs, vice chairs and members.

So it takes in a broader range of actions that need to take place before members are actually seated, new members are actually seated. The idea is to take advantage of this period between the fall NOSB meeting and the seating of Board members in January. We established through this schedule January 24 the beginning date of being seated, there was some lack of clarity in the NOSB manual here, and the ending date being January 23 at midnight.

And so if you go through this list, which I don't think we have time to go through unless you really want to do this. It could be great conversation

over dinner though. You know, there are a series of steps here that you'll see on page 4 of the proposal that go to the appointment of Committee chairs, the appointment of vice chairs, a time frame for the appointments, exchange of common -- or Committee files, review of Committee files, and a mentorship program, and that deals with the period between the fall, this meeting -- the fall meeting and the seating of the new -- or the appointment and then seating of new Board members.

One thing we actually had in here was to encourage new Board members to come to this meeting, so it was our hope that it would be appointed prior to the fall meeting, which would really help in this transition period. And then there's another set of issues around what will happen between Board appointments and the fall Board meeting. So in other words, changing Committee appointments, we don't have a policy for that. If someone wants to change the Committee they're on, this lays out a process for doing that, and filling vacancies of Committee chairs and/or vice chairs as well.

And then in addition to that schedule which we went through man iterations of this and discussion so this was just discussed in a large -- with a lot of detail. In addition to that, we're talking about amending section 3 of the policy procedures manual, election of officers, and this would be under the section on nomination to read as follows. Should the Chair, Vice Chair, Secretary, resign or fail to serve the full term, the Executive Committee shall appoint an interim officer.

We didn't have -- we realized in going through the PPM we didn't have a mechanism for doing that either. So this was a proposal that was unanimously -- well, five people voted yes, zero no, one abstention -- zero abstentions, sorry, one absent, ands zero recusals.

Barry Flamm: Questions? If there's no questions we can move onto public comment, procedures. This is a discussion paper, and we'll -- we planned to have a recommendation for the spring meeting. Colehour, please.

Colehour Bondera: Very good. I'm so happy to be the final part of this process. I thank you. I'm not embarrassed, but as a middle child it's harder to figure out how to be at the end like this. So I'll try not to let -- I'll try not to bore you. I did put up some pictures here to go through this, and I would like to go through it as quickly as possible. I usually like to eat around 5:00 or 5:30 myself.

So public comment procedures, and this is a discussion document, and I will -- I'll admit, and I'll say, you know, we don't as a group deal with that many discussion documents instead of recommendations, and so I understand it's not -- you can see it as not that valuable, but in my opinion it's almost more valuable because now we really not just from the public, but yes the public, but from all of of us, we have an opportunity to craft this more succinctly.

So to start out, I think, you know, the NOSB has historically sought to ensure that public input is central to its decision-making process, and I think that that's critical to recognize, and the Policy Development Committee really wants to assist the NOSB to make decisions that build public support for and trust in the standards. In order to do this, the Policy Development Committee sees public input regarding the establishment of a policy that clearly defines effective public comment in NOSB deliberations.

So I'm gonna briefly look at the background. The background shows me that activities when we're digging around there and finding things. Activities of the NOSB include conducting public meetings, soliciting, and and taking public comments. That's in the Policy and Procedure Manual, page 5, and it's in order to carry out the NOSB mission. So there's different ways to do these things as well as ways to receive them.

Public policy, the policy states each person shall be given five minutes to speak unless otherwise indicated by the Chair. Further that written (inaudible) can be submitted to allow another person to speak on behalf of somebody, and that's critical, and we all are aware of that. Again, the NOSB chair has discretionary authority. I think here is, you know, this next part shows me really, I don't know, you know, if we can get it up there, but the Policy Development Committee seeks public input on issues that may require clarity and they are -- and I'll just briefly go through them.

How the NOSB informs the public of time allotments for public comments during NOSB meetings. How the NOSB publically acknowledges public comment. How the NOSB responds to popular or pressing issues raised in numerous public statements, but not included in the meeting agenda. Whether the time designated refers to presentation time or to question and discussion time by NOSB members or a combination of both, and then whether in addition other options with modern media tools might allow live or pseudo-live input from public members who are not present.

And so the point of the document is really that -- get the public input to address some of these. There might be additional issues that we didn't come up with, and figure out how to deal with those questions. So let's look at the discussion briefly then. The NOSB really has put a lot of value in the comments delivered in person, and I think that that's worth, you know, reiterating because it's true. Oral testimony gets a lot of recognition.

The Board has adopted policy that guarantees that those who have preregistered and attend meetings at least a minimum amount of time to deliver their messages, and the modification is what we're here talking about to the basic structure of the policy, so that we can consider how to best modify, and I think, you know, as a sort of observational comment, it's the fact. An increased number of people are seeking to participate in this process, but time isn't changing.

So, you know, that's really the factor that we're trying to address and figure out how to best manage. So moving onto the conclusion, the Committee is seeking public input, and we really want to make sure there's time for clarification and discussion of both members and the public, and so we came up with a number of questions, and I have a list of questions here. The questions are, given that public comment, and I'm going to briefly read through them, and some are in the middle on my graphic.

I even put in a break image, but given that the public comment period cannot be unlimited, and the reason I want to read these to you all is actually just to stop myself briefly, is that I really think that the public's input is very valuable on this, and I think that experienced Board members, even outgoing Board members, since this is a discussion document and we're not -- it's not a recommendation. It will not become a recommendation until next year.

I think giving some feedback on these questions would be very helpful to us all, and from the public perspective, I think, you know, past Board members could be very helpful. In any case, we did come up with these questions. Given that the public comment period cannot be unlimited, how should the requests make public comment be prioritized? Should the policy be clarified to state a fixed presentation time for public comment? Should policy also define a maximum question and discussion time once public comment is received?

Who should allow the variation or combine the times into a defined total? Is time setting best done by the Board chair at the time of the meeting depending on the circumstances at hand? Should the time allocated be flexible or related to the number of requests? Should the public comment time allowed remain as it now exists in the policy and procedure manual. Is some other designation of time or times more appropriate?

Should public comment through live or remote means be allowed or encouraged? And given the limits of time, should recent revisions to the manual continue or should the proxy practice be abolished. How can this function the NOSB serving as an advisory role best serve as a public private partnership that is responsive to the concerns raised by the broader organic community.

The public is encouraged to provide any additional questions and thoughts. That essentially -- last part was the motion that we made. We had a committee vote on it. The six member of the Committee voted in support. We had not nos, we had no abstentions, we had nobody absent. I want to wrap this up, unfortunately, it will still take me another minute or minute and a half, so patience is good.

Like I said, I did offer you some vegetables back there in my graphic offerings, but I'm sorry they weren't shared. I can't promise they were organic. So we received five comments from the public on this already in terms of discussion, and I have summarized those comments and my summary, I will admit has not been done academically, so I only am going through it because I am going to anticipate that it's possible that all of us may not read every single line of every single one of those comments (inaudible) sit down to much less.

Just so people are aware of where it's at right now, some people -- and these are out of order and not -- I didn't do anything with them except for cut and paste and reduce. But I'm going to go through them briefly. One comment was first come first serve and then create a waiting list, listen to all who are trying in various means. Somebody else, both written and oral comments are important and should be considered in their totality.

Expertise and representation is critical that the chair of the NOSB remain flexible. Do not limit NOSB questions -- do not limit questions from the NOSB back to the public. Time decided by the Executive Committee in advance, at least two weeks prior to meeting, letting the public know the

decision and then further somebody said, allowing a minimum of three minutes and a maximum of ten minutes for public comment.

Several people said remote testimony not needed, and unfortunately several of these that I'm reading were done by several different commenters. Several people says proxies to remain as is. Extra comments would allow them, but also you could count them like up to three maximum or ten percent of the total done. One comment that I thought was interesting was allow locals to sign up in person. Another one was support sense of the Board statements to the secretary to reflect public opinion.

Another one, and I'm quite nearly done actually. NOSB work with the NOP to be able -- and this actually came from several different commenters, and this is my summary of it. To be able to get input from public beyond or not exclusively during the limited written and oral comment period options. So work with the NOSB should work with the NOP to make -- to address that. Another one was respect public input. Another was about corporate and expert requests of product endorsement versus roundtable discussion on topical areas.

And I suggested that I was at the end and I sort of was, but I have some additional ideas which includes an image of a nice horse looking over a fence. There's only four of them, and they're brief. They really weren't -- because the one's I just presented were actually response to the questions, and these ones were extra because the final question was what else do you all have to say. And I think this first one is actually for me relatively important because it rings true to me.

To personalize it at some level, even though this isn't personal at all, because I grew up in a family of 13. I grew up in actually a rural rather poor family, and the critical issue was, you know, we're all individuals, everybody has a vote. And I think that's -- several people said all citizens have one vote, and the NOSB needs to consider equally each public input received in whatever form, either orally, written, or however it comes.

There was as specific recommendation of a revision to the policy and procedures manual, which was on Page 27 to change a line that reads -- to make a couple of additions, individuals providing public comment and then it adds, and NOSB members will refrain from any personal attacks, and from remarks that otherwise impugn the character of any individual and then it adds organization or company.

The final two are during Committee discussions and the final vote, NOSB members are encouraged to generally summarize the number of written and oral comments received for each recommendation indicating whether the comments were for our against the recommendation, and I was very thrilled that that happened very -- most people did that today, and I was thrilled with it. To repeat what I said, we received five comments and they -- none of them said we don't like this at all. They all were like you should maybe add this or respond this way.

And finally, these are not in any order, but finally, NOSB member appointments -- and actually, I think this one almost doesn't apply to this honestly, so I hesitated to included it, but it was one of the comments on this section, so I will still share it. NOSB member appointments must truly represent the various groups designated by the OFPA, and those representatives engage in deliberations in a transparent way open to public involvement. Like I said, that particular comment isn't specifically public comment, but it was a public comment on this.

So that's what I wanted to share. If people have questions or additions or thoughts, I'm happy to receive them and/or subsequently in written form and/or over dinner or any other way. Thank you.

Barry Flamm: Questions? Hearing -- whoops, I wasn't quick enough.

Katrina Heinze: Okay. I'm kind of just doing this because it's not fair that the last guy doesn't get anything. No. I'm just going to do one, and it's it's going to be really fast. It's a recommendation. As our community grows, I think we do need to look at how we do public comment, because I love, love hearing all the public comment. It is the best thing about being on the Board. There's lots of good things, but that's the best.

That being said, it will get unwieldy as our community grows ever bigger. O my suggestion would be, given the however thousand (inaudible) boards out there, there's probably some -- 1,004, there's probably some great ideas of folks who have tackled this before this and have some really creative solutions, and I bet the folks in the program could help get us some best practices that we could implement. So that would be a suggestion.

Barry Flamm: Mac, you got a question or comment?

Robert Stone: Yeah, a comment. This morning, like when we were having our discussion, and if we -- I wonder about how to structure the public

comment around our own discussion so that we can manage the conversation a little, or cluster the comments so that all of the sulfur dioxides are in a certain time slot, and it's not kind of ping-pong match of what's next, and kind of a structure to the comments -- a structure to the presentation of the comments relative to our discussion as a time management tool.

Barry Flamm: Thank you. Additional comments or questions? Nick?

Nicholas Maravell: Yeah. Along those lines, some committee use panels, and I don't know if -- well, let me state my bias here. I'm a little tired of drive by comments. I'd like to get people on a panel with differing points of view, and then have the Committee -- the Board here able to say well, how do you respond to that, how do you respond to that. So I say this not to reduce time, I would want to keep it within the same amount of time that we currently allot, but to elevate the discussion for the purposes of informing the Board members.

Barry Flamm: Colehour?

Colehour Bondera: Did you feel, Nick, that that sort of correlates with what Mac said in terms of clustering comments?

Nicholas Maravell: Yeah. I think what it -- I just wanted to -- what I was saying is Mac's comment could have been taken as in seriatim, and what I'm saying here is concurrent, or more concurrent. That's all.

Barry Flamm: Any additional comments? If not, I turn it back to the Chair.

Tracy Miedema: Thank you Policy Development Committee Chair, Barry Flamm. It's 7:00 p.m., and a reminder to Board members we have dinner starting right away at Elizabeth's on 37th. We're cabbing it, so grab your own cab. It's over a mile walk, so I'll be ordering dinner before you get there if you decide to walk. See you -- we will resume tomorrow morning at 8:00 a.m., 8:00 to 5:00, public comments all day.

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