In The Matter Of:

NATIONAL ORGANIC STANDARDS BOARD (NOSB)

SPRING 2026 WEBINAR DAY 1

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UNITED STATES DEPARTMENT OF AGRICULTURE

NATIONAL ORGANIC PROGRAM

NATIONAL ORGANIC STANDARDS BOARD (NOSB)

SPRING 2026 WEBINARS

DAY 1

Tuesday,

May 5, 2026

Via Zoom for Government

12:00 p.m., Eastern Standard Time

National Organic Standards Board (NOSB) Members

Allison Johnson, NOSB Chair

Amanda Felder, NOSB Vice Chair

Andrea Hatziyannis, NOSB Secretary

Kathryn Deschenes

Nate Lewis

Cat McCluskey

Dilip Nandwani

Corie Pierce

Franklin Quarcoo

Javier Zamora

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Jared Clark, Assistant Division Director
Andrea Holm, Agricultural Marketing Specialist
Heather Kumar, NOSB Food Technologist
Michelle Arsenault, NOSB Advisory Committee Specialist
Johanna Mirenda, Agricultural Marketing Specialist
Devin Pattillo, Agricultural Marketing Specialist
Jason Edmonson, Agricultural Economist

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(Time: 12:02 p.m., EST)

MICHELLE ARSENAULT: Welcome, everybody, to the National Organic Standards Board Comment Webinar Week. We are going to record, so I just wanted to let you know ahead of time we are recording this meeting.

All right, so I'm going to officially call the meeting to order, and welcome, everybody, for joining us. It's so good to see everybody's faces. I feel like I don't get to see people anymore.

So we have a couple of administrative slides on the screen, so if you're on the phone with us and you can't see what they say, I'll try to summarize them briefly. We have two slides, one for attendees and then one specifically targeted to speakers, so people that signed up to give testimony today and then again on Thursday.

So attendees are on mute, and you should be unable to unmute yourself. We appreciate it if you could keep yourself on mute, though, to minimize background noise, and while we love hearing the dogs barking and the kids running around, it's distracting when people are speaking, so we'd appreciate it if you could keep yourself on mute.

The chat is enabled, so if you find your Zoom widget bar/task bar, sometimes it's at the bottom, sometimes

it's floating around your screen, you can chat with each other. Relate technical difficulties to NOP, like if you're having trouble. If you are having trouble in Zoom, really the easiest thing to do is drop off and come back in and it usually fixes all the problems. Unplug it and plug it back in. Chats are not part of the public record, though, and they're not a public comment, so you can chat amongst yourselves, but the Board won't be answering any questions that appear in the chat.

Closed captioning is available, so if you find your live transcript button in your task bar, mine's under the button for "More" now; you can toggle on or off, and you can increase the size if you want, so you can control that on your own screen and it won't affect anybody else's.

Please don't use the "Raise Hand" feature. People registered to speak, so we won't be calling on people during the webinars. You can also customize your own view. If you go in the upper right corner of the window, you'll see a little menu, so you can look at gallery view or speaker view.

We'll highlight -- my Zoom tile will be facing the speaker timer, so that will be pinned on the screen for everybody. You can also when we share -- we don't have any slides except our main slides here -- when we share the slides, if you go to the upper right and minimize your

window, it won't take over your whole screen when we share a slide, and you can actually see stuff behind you, whatever we're displaying.

And the webinar, again, is being recorded. We're going to have a transcript of the entire meeting, the two webinars this week and then the in-person meeting next week, a couple of weeks after the conclusion of the meeting, and we'll post it on the NOP website after we receive them.

Thanks, Andrea. Next slide, please. Did it change? Oh, there we go. I have a little bit of a delay here.

All right, so for speakers, make sure that your name is displayed in your video tile, so we can find you when it's your turn to speak. And then we may send you a little prompt on screen that says we asked you to unmute yourself, or you may be able to just unmute yourself on your own.

When you come to the mic, you're going to always state your name and affiliation for the record at the start of the comment -- at the start of your comment. And each commenter has been allotted three minutes to speak. I will have the speaker timer, again, pinned in my Zoom tile, so you'll be able to see the time counting down. When you hear the beep, we ask that you just finish your sentence, and then Allison Johnson, the board of the chair -- chair of the

board, I'm all backwards today, will open up the floor to board members to ask questions. So once you're done speaking, don't run away, because there may be questions for you.

And then I'm going to test the timer now, so you guys can tell me if you can hear it okay. I am not going to toggle my camera just yet, so you'll just be listening for the very loud beep.

(Pop. Pop.)

MICHELLE ARSENAULT: Thumbs up? Nods? Can you hear it okay? Is it loud? Too soft?

CHAIR JOHNSON: It was like a little pop.

MICHELLE ARSENAULT: A little pop. Okay. Well, the clock will appear on my Zoom tile as well, so you'll be able to see the time counting down. Otherwise, Allison will interrupt you.

Okay, now I'm going to turn the mic over to Erin Healy, the Director of the Standards Division, for Welcoming Remarks. Erin.

MS. HEALY: Great. Thank you, Michelle. Can you hear me okay? Okay.

Hello, everyone. Welcome. Thank you for joining us today. We're really excited to be able to hold this webinar and to hear your public comments. We're also excited to have an in-person meeting next week.

Thank you to everyone who signed up for comments. We do love hearing from stakeholders. It's important for us to understand what's happening in your neck of the woods, so that can help us inform final rulemaking and final decisions.

As a reminder, this meeting will be run based on the Federal Advisory Committee Act and the Board's Policy and Procedures Manual. Allison Johnson, our Board Chair, will facilitate the sessions.

We also want to remind everyone that this is an open and transparent process. We do ask everyone to be respectful of each other, and this extends into the chat messages as well, so please be sure to treat others the way you would like to be treated.

And I want to thank the Standards Division. A lot of work goes on behind the scenes, so I want to give a special shout-out to everyone on my team: Jared Clark, Michelle Arsenault, Devin Petillo, Andrea Holm, Jason Edmondson, Jo Miranda, and Heather Kumar.

I also want to thank the Board for our continued collaboration, and especially want to thank them for their understanding and flexibility in accommodating a shorter timeline between the comment period and the meeting this time around.

And I will hand the mic back to Michelle, who will

do a roll call of the Board members.

MICHELLE ARSENAULT: Thank you, Erin. Okay, so I'm going to roll call the Board members, and it's a way to test your mic, make sure your camera's working, but mostly your mic.

All right, so Kathryn Deshane.

MS. DESCHENES: Present.

MICHELLE ARSENAULT: Welcome, Kathryn.

Amanda Felder.

VICE CHAIR FELDER: Present.

MICHELLE ARSENAULT: Hello, Amanda.

Andrea Hatzianas.

SECRETARY HATZIYANNIS: Present.

MICHELLE ARSENAULT: Good to see you, Andrea.

Nate Lewis.

BD. MEM. LEWIS: Hello.

MICHELLE ARSENAULT: Audio sounds great. Thanks, Nate.

Let's see, Cat McCluskey.

BD. MEM. McCLUSKEY: Hey, good morning.

MICHELLE ARSENAULT: Hello, Cat. Welcome.

Dilip Nandwani.

BD. MEM. NANDWANI: Good morning.

MICHELLE ARSENAULT: Good morning, Dilip.

Corey Pierce.

BD. MEM. PIERCE: Here. Hello.

MICHELLE ARSENAULT: Welcome, Corey. Hello.

Franklin Quarcoo.

BD. MEM. QUARCOO: Present.

MICHELLE ARSENAULT: Hi, Franklin.

MICHELLE ARSENAULT: And Javier Zamora.

BD. MEM. ZAMORA: (No response.)

MICHELLE ARSENAULT: Did Javier join? Not seeing Javier, yet. He may just be on the phone. Nope, not seeing his phone number, either.

And Allison Johnson, NOSB Chair.

CHAIR JOHNSON: Hey, good morning.

MICHELLE ARSENAULT: I skipped everything intentionally to get you at the end. I'll get us used to voting next week.

All right. So for the transcription record, we have nine with us, and we are expecting to have nine and Javier to join today, so we'll eventually have 10.

All right, Allison, I'm turning the gavel over to you for the remainder of the day to get us started.

CHAIR JOHNSON: Thanks, Michelle. And good morning and afternoon to everyone. I'm really excited to kick off our Spring 2026 Meeting with public comments today.

Huge thanks to the NOP staff and my fellow NOSB members for all the planning and prep that goes into these

comment sessions. There's a lot that happens behind the scene, and I'm really proud of all of you and grateful to work with you.

I also just came from our elementary school Teachers Welcome Tunnel in honor of Teacher Appreciation Week, so I wanted to give an extra shout-out to the teachers out there, especially those of you who are preparing our next generation to steward the land and continue to grow organic. All of our jobs are hard, but you all are truly heroes, so thank you for doing what you do.

I also see former Board Chair Kyla Smith on, and it's her birthday, so just a quick happy birthday shout-out before we get started.

With that, I wanted to give you some reminders. There's a policy in the Policy and Procedures Manual about public comments. So all speakers who will be recognized signed up during the registration period. Persons must give their name and affiliation for the record at the beginning of their comment. Proxy speakers are not permitted. Individuals providing public comment, and everyone for that matter, should refrain from making any personal attacks or remarks that might malign the character of any individual. Members of the public are asked to define clearly and succinctly the issues they wish to present before the Board, and this will give NOSB members a comprehensible

understanding of the speaker's concern.

I will call on speakers in the order of the schedule, and we'll announce the next person or two so they can prepare, and I apologize in advance for any butchering of your names. I'll do my best here. Please remember to state your name and affiliation, and then we'll start the timer.

Board members will indicate by raising their hand if they have questions, and I will call on them. Only NOSB members are allowed to ask questions.

So with that, our first speaker will be, hidden behind my many tabs here, Kestrel Burcham, and then followed by Valerie McKinney and Russell Taylor. Kestrel.

MS. BURCHAM: Can you hear me?

CHAIR JOHNSON: There you are. Yep. Please go ahead.

MS. BURCHAM: Awesome. Thank you.

Good morning, members of NOSB and NOP. My name is Kestrel Burcham. I am an attorney and policy director for the Cornucopia Institute. I have two topics I want to address today, anti-organic propaganda and carrageenan.

Anti-organic propaganda currently runs rampant, filled with misinformation about what organic allows and whether it's a meaningful label or just a marketing gimmick. While we know that certified organic is more than a gimmick,

and that organic principles are science-backed, the message is being muddied by influencers feeling the anti-organic claims. We need to address this propaganda with a more concerted effort. It's not enough to stay in our pro-organic bubble, because the misinformation is having a real-world impact.

Cornucopia hears from organic farmers regularly now that our anti-organic propaganda is impacting their livelihoods. Consumers who need high-integrity organic food to support their health have also let us know they are concerned the label is being watered down due to the spread of misinformation. Better communications about the research-backed benefits of organic farming and the regulatory framework is needed. Support from the NOP is also needed so that they can continue with the robust enforcement and continuous improvement of the regulations. To that end, it's important that transparency, legal standards, and regulatory oversight isn't watered down or limited.

With respect to carrageenan, OFPA requires that organic foods conform to a higher standard for human safety than other foods. Organic food also stands apart from other labels in that it questions -- asks questions about acceptable risk and consumer transparency by its very design.

Cornucopia does not believe that carrageenan and the current scientific evidence around it and the human health impacts is mixed. If you remove the studies that have clear conflicts of interest with the carrageenan industry, a pattern of human health concerns is clear. Carrageenan has been shown to trigger intestinal inflammation, among other harmful health effects. Much of the research in both humans and animals show negative health implications used application levels of carrageenan at much lower levels than found in a typical Western diet. This is very concerning.

The evidence summarized by the 2026 Technical Review shows that carrageenan does have adverse human health effects. Cornucopia has developed our own extensive internal reference document that summarizes the relevant human health research papers published since 2017. With the conflicts of interest clearly laid out, we can share this with the NOSB if that would be at all helpful. Carrageenan should be reclassified as a synthetic substance and removed from the National List due to the substance not meeting the requirements for use in organic food and handling.

Trying to fit an organic model of farming into a conventional food system has always come with flaws. Organics should look not to conventional food systems for answers; it should be the reverse, especially in an age of

increasing food insecurity, climate stressors, and social unrest. The same must be true for how we address this flood of anti-organic propaganda.

Thank you for your time and efforts safeguarding the organic label for us all. Have a great day. Thanks, NOSB.

CHAIR JOHNSON: Thank you.

Questions from the Board?

(No response.)

CHAIR JOHNSON: All right, seeing none, thank you for your comment.

Next up will be Valerie McKinney, followed by Russell Taylor, and Mark Kastel. Valerie.

MS. McKINNEY: Can you hear me okay?

CHAIR JOHNSON: Yes. Go ahead.

MS. McKINNEY: Okay, Valerie McKinney, Trece, Incorporated.

Good morning and thank you to the National Organic Standards Board for your time and for the thoughtful progress you've made, particularly in recognizing per ester for use in monitoring and mating disruption. This is an extremely important step forward for biologically based tools in organic production and it is much appreciated.

My comments today will focus on confirming the current regulatory framework for CideTrak DA-MEC, a pear

ester based product, and how we as a company are to apply it constant -- consistently for current and future products, particularly as it relates to formulation technologies like microencapsulation.

Under the National Organic Program, and specifically 7 CFR 205.601, there is clear language allowing the use of certain synthetic inert ingredients, including EPA List 4 materials. It is my current understanding that this language remains in effect and provides a defined basis for evaluating formulated products. Microencapsulation in this context is not an active ingredient, it is simply a delivery system. The regulatory framework evaluates the substance used within a formulation, not the physical form that they take. When the inert materials used in microencapsulation systems meet the classifications outlined in the regulation, their use is consistent with the current allowances.

A key point of clarification I would respectfully like to raise is whether microencapsulation is being evaluated under the definition of excluded methods in 7 CFR 205.2. This definition is focused on genetic modification of organisms, and in this case, microencapsulation is being applied to non-living substances and does not involve or alter living organisms. As such, it would not fall under this scope.

From a broader perspective, disallowing a product based solely on its formulation technology rather than on the compliance of its individual components introduces a distinction that is not explicitly articulated in the current rules. If there is a shift of how these materials are being interpreted, additional clarity would be extremely valuable to those of us working to develop compliant products.

As a company that invests significant time and resources into organic solutions, our goal is to align and be compliant with the regulations. However, without clear and consistent guidance, and with the current situation such as CideTrak DA-MEC, it has now become impossible for us to determine how to actually move forward. How do we evaluate what inert materials are acceptable in practice? How do we design products with confidence that they will meet organic standards? And how do we continue to innovate within a framework that may be involving for interpretation?

We respectfully ask for that clarity so that we can continue to support organic growers with effective, compliant tools.

I'd like to thank you again for your time, your consideration, and your continued support for biologically based pest management systems. Thank you.

CHAIR JOHNSON: Thank you. Starting the day with

very punctual speakers. I appreciate it.

Questions from the Board? Nate, go ahead.

BD. MEM. LEWIS: So, let's see. I just first want to clarify, we're not my understanding is we're not applying excluded methods in this situation with the proposed annotation. And the concern of the subcommittee is related to microplastics in the environment. And I think you pointed out accurately that plastic can be one of the inert ingredients used in formulation.

MS. McKINNEY: Correct.

BD. MEM. LEWIS: That is the concern being raised in this particular situation. So, my question is around availability of per ester to growers. I'm from Washington. Tree fruit industry is very near and dear to my heart.

I know that the full suite of pheromones, kairomones that they use to do their IPM, their integrated pest management, is really important, and so I just want to be really crystal clear, will the prohibition on a micro encapsulated form eliminate all uses? Or are there any products that could comply with that? Or are all pear esters micro encapsulated?

MS. McKINNEY: So, the monitoring lures, no, pear ester is not micro encapsulated. For your passive mating disruption dispensers, no, it is not micro encapsulated. It is only micro encapsulated for a product called CideTrak DA-

MEC, and it's the only larvae disruptant on the market. So it's only for that single product.

BD. MEM. LEWIS: That single product. Okay, great. I just wanted to make sure we were like -- yeah, we're down to the weeds --

MS. McKINNEY: I get it.

BD. MEM. LEWIS: -- on these formulas, and I want to make sure that, you know, it's -- that we have our understanding correct, and the rest of the board who's, you know, maybe not in the subcommittee and touching this particular product very specifically can hear, you know, what is available and what is not. So I really appreciate your response to that. Thanks.

MS. McKINNEY: No problem. Thank you.

CHAIR JOHNSON: Thank you.

Any other questions from the Board?

(No response.)

CHAIR JOHNSON: All right, thanks Valerie.

MS. McKINNEY: Thank you.

CHAIR JOHNSON: Next up, we have Russell Taylor, followed by Mark Kastel, and then Sarah Neagu.

MR. TAYLOR: Yes. Hello. Russell Taylor here, president of Humic Product Trade Association. Can you hear me okay?

CHAIR JOHNSON: Yeah, great. Go ahead.

MR. TAYLOR: Great. I want to focus on one issue, which is consistency of how the Board uses processes to define material categories.

As an example, the Board has spent considerable time in the past meetings discussing the decomposition and treatment of manure. Through that work, it is well established that green manure and finished compost are not the same material. While they may originate from the same or similar plant inputs, the finished compost is defined by a process, a biological process, that over time transforms the material to something fundamentally different. That distinction matters.

The situation facing fulvic acid is a direct parallel. Plant extracts and fulvic acids may originate from similar plant materials, but they are not the same substance. Fulvic acid is a result of a process called humification. It's a degradation and transformation process. Without that process, the product remains a plant material or a plant extract. So, consistency -- the question is simple. If green manure is not compost because the composting process has not occurred, then plant extracts are not fulvic acid if humification has not occurred.

Now, NOP Guidance Memo 5034-1 reflects this distinction by describing fulvic acids as derived from humates, which are a mined mineral. However, in practice,

materials that have not undergone humification are being reviewed and represented by the MROs within their fulvic acid categories. This is not a question of organic status for plant extracts. They're already allowed. But, filing a petition here does not fix the problem. It is a question of how they're being categorized and represented by the MROs.

Products that have not undergone humification are being placed into the fulvic acid category. Not because they meet the process definition, but because the current guidance disclaimer leaves room for interpretation. This creates confusion in the marketplace and weakens the clarity of these definitions.

We raised this issue last year with the NOSB. We were directly sent to the NOSB from the QAD -- USDA QAD for resolution. The Program's past technical reviews make this clear; humic and fulvic substances are a product of humification and not derived from fresh plant extracts.

Will the Board reaffirm that fulvic acid, like compost, is defined for the process that creates it? And those materials that have not undergone that process should remain in their appropriate category?

This is not -- this doesn't require a new resolution or rule. It's simply a clarification and a one-word fix in the NOP Memo 5034-1, but it restores the integrity of the entire category.

Thank you.

CHAIR JOHNSON: Thank you. I see a question from Dilip. Go ahead, Dilip.

BD. MEM. NANDWANI: Thanks, Allison.

Thanks, Mr. Taylor, for your comments on humic acid and on this topic, which is very interesting to me. I have a very simple question.

You mentioned fulvic acid and also humification process. Can you please tell us a little bit about the difference? There are lots of products in the market. They are sold by fulvic acids, humic acids, and -- humic and whatnot. Some are OMRI listed, and some are not, as probably we all know. Can you tell us a little bit about what's the process of manufacturing with fulvic acid and humic acid, and how can -- they are listed, whether as OMRI listed or not?

MR. TAYLOR: Right, we've gone through this issue in detail with OMRI, and I won't try to throw them under the bus, but that is one of the MROs that's causing the issue.

So as I stated, you know, humic and fulvic acids are a creation of a process. And the -- these compounds are not easily analyzed. So when we're analyzing humic and fulvic acid, we're using a quick test. Now, that test relies on a resin called a DAX-8 or XAD-8 resin. It captures molecules of a certain molecular weight and size.

So there is absolutely other uses for this resin, and one is for capturing paper pulps and other byproducts.

So what's happening is they're using this resin test as a qualifier, saying, well, you passed the test, you're fulvic acid and they're completely ignoring the process of how these compounds are formed. So you're seeing things such as corn steep liquor, lignosulfonate, soybean extracts, all combine to the resin. Then because they bind to the resin, the MROs are saying, well, it's fulvic acid, even though we know that there's significant amounts of false positives. So the creation of fulvic acid should come from a humified process.

When you look at the AFCO rules, they specifically state humic substances are, you know, sapropel, oxidized lignites, humic shales, things that are in the earthen deposits. The NOP memo 5034-1 reaffirms this. But in the beginning of the 5034-1 memo, there's a statement that says, "This list is not exhaustive." So they are using that loophole, saying, well, other things can fit into this category, and so therefore, it becomes a dilution of the categories that are actually there.

BD. MEM. NANDWANI: Thank you.

CHAIR JOHNSON: Any other questions from the Board?

(No response.)

CHAIR JOHNSON: All right, thank you for your comment.

All right, next up, we have Mark Kastel, followed by Sarah Neagu, and then Charles Benbrook. Go ahead, Mark.

MR. KASTEL: Thank you.

Greetings from Lafarge, Wisconsin. My name is Mark Kastel. I'm the Executive Director of OrganicEye.

First, please allow me to suggest that any business that transpires at this meeting very well could be legally challenged. When we collaborated with the authors of OFPA in Congress in the late 1980s, the composition of the NOSB was carefully designed to insulate rulemaking from undue corporate influence. The statute states that the USDA Secretary shall establish the National Organic Standards Board. It further goes on to delineate that specific seats shall be designated for organic farmers, organic public interests, certifiers. Presently, considering Javier's chronic absence, farmers only have 25 percent of the legally required representation, consumers 33 percent, and certifiers 0. I would say that that even if they appoint people at this point, they wouldn't be qualified to vote on the agenda items having not participated in the subcommittee process.

E-commerce labeling. OrganicEye's petition asks for nothing more than to make sure that the legal disclaimer

on the packaging has the ability to be either enlarged and visible or that the statement be replicated somewhere else on the webpage. It's currently required under the regulations, shifting this further clarification as guidance would be unenforceable. There were some gross misrepresentations in the write-up by the subcommittee. I would encourage all board members to review the comments for yourselves. They were overwhelmingly in favor by individual consumers and groups representing many diverse stakeholders. It's a specious argument to suggest that organic shoppers are not interested in the full, currently required labeling information. Many of the comments illustrate that. The suggestion that some industry interests -- the suggestion by some industry interests to kick the can down the road waiting for the FDA to do something is inappropriate. You folks have the authority.

Furthermore, there's a smokescreen in the comments suggesting that somehow manufacturers would be responsible. Manufacturers are not responsible for anything outside of the packaging they produce. We would be open to a friendly amendment proposed by the trade group representing organic produce distributors whose comments were overwhelmingly supportive. They suggested exempting loose produce. That makes sense.

Carrageenan, a plethora of peer-reviewed and

published research mostly funded by the National Institutes of Health, concludes that carrageenan is a potent intestinal inflammatory agent and a possible carcinogen. Please see OrganicEye's written comments for full citations. No carcinogen should be approved for use in organic food.

Thank you very much.

CHAIR JOHNSON: Thank you.

Questions from the Board?

(No response.)

CHAIR JOHNSON: All right, thank you for your comments.

MR. TAYLOR: Thank you, Madam Chair.

CHAIR JOHNSON: Next up we have Sarah Neagu, and then we'll have Charles Benbrook and Ed Maltby. Go ahead, Sarah.

MS. NEAGU: Okay, great. Thanks for having me. My name is Sarah Neagu-Reid, and I serve as Director of Production and Environmental Policy at the International Fresh Produce Association.

We represent over 2500 companies, including more than 500 organic-certified fresh fruit, vegetable, and floral operations. I am providing comments today on behalf of the IFPA Organic Committee, which as many of you know, is made up of volunteer leaders across a wide range of organic specialty crops, production systems, and growing regions.

We appreciate, as always, the Board's continued work on the Spring 2026 agenda and the opportunity to provide input.

At a high level, our comments reflect the importance of maintaining effective tools that organic growers rely on today, while also ensuring the system continues to evolve to meet future challenges. Looking ahead, I want to briefly highlight two areas related to the Board's research priorities that we consistently hear from our members on.

First, the need for increased investment in mechanization and automation in specialty crop production. While this is a broader industry challenge, it is particularly relevant to organic systems, which are often more labor-intensive, as many of us know. As labor pressures persist, advancing innovation in this space will be critical to maintaining the competitiveness and viability of organic production.

Second, the continued need to expand organic crop protection tools. We strongly support efforts to advance side-by-side trials of approved organic pesticide products, both synthetic and natural, across multiple regions, as well as collaboration with a very important program to our industry, the IR4 project, to help bring forward additional tools. Expanding the toolbox is essential to ensuring our growers can effectively manage pests and diseases while

meeting organic standards.

We appreciate the Board's ongoing work and thoughtful consideration of these issues, and we look forward to continuing to engage in the months ahead. Thank you for the opportunity to comment.

CHAIR JOHNSON: Thank you.

Questions from the Board?

(No response.)

CHAIR JOHNSON: All right, thanks for your comment.

We are cruising right along, folks. Next up, we'll have Charles Benbrook, followed by Ed Maltby, and then Abby Youngblood.

Charles Benbrook, do we have you?

(No response.)

MICHELLE ARSENAULT: Ed is on. I just asked him to unmute himself, so -- okay, he has disappeared.

CHAIR JOHNSON: Uh-oh.

MICHELLE ARSENAULT: Let's see. Hold on one second, Allison. Sorry.

CHAIR JOHNSON: No worries.

MICHELLE ARSENAULT: I don't see him on the phone. It looks like he lost his connection. I just saw his name on there and now it's gone.

CHAIR JOHNSON: Maybe he's -- oh do I see him?

No, maybe he's signing back on. Okay. Let's go ahead to Ed.

And then we'll check back for Chuck in a moment. Go ahead.

MICHELLE ARSENAULT: Ed just joined us.

CHAIR JOHNSON: Yeah. Okay, great. Go ahead, Ed.

MR. MALTBY: Okay, good afternoon. Thank you to the 10 members of the NOSB Board. Hopefully you'll get reinforcements fairly soon, but that sounds like most working farms across the world that 10 do the work of 15.

My thanks also to the NOS -- NOP for bringing the meloxicam drug to a proposed rule so quickly. This will be a great benefit to all livestock farmers.

On the proposal for chlorine materials, we support clarifying that chlorine may be used for livestock drinking water and agree that all certifiers should consistently allow this. Our concern is about the annotations wording and potential compliance testing requirements which might lead to increased water testing to prove compliance. If a producer mentions chlorine as part of their drinking water treatment in their OSP, this could result in mandatory testing even if chlorine wasn't used. It is unclear how long testing should persist after sporadic chlorine use.

The amended annotation could require testing all water sources to verify safe drinking water at compliance regardless of chlorine treatment. We want to ensure that

the use of chlorine in livestock drinking does not introduce excessive or unwarranted and expensive testing requirements.

We suggest the following wording change, "Where chlorine is used to disinfect or sanitize livestock drinking water, chlorination must not result in chlorine concentrations that contaminate air, soil or water resources or that exceed applicable legal limits." We recommend sending the proposal back to the subcommittee.

The third party TR, we appreciate the clarification in the policy and procedures manual that the third party technical reviews should be conducted for all newly petitioned substances and the narrowing of conditions when existing information expertise can be relied upon to evaluate petitions for the National List.

We suggest the wording about the use of an independent TR changes from "should" to "shall" have a technical review to make it less open to judgment. The purpose of a TR is to add to or corroborate the information from the petitioner. The TR is unbiased and if done properly outlines information on environmental and health effects and alternatives that might not have been presented in the petition.

If the Board does feel that they have evidence that would be prevalent to a TR, they should provide that to the public in written form similar to how a TR would be

presented. That evidence should not rely solely on the information from the petition but should come from unbiased sources. The NOSB is a gatekeeper and has a duty to provide thoughtful, well researched information that gives the community a chance to debate all aspects of a petition.

Thank you very much.

CHAIR JOHNSON: Thank you, Ed.

Questions from the Board?

(No response.)

CHAIR JOHNSON: All right, thank you for your comment.

MR. MALTBY: Thank you.

CHAIR JOHNSON: Looping back, is Charles Benbrook on now?

MICHELLE ARSENAULT: Still not seeing him. I'll check on the call, Allison.

CHAIR JOHNSON: I'll check back at the end.

Moving on then, we have Abby Youngblood coming up followed by Alan Lewis and then Jay Feldman. Go ahead, Abby.

MS. YOUNGBLOOD: Thank you.

Good afternoon. My name is Abby Youngblood and I'm the Executive Director of the National Organic Coalition. I want to start by sharing some of the big picture issues that NOC is working on with USDA and

Congress, and then I'll give NOC's input on CACS issues.

NOC is deeply concerned about staff losses over the past year at the National Organic Program and across USDA agencies. We oppose efforts to relocate NOP staff as part of USDA's reorganization process and we have urged both Congress and USDA to prioritize rehiring critical staff who have been lost.

On the Farm Bill, the bill that was passed by the House last week contains a few bright spots for organic but ultimately it falls short of what is needed. There are several things that we need to fix now in the Senate version of the bill. We need an increase in resources for the National Organic Program over the life of the Farm Bill rather than flat funding. We're also asking the Senate to adequately fund the Organic Certification Cost Share Program, which is underfunded, and we need to increase the reimbursement rates. We know that that program is one of the most effective ways for Congress and USDA to support small farms and to reduce barriers to organic certification. Those are just a couple of the things that we need to fix in the Senate Farm Bill, so we're urging the NOSB and the organic community to amplify the calls to action that are on NOC's website related to certification cost share program delays and the need for a stronger Farm Bill in the Senate.

NOC strongly opposes efforts to weaken or roll

back the Organic Livestock and Poultry Standards rule. We've asked farms and businesses to voice their strong support directly with Secretary Rollins. We know that if OLPS is weakened that threatens trust and credibility in the organic seal. We need a meaningful and consistent standard and we know that without that, that will affect the marketplace. The value of organic will decline. That will hurt producers and destabilize businesses and supply chains that depend on the strength of the organic seal.

I want to focus the remainder of my comments on CACS topics on residue testing. NOC supports the overall proposal and we agree that residue testing should combine both risk-based and random approaches without prescribing fixed percentages. At the same time, we need a clearer shared definition of what risk-based means. Establishing a common evolving framework for risk should be a priority now for the organic community and we have made several suggestions about how the instruction to certifiers on residue testing could be modified as a starting point for a common framework.

We also know that testing is most effective when it's conducted closer to the source before aggregation and processing where root cause analysis is still possible, so we would like to see that concept integrated into the instruction to certifiers, as well.

On e-commerce labeling, we believe that guidance alone is not sufficient to address the scale of the problem. Guidance lacks enforceability, so we urge the Board to advocate for rulemaking so online retailers are held to the same standard as brick and mortar retailers and without that we have a significant gap in organic integrity as sales continue --

Thank you so much for considering these items.

CHAIR JOHNSON: Thank you.

Questions from the Board?

(No response.)

CHAIR JOHNSON: All right, thanks for your comments, Abby.

Next up we have Alan Lewis, followed by Jay Feldman and then Drew Cheney. Alan, go ahead.

MR. LEWIS: Okay, good. Thank you. Alan Lewis, wearing a few different hats today, but thanks to the NOP staff for a seamless event.

First, as an employee of Natural Grocers, we now have over 170 stores in 22 states. We remain the only national chain that exclusively sells organic produce in its stores. This is a general reminder that shoppers want organic produce and are willing to pay a price premium for it. Let's be brave.

Also, I'm calling from SynBioBeta, the synthetic

biology conference in San Jose where we're collecting intelligence on technology threats and propaganda threats to organic integrity. Reports will be posted.

Changing hats to my role as a board member of IFOAM, the International Federation of Organic Agriculture Movements, I'd like to report that our global effort to determine minimum standards for the use of regenerative claims on retail food products continues apace. After robust sessions at the Regenerate Conference Expo West via Zoom, our next meeting will take place on June 4th. See IFOAMNorthAmerica.org for more information.

Why mention this project to the NOSB? Because, as Cornucopia Institute rightly mentioned earlier, organic integrity is under coordinated attack and threat by influencers online, most of whom have no stake in the outcome of their efforts.

IFOAM has also submitted a formal comment asking that sodium nitrate be prohibited in organic production. It is not compatible with the requirement that fertility come from biological activity of the soil supplemented with on-farm cycling of organic material. It is merely a replacement for synthetic nitrogen.

Lastly, on a personal note, appointments to the NOSB need to be finalized. There is a deep bench of capable citizens ready to serve. Losing five members in the input

of their research thought, including input from their broad communities, will continue to cripple our work to protect and promote the organic movement.

And I yield the balance of my time. Thank you.

CHAIR JOHNSON: Thank you, Alan.

Questions from the Board?

(No response.)

CHAIR JOHNSON: All right, seeing none, thank you for your time, Alan.

Next up we have Jay Feldman, then Drew Cheney, and Terry Schistar.

MR. FELDMAN: Thank you. I'm Jay Feldman, Executive Director of Beyond Pesticides and former NOSB member.

As you may know, Beyond Pesticides has submitted comments on all the issues before the Board, highlighting farmer, farm worker, consumer, and environmental health concerns, as well as the statutory mandate to address a full lifecycle analysis of substances and their essentiality in an organic system.

However, today I address the vacancies on the National Organic Standards Board that have not been filled by the Secretary of Agriculture. This lapse defies a congressional mandate in law and harms the integrity of the Board process of oversight, advice, and control of the

National List of allowed and prohibited substances. It taints all the important work you do and gives consumers reason to distrust the USDA organic label, which the public and organic community has spent decades building. I urge this Board to issue a strong statement at your upcoming meeting, stating that the failure to announce NOSB appointments is a violation of law, harmful to organic producers, damaging to consumer trust, and ultimately threatening human and ecosystem health.

As one who was involved in the drafting of the Organic Foods Production Act, I note that the law grew out of a deep concern that the chemical-dependent food production system was and is contaminating ecosystems, poisoning those who produce and eat this food and those in surrounding communities exposed to chemical drift. Central to the law, its integrity and consumer trust is the National Organic Standards Board.

Organic has grown as a sector from grassroots principles and values, with farmers, consumers, certifiers, and scientists coming together, originally without government involvement. This group of stakeholders is codified in OFPA to ensure that the organic label has meaning. Not filling a position for two farmers, two consumers, and a certifier is not acceptable. Please stand up for integrity.

In advance of the sunset vote on carrageenan at the fall meeting, please note that the February 2026 TR supports its listing as synthetic and identifies health effects from carrageenan itself, not just degraded carrageenan. Please list it and sunset it. The TR states, "The researchers observed stronger pro-inflammatory effects when inflammation was already present, as it is commonly in people living with IBS disease."

Our organic law does not accept the weak safety standards of other statutes. We don't distinguish between chemicals that initiate and promote illness. We protect all people, especially those most vulnerable, those who are sick because of chemical intensive practices that are not adequately regulated.

Thank you, and thank you for your service on the NOSB.

CHAIR JOHNSON: Thank you.

Questions from the Board?

(No response.)

CHAIR JOHNSON: All right, thanks for your time, Jay.

MR. FELDMAN: Thanks.

CHAIR JOHNSON: Next up is Drew Cheney, who I don't believe is on yet.

MICHELLE ARSENAULT: I don't see Drew, Allison.

Sorry.

CHAIR JOHNSON: Okay. We'll loop back to Drew. And then we have Terry Schister and then Kip Teegardin, who gets my prize for favorite name of the day. Go ahead, Terry.

MS. SHISTAR: Okay. Am I unmuted now? Yeah.

My name is Terry Schister. I'm on the board of directors of Beyond Pesticides. We submitted comments on all the issues before the Board, and I'm going to highlight a few of them.

Microplastics should not be broadcast into organic crops. Pear ester is a chemical pheromone synthesized to be structurally and functionally identical to a volatile substance emitted by mature and ripening pears and other fruits. It attracts codling moths and is used in various ways to control them. Pear ester should be added to the National List with an annotation that describes its use, as required by OFPA and prohibits its use microencapsulated in plastic. Use of pear ester is limited to passive traps and monitors and not for use in microencapsulated formulations.

In addition, we are concerned that semiochemicals other than pheromones may have uses that are consistent with organic practices and may reduce the use of more hazardous materials. So we urge the NOSB to determine whether such uses exist and whether they would be permitted by OFPA.

Chitosan is a material in search of a place in organic production. It is a synthetic material that is not well characterized and different forms have radically different uses and properties. It is not necessary for organic production and the NOSB has a technical review that summarizes many allowed substances for the petitioned use in wine made with organic grapes.

Limits should be placed on the use of chlorine in livestock drinking water. Chlorinated drinking water is unavoidable for anyone using public water supplies, but many livestock producers supply drinking water from wells, cisterns, or ponds. The NOSB should propose guidance and/or instructions for certifiers regarding the application of this use in the various situations faced by livestock producers, including shocking wells with high concentrations of chlorine.

The NOSB must perform a comprehensive review of cleaning, disinfecting, and sanitizing materials that can support annotations for these materials on the National List.

E-commerce must provide all the information about organic products that is required by law. Probably every organic consumer who has shopped online has encountered product names including the word "organic," or descriptions of products as organic, or containing organic ingredients,

and wondered whether that description is true. There is an inconsistency between the requirements when a product is offered for sale by a brick and mortar establishment and the requirements in e-commerce. An inconsistency provides an opportunity for fraud. The requirements for e-commerce should be brought into line with those for physical establishments. The NOSB must not wait for FDA to act, but immediately identify any obstacles to eliminating this loophole and propose a change that will address them.

Thank you.

CHAIR JOHNSON: Thank you, Terry.

Questions from the Board? Franklin, go ahead.

BD. MEM. QUARCOO: Thank you, Terry. I have a quick question on that. I want to be sure that I'm getting this right. Are you requesting for a broad listing of semiochemicals like kairomones, just the entire category? Or you are for listing them individually?

MS. SHISTAR: Well, it would be individually if they were listed. What I'm suggesting is because OFPA specifically mentions pheromones but doesn't mention other semiochemicals that the NOSB needs to look to see whether there are other semiochemicals that might be consistent with organic practices and that should be allowed. So I'm not saying that any -- there should be any blanket considering, you know, listing but that the NOSB needs to consider these

things.

CHAIR JOHNSON: Thank you for that.

BD. MEM. QUARCOO: Thank you.

BD. MEM. LEWIS: Thanks, Terry. Always appreciate your expertise on these pesticide related questions.

So the Crop Subcommittee was deliberate in our wording to allow for, as we, kind of, heard earlier from the manufacturer, to allow for lures and traps passive pheromones but not the active spray microencapsulations of the pear ester.

Can you walk me through your logic on the objection to those passive pheromone dispensers and that particular use? I read your comments.

MS. SHISTAR: I don't have any objection.

BD. MEM. LEWIS: Okay. So --

MS. SHISTAR: I don't have any objection.

BD. MEM. LEWIS: Why --

MS. SHISTAR: I'm just saying that those uses have to be -- should be specified in the annotation.

BD. MEM. LEWIS: I see. Okay, great. Thank you. That's helpful in my understanding of your comments on it. Thanks.

CHAIR JOHNSON: Any other questions from the Board?

(No response.)

CHAIR JOHNSON: All right, thanks for your comments, Terry.

All right, we are running a bit ahead. Kip Teegardin, are you on and ready to comment? I know it's a little ahead of schedule.

MR. TEEGARDIN: Yes. Can you hear me?

CHAIR JOHNSON: Yes. Go ahead, please.

MR. TEEGARDIN: Well, first, yeah, I'll introduce myself. My name is Kip Teegardin. I'm a veteran in organic chemistry for about 16 years. And I serve as a semiochemical production R&D manager at Trece. But I do appreciate the opportunity today to speak in support of adding pear ester, including the microencapsulated formulations I've tracked, the DAX to the list. My comments today really focus specifically on environmental and scientific questions. I raise regard to the polyamide microencapsulation used in this formulation.

First, it's important to recognize the activating pear ester is a naturally-occurring semicochemical. It's an effective tool in larval control in search IPMs. It's simply a controlled release delivery system. It allows this naturally-occurring compound to remain effective for extended time.

A key concern raised in comments, which is totally valid with microplastics, we do not disagree in this, the

Amex was really built around a polymer background that could hydrolyze and could biodegrade. You'll see that in my comments with citations.

Scientifically, these materials are very different. Conventional plastics, such as polyethylene, polypropylene are composed of long hydrocarbon chains that are highly resistant to environmental breakdown and persist for decades. That is a fact. By contrast, the DA-MEC polyamides contain amide linkages in this polymer backbone which chemically are more susceptible to hydrolysis and microbial degradation under environmental conditions.

Every activity has a level of risk, especially in anything chemistry related from natural to unnatural, to synthetic. And I evaluated that risk through calculations and at the recommended fill application rate, estimated polyamide contribution is approximately .00032 milligram, excuse me, per kilogram of soil in the top 15 centimeters of an acre, which I would consider a parts per billion level of introduction. This is extremely low exposure level and has an order of magnitude below concentration associated with toxicological concern in environmental studies.

Third, the product has already been reviewed by the United States Environmental Protection Agency as part of the pesticide registration.

Finally, based on polymer chemistry, low

application mass, and available biodegradation literature, chronic accumulation in agricultural systems is not anticipated. While no agricultural material should be evaluated casually and profoundly, the available evidence supports that this formulation presents very low environmental risk while maintaining a meaningful benefit to organic growers seeking alternatives.

Thank you for your time and consideration, and I'll be open to any questions.

CHAIR JOHNSON: Thank you.

Questions from the Board?

(No response.)

CHAIR JOHNSON: I have a question that I'm still trying to formulate. I appreciate you drawing the distinction between plastics that are resistant to breakdown and persist in the environment longer versus polymers that break down more readily.

For those that break down more readily, does that mean there's a -- like, a heightened concern about runoff and breakdown into other compounds that we don't have a great understanding of? Or can you speak any more to what the impact is after that breakdown?

MR. TEEGARDIN: Yeah, that's a really good question, and I had to review some of that myself. You know, we have many products, and this was something where I

came into just evaluating our own risk, right, as a company and what we're doing, and I believe some of the earlier comments that I've read and reviewed with Doug Light and Al and I when this all started and begun, my understanding is we reviewed and analyzed -- this is actually years before me -- that the capsule, there's very little runoff into the water, and then based on literature that if there was any accumulation then you have some biodegradable material because even amino acid is considered a polyamide. Right, it's got an amino acid that is connected to a carbonyl, and there's definitely again some concerns.

One of the biggest things I wanted to state today was definitely a distinction between those two. But -- and a lot of that is, you know, ongoing research, especially when talking about polyethylene and polypropylene, but with the runoff, I believe there's very little based on that Al and I and Doug Light's research.

CHAIR JOHNSON: Okay, thank you. Franklin, go ahead.

BD. MEM. QUARCOO: Yes, thanks so much for that comment.

When we look at degradation of plastic, there are two aspects -- well, there are several aspects to it. We have the chemical side, which you talked about. What is the currently available information on possible effects on

microbial diversity and just the biology of the soil with all this plastic that we have degraded -- degrading? Is it possible that this could just serve as an artificial selection factor that would just change the microbial diversity or just the diversity of organisms in the soil and in our environment?

MR. TEEGARDIN: That's a really good question, as well.

Yeah, and again, in my written comments, I have some citations there of people definitely studying marine, right? The marine is very, going back to Allison's question of runoffs, right, you get a marine or even just freshwater microbial activity, it seems to be a very extensive research in that regard. And one of the citations that I was actually reviewing before the meeting was definitely, you know, two or three species of microbial just found naturally that would break down polyamides. And that's typically the study, too, when you go into a -- and I -- into a toxicological type of study where you apply these polyamides to the soil and you have microbial -- if you have biodegradation, right, you're going to give gas emission, right, and you're studying that, right? You're just studying that carbon that you've introduced is transferred into a gas of -- you know, CO2 gas, right? And it's -- and again I think that looking at the polyethylene,

polypropylene, yes, those are very -- those materials they're forever in microplastics in that regard.

Here at Trece, we're attempting to yes, you could put them in the category of microplastics, however microplastics can biodegrade and these break down to in oxides, amino acids, things like that.

BD. MEM. QUARCOO: Thank you.

CHAIR JOHNSON: Thank you.

Any other questions from the Board?

(No response.)

CHAIR JOHNSON: All right, thanks for your comments, Kip.

We're going to loop back and see if we have picked up Charles Benbrook or Drew Cheney and then we'll head into a break. I don't think we do.

MICHELLE ARSENAULT: Let me see, Charles -- Allison let me just double check the phone numbers in case he's just on the phone. Nope.

CHAIR JOHNSON: And we'll take a 20-minute break and reconvene at the 25 mark, whatever time zone you're in, and we'll pick up at that time with Claire Hintz, Bruce Kaser, and Noreen Mucha. Thank you.

(Whereupon, a brief recess was taken.)

CHAIR JOHNSON: Welcome back, everyone. We're a little bit ahead so we may be missing a few people but we'll

jump in and see who we catch.

Next up is Claire Hintz or Heinzt, followed by Bruce Kaser and Noreen Mucha.

MICHELLE ARSENAULT: Allison, we're not finding Claire on the line with us. Nor Bruce. I'll just double check once more in case they just joined. Nope.

Let's jump ahead then to Noreen Mucha. Are you here, Noreen? There you are. Go ahead.

MS. MUCHA: Yeah, sure. Good afternoon. My name is Noreen Mucha and I'm speaking on behalf of Wisconsin Organics. We're a 501(c)(3) nonprofit that serves as a statewide hub connecting, informing, and strengthening Wisconsin's organic sector through market linkages, coordinated value chain networks, and farmer-consumer pathways.

We work with organic farmers, processors, handlers, retailers, certifiers, research institutions, and consumers across Wisconsin, and we appreciate the Board's commitment to continuous improvement of organic standards and transparency.

In regards to compliance, accreditation, and certification subcommittee proposals, we strongly support NOSB's work on the residue testing for our global supply chain and on e-commerce organic labeling requirements because our statewide directories and market development

work depends on standards that are clear, enforceable, and consistently applied by certifiers and retailers. When producers and consumers see inconsistent residue outcomes or unclear labeling online, it erodes trust in the organic seal and undermines the transparent markets we are working to build in Wisconsin.

As you refine residue testing policies and definitions, we urge you to prioritize approaches that maintain high organic integrity while remaining feasible for small and mid-scale operations that rely on complex supply chains and contact handlers.

For e-commerce labeling, we encourage the Board to recommend requirements that apply consistently across platforms and that are simple enough for small brands and direct marketing farms to implement. As we build integrated directories and an organic data dashboard for Wisconsin, we see substantial opportunity for NOSB and NOP to build on aggregated regional data about market supply chains and farmer experiences to inform future sunset reviews, research priorities, and policy updates.

Thank you for your time and service. Over.

CHAIR JOHNSON: Thank you.

Questions from the Board?

(No response.)

CHAIR JOHNSON: All right. Thanks for your time,

Noreen.

Next up, we have Adam Seitz, followed by Noah Simon and Adrienne Shelton. Sorry, I didn't give you a preview, Adam, are you there? There you are.

MR. SEITZ: I am. Yeah. No worries.

CHAIR JOHNSON: Go ahead.

MR. SEITZ: Good afternoon. My name is Adam Seitz, and I serve as a Senior Technical Reviewer and Policy Specialist for Quality Assurance International, an NSF company and a leading provider of organic certification services worldwide. Thank you, NOSB and NOP, for your efforts and the opportunity to comment. My comments will be focused on handler substances.

Sodium bicarbonate. QAI fully supports the recommendation to add synthetic sodium bicarb produced via Trona ore processing only to 7 CFR 205.605(b). This addition is consistent with the understanding that this form was intended to be permitted but was misclassified when originally added to 605(a) if reviewed based on current classification of materials guidance.

Chlorine materials. No National List substance is more widely used by QAI certified handling operations than chlorine materials. QAI finds review criteria and permitted handler uses for chlorine, to be clear, though there may still be some review differences amongst certifiers. QAI

reviews the active ingredients in chlorine materials and verifies that the label permits the intended use.

Carrageenan. QAI certifies 17 operations with 23 unique carrageenan ingredients approved for their use in beer, dairy, plant-based dairy substitute, and animal protein products. The actual product count is higher since several of the products are certified as non-retail ingredients. During its last sunset review, QAI requested that the NOSB examine the appropriateness of carrageenan's classification as non-synthetic, as is consistent with published ACA best practices and based on the historic perspective noted in the meeting materials regarding its classification, QAI currently qualifies carrageenan as low risk for classification verification. This means we cannot speak to the manufacturing process for our approved carrageenan ingredients. This will remain the case unless the Board formally examines and amends the carrageenan restriction or listing should it choose to do so similar as to what is being done for sodium bicarb.

QAI would like to highlight the international acceptance of carrageenan in organic products, which will allow organic products containing carrageenan to be available in the United States, regardless of its National List inclusion. For example, its continued allowance in organic products certified under the Canada Organic Regime

was just affirmed when the updated permitted substances list was published this past March.

Silicon dioxide. QAI certifies 48 operations using silicon dioxide as a stand-alone ingredient or processing aid. Many more use it within organic ingredients and as an ancillary substance. QAI would like to highlight that the commercial availability requirement on organic rice hulls does not apply to the use of silicon dioxide made with organic products. Based on 7 CFR 205.301(c), it indicates the 205.301(f)(6) prohibition on use of non-organic ingredients when organic ingredients are commercially available doesn't apply to non-organic ingredients used in made-with-organic products. This perspective is in alignment with published ACA best practices.

Our understanding of whether silicon dioxide is an engineered nanomaterial is aligned with the 2026 Technical Report, so unclear but there is additional information on this front in our written comments.

Thank you much.

CHAIR JOHNSON: Thanks Adam.

Questions from the Board?

(No response.)

CHAIR JOHNSON: I have one. You mentioned non-retail products. Can you explain what that is?

MR. SEITZ: So it's intended -- it's certified

organic but used in -- for use in the further manufacturing of food, so it's like a certified organic product at that count. Our resolution into uses, very hard to go that deep and compile the data for non-retail products like that. Greater insight into the individual non-organic ingredient being used.

CHAIR JOHNSON: Thank you.

Any other questions?

(No response.)

CHAIR JOHNSON: All right, thanks for your comments Adam.

Next up is Noah Simon, followed by Adrienne Shelton and then Johanna Phillips. Do we have Noah.

MICHELLE ARSENAULT: We're not seeing Noah on the line with us today, Allison.

CHAIR JOHNSON: I see. All right. Then Adrienne and then it'll be Johanna Phillips and Amy Bruch. Adrienne, go ahead.

MS. SHELTON: Hi, thank you.

My name is Adrienne Shelton and I'm the R&D Manager for Organics at Enzo Zahn and Vitalis Organic Seeds. I'm speaking to you today as co-chair of the Organic Trade Association's Seed Task Force and on behalf of the entire committee.

First of all, thank you for the opportunity to

speak today and for your continued service to the organic community. The OTA Seed Task Force is a cross-sector group of breeders, seed producers, certifiers, growers, and advocates working to strengthen the use of organic seed across US organic production. We are committed to developing collaborative, data-driven roadmaps to promote increased use of organic seed in a sensible and predictable way.

The Task Force is pleased to see NOSB's renewed work in this area, although we were discouraged that a discussion document did not accompany this spring meeting. We recognize that the seed issue is complex and it can be overwhelming to figure out where to start. But our message to you today is simple; please listen to the consistent feedback from across the industry, which is this, organic seed markets are not working, and small incremental fixes are no longer sufficient. We have performed in-depth analysis about this, which you can find in last fall's written comments and more recently in the March CACS meeting minutes.

The limited commercial availability of organic seed is driven by technical and especially economic challenges. Supply cannot develop without reliable demand, and reliable demand will not develop unless the market operates under common and reasonable expectations. Progress

requires addressing the economics that prevent organic seed markets from functioning at scale while also working through the technical barriers that influence production, sourcing, and compliance.

But don't just take our word for it. Over the course of the last three meetings, the Board has received over 100 written and oral comments from stakeholders, and three consistent themes emerged. First, there is broad alignment that organic seed is foundational to organic integrity and requires stronger policy follow-through.

Second, any approach to increase reliance on organic seed must be based on realistic timelines and continued flexibility for growers. This second point is critical because rigid mandates or premature enforcement could restrict farmer choice or undermine operation viability, and this is simply not acceptable.

Third, stakeholders agree on the need for action beyond additional discussion documents.

Taken together, the comments reflect a shared commitment to expanding organic seed use while not losing sight of the need to balance enforcement, market readiness, and farmer feasibility. We have reached a critical juncture. The Rubik's Cube cannot be solved alone, but there are solutions. We can solve it together so let's get to work.

Thank you for your time.

CHAIR JOHNSON: Thanks, Adrienne. Cat, go ahead.

BD. MEM. McCLUSKEY: Thanks, Adrienne, for your comments on behalf of the Seed Task Force and the work the Task Force is doing.

I would really love you to, if you're able, to expand on possible next steps that the Task Force has identified on, as you have stated, this very complex issue and really complicated discussion that we're having as a community.

MS. SHELTON: Thanks, Cat. I appreciate the question. Yeah, there are a few really practical steps that I think we should start considering to really move this issue forward.

One is it's probably time to reconsider developing a seed availability resource or organic seed database. We know this has been tried in the past, but there's a few reasons that there -- that I think the time is right to move forward with really trialing a new program. One is that, of course, the IT has really improved, right, and so our ability to develop user-friendly databases is much more advanced than it was a decade ago.

The other piece of it is that it would provide simplifying the organic seed search for growers, right? They could have one concentrated location to search for

organic seed. And also, by doing this, we would actually start to be able to collect data on seed usage trends. And we've found over and over again that this is a really limiting factor before really making real steps towards policy changes. It's because we don't know what the seed demand is. We don't know how seed is being used by operations. So a database would allow to start collecting data anonymously, so we could see where the demand is and how the organic seed that's available either meets or doesn't meet that demand.

The other really critical piece of that is that any sort of database or resource would have to be paired with a mandate for use. And so I think this would be a really nice opportunity for a public-private partnership, right, where that's work that the NOSB could be moving forward with, how, from a policy perspective, could a database be actually mandated? And then on the industry side, let's actually beta test a new database and see how that would work.

Another area that I think really deserves attention is to re-look at developing an MRO for seed because we still know that even if we look at all the, for example, organic tomato seed that's available on the market, that really doesn't tell us anything about which regions, which production systems, which end uses those seed are

actually useful for. And so we need a way to independently analyze seed availability to be able to determine is organic seed a viable option or not for a particular operation. And an MRO for seed would allow this independent analysis that could then help certifiers to make decisions when they're looking at organic seed compliance.

So I think if we really start to work on some of these really practical models and put them forward to the community, they would give us a foundation to actually start to think about, okay, what -- are there policy changes down the road that we need to consider?

BD. MEM. McCLUSKEY: Thanks, Adrienne. I appreciate the measured steps there that you've laid out.

CHAIR JOHNSON: Thank you. Any other questions from the Board?

(No response.)

CHAIR JOHNSON: I'll take this moment to plug our seed panel that will be on Wednesday during the meeting next week at 10:45 Central. We'll have a few other seed experts to hear from, so looking forward to that. Thanks for your comments, Adrienne.

MS. SHELTON: Thank you.

CHAIR JOHNSON: All right, next up, we have Johanna Phillips, then Amy Bruch, and Bryce Irlbeck. Go ahead.

MS. PHILLIPS: Hi. My name is Johanna Phillips, Director of Business Development and Technical Affairs with Strengthening Organic Systems. I'm commenting on behalf of SOS today. My business partner, Gwen, will be commenting in person next week. Thank you for the opportunity to comment.

I want to start by thanking the NOSB members and NOP staff for their hard work. However, we are concerned that the Board is not yet at full capacity. We call on USDA leadership to thoughtfully appoint the remaining open NOSB seats as soon as possible.

SOS brings decades of combined experience in policy, standards, and certification. Personally, I've spent almost 20 years in regulatory oversight and compliance investigations. Having grown up on a family cow-calf operation in southern Idaho, I'm deeply passionate about the opportunities that the USDA seal provides for our domestic farms.

Regarding the National List, we support the relisting of all materials in this meeting's packet. Organic operations already work with limited toolkits, and unless there's a compelling reason not to relist, we support the continued availability of these materials to maintain operational stability.

Regarding the CACS and residue testing proposal, we strongly support the proposal for 5 percent risk-based

and randomized sampling by certifying agents. We reiterate that certifiers should evaluate their cost structures to increase fees for higher risk operations. We support linking the language between 205.504(b)(5)(iii) and 205.670(f). And we encourage increased transparency and oversight as a critical tool for fraud deterrence. The proposed language regarding downstream notification is both thoughtful and reasonable. We encourage the NOSB to pass the full proposal at this meeting.

Here's a call for action. In the current climate, US organic farmers cannot afford delays. It's imperative that these recommendations, especially those from CACS, move immediately into action at the NOP. We must modernize oversight and provide clear instruction for certifying agents to keep pace with the rapidly evolving global market.

Currently, domestic operations face an oversight disadvantage. International operations do not face the same implications for willful violations that a US farm does. By passing these recommendations and supporting Farm Bill initiatives like Risk-Based Oversight for Integrity Act and Domestic Organic Investment Act, we protect the value of the organic seal. If we continue with the status quo, the seal is undermined, and our domestic producers will continue to suffer.

Thank you for your consideration. I'm happy to

respond to any questions.

CHAIR JOHNSON: Thank you.

Any questions from the Board?

(No response.)

CHAIR JOHNSON: All right, thanks for your time.

All right, next up we have Amy Bruch, followed by Bryce Irlbeck and Garth Kahl. I think Amy was out and about, and we may not get Amy. All right, we'll move back at the end, which is very soon. Bryce Irlbeck.

MICHELLE ARSENAULT: Bryce is also not on the phone with us yet, Allison, because we're so far ahead.

CHAIR JOHNSON: Efficient I guess.

MICHELLE ARSENAULT: We don't even know if Garth is on the call yet. Nope, not seeing Garth, either.

CHAIR JOHNSON: Okay. We'll go back to the top then and see who we may have picked up. Is Charles Benbrook here?

(No response.)

CHAIR JOHNSON: Charles Benbrook?

(No response.)

CHAIR JOHNSON: Okay, don't see Charles yet. Drew Chaney?

(No response.)

CHAIR JOHNSON: Drew Chaney?

(No response.)

CHAIR JOHNSON: All right. Claire Hintz?
(No response.)
CHAIR JOHNSON: Do we have Claire? Claire Hintz. Bruce Kasser or Kaser?
MICHELLE ARSENAULT: Allison, I see Bruce on the line with us.
CHAIR JOHNSON: Okay.
MICHELLE ARSENAULT: Bruce, I'm going to ask you to unmute, in case you can't control your settings yourself. There you go.
CHAIR JOHNSON: All right, go ahead, Bruce.
(No response.)
MICHELLE ARSENAULT: I think we may have lost him.
CHAIR JOHNSON: Nope. It's like some sound and connection issues we're running into today.
Okay, Noah Simon.
MICHELLE ARSENAULT: Noah is here. He just chatted in. There you go.
MR. SIMON: I'm ready when you are.
CHAIR JOHNSON: All right, Noah. Go for it. Thank you.
MR. SIMON: Okay. Hi, folks. My name is Noah Simon. I'm a farmer and co-owner of Breadtree Farms. We're an 800-acre organic agroforestry operation in Washington County, New York, and the largest chestnut grower by acreage

in the Northeast United States. We manage over 25,000 organic chestnut, hickory, and oak trees integrated with sheep and cattle silvopasture, as well as raw onion and maple syrup production.

With the support of the USDA's Organic Market Development Grant, we're also building a chestnut processing facility here at our farm in Salem, New York, that will serve as a shared path to market for hundreds of organic chestnut growers in our region. I'm here to urge the Board to adopt OFA's new proposed definitions regarding manure deposition in vegetated fruit and nut orchards, as well as the proposed 21-day withdrawal period for livestock grazing in vegetated nut orchards.

Global climate science led a project drawdown has identified silvopasture and perennial staple crops as top 20 global strategies for climate change mitigation, and today, current organic standards force farmers to choose between adopting these important forms of carbon farming and achieving organic certification for a mid-September chestnut harvest. The 90-day rule currently means removing livestock by mid-May, which eliminates virtually the entire growing season. The rule, as it's currently written, was written to regulate the spread of manure on annual crop fields. It does not make sense in organic silvopasture, where animals are depositing manure sparsely on vegetated ground and

living soils, and our crops are growing on trees within protected shells.

Pecans offer a useful point of comparison for this discussion. As a more commercially established tree crop that also grows in a shell, which is removed before consumption, under FSMA, pecans are currently classified as rarely consumed raw and thus fully exempted from the Produce Safety Rule. Cattle grazing in conventional pecan orchards is common and faces no federal withdrawal requirement, but in fact, as we all know, pecans are mostly, in fact, eaten raw. Chestnuts, hickories, and acorns were not included on that list, but not because anyone actually eats them raw. They weren't captured by the FDA's consumption survey and the FDA created no pathway to update that list after it was created. In reality, these crops are almost never consumed raw.

All of these nuts are cleaned in hot water baths by the processor. Many are transformed into oil or flour. The shell is always removed before consumption, and the kernel itself is virtually always cooked before it is eaten. So today, conventional pecan growers face no mandatory restriction for a crop that is usually consumed raw, while organic chestnut growers face a 90- to 120-day restriction for a crop that is almost never consumed raw.

The FDA itself has indicated it has no objection

to OFA's proposal. The proposed change to this rule is well supported by the science and consistent with how these crops are actually produced and consumed, and very importantly, this change would have a huge positive effect for the growth of silvopasture and climate-resilient agriculture in our region.

Thanks for your time and the important work that you're doing, and I welcome any questions from the Board.

CHAIR JOHNSON: Thanks for your comment, Noah, and sorry for the timing challenges. Thanks for making it on. I know it's busy when you're juggling.

Nate, go ahead.

BD. MEM. LEWIS: Can you all hear me? Okay.

Thanks, Noah. It sounds like you're doing great work up there, and congrats on the grant. I'm glad that made it through the challenges that the administration's been having in getting money out the door. Well, anyway, good luck on that.

On this particular issue, I completely hear your concerns, and it is sort of an unfortunate situation we're in, where the organic standards don't provide that flexibility and the post-harvest handling to kind of take a case-by-case basis, and I think that's sort of a fundamental issue in that organic isn't a food safety standard, but it does have these food safety elements that are, like, static

and we can't really change. And so I think one of the things we're looking at is how we can provide better definition around what constitutes a manure application? And so, like, I think there's some gradient there where, you know, if you spread manure out of a manure spreader or clean out your barn and apply it in a thick manner on a vegetable field, everyone would agree that is a manure application, whereas brief grazing periods of animals, it's less clear. And I'm just curious if you have an idea around, kind of, like when do you consider grazing equaling a "manure application" because I feel like that's an area in the rule that we can provide some context around that might get 80 percent of the good practices allowed and without having to go into the whole rulemaking process around changing days and times, which is not something that's necessarily off the table for us as a Board, but could be for this particular administration in terms of how they want to prioritize rulemaking. So just curious your thoughts around like what is a manure application when it comes to grazing animals?

MR. SIMON: Sure. Well, I appreciate the question. I'm afraid that I don't think I'm the most informed person to answer this in a quantifiable way. I can answer it from my own -- from our experience and what I know about the practices that I think most farmers, at least in our region, are interested in adopting or have already

adopted and are doing, you know, doing so outside of the organic certification.

I think what we're talking about is daily moves of sheep or cattle with mobile fencing, either polywire or in the case of cattle or, you know, like single strand in the case of cattle or netting in the case of sheep, you know, the slowest possible would be like every second day moves. Harriet and the OFA have worked with a PhD researcher, I believe the name of whom I can't recall, who's been doing some research into actually quantifying the pathogen loads, and I believe that that research hasn't been published, but their preliminary findings suggest that basically the pathogen loads coming from this kind of intensive -- managed intensive rotational grazing are indistinguishable from background pathogen loads from wildlife.

You know, it's important to remember these are open orchard systems where, you know, all manner of wildlife are coming through and not checking with any human regulatory bodies before they do what they need to do. So, you know, that's happening no matter what and I think that, let's just say from my intuitive experience, that observation is consistent with what I have observed, that like within a couple of weeks there's no visible evidence of manure.

So that's the practice that we're talking about

and that I'm familiar with is not -- you know, it's not the physical distribution of -- pack with wagons or side discharge mulch, you know, like mulchers or it's certainly not the distribution -- you know, it's not the injection or broadcast of liquid manure, anything like that. I can't quantify the exact comparison because I haven't studied it, but I would guess that it's a small fraction of the quantity in terms of however you would measure the pathogenic risk.

BD. MEM. LEWIS: Yeah, no, that's really helpful.

And Allison, I'm sorry, just like a follow-up just to, kind of, corroborate. What I'm hearing you're saying in your comments is like trying to figure out some way to evaluate post-harvest handling, you know, whether the shell is cracked or there's a roasting step or some, sort of, post-harvest handling step that would mitigate pathogen risk is an area to focus on? And also --

MR. SIMON: Um-hmm.

BD. MEM. LEWIS: -- kind of, like intensity or duration of grazing on any one particular area as a -- you know, because like you're saying, I think there's a general consensus that, right, injection of liquid manure is a manure application.

MR. SIMON: Yeah.

BD. MEM. LEWIS: There's also consensus that a deer in -- wildlife in your field is not a manure

application. And what we're dealing with is the thing that's somewhere in between and when do you need to start counting that 90/120-day rule.

So let's try to figure out some way to put our arms around post-harvest handling. Let's also try to figure out some way to put our arms around frequency, intensity of grazing animals in the orchard or whatever the system is and see if there's a way to thread that needle.

MR. SIMON: Certainly. Yeah, I would be happy to speak -- I appreciate that perspective and I would be happy to speak to the post-harvest handling and cleaning processes that are already standard within the chestnut industry if that would be helpful for folks to hear. Or I can, you know, provide some written comment to that in the future.

BD. MEM. LEWIS: Yeah. I think -- you know, I think in general written comments on that side is super helpful because, you know, then we can refer back to it. And so I definitely encourage you to, you know, in all the spare time that I know you have, to try to get some of those thoughts down.

But anyway, really appreciate your comments. They're tremendously helpful. Thank you.

MR. SIMON: Thank you guys. We appreciate it.

CHAIR JOHNSON: Thank you. Kathryn, go ahead.

MS. DESCHENES: I was just wondering, Noah, if you

have any, like, record-keeping or verification challenges within your agroforestry operation that maybe we should account for?

MR. SIMON: Can you give me a sense of the specific kinds of record-keeping challenges that you have in mind?

MS. DESCHENES: More just, like, as agroforestry is, you know, becoming more and more prevalent, you know, what challenges do you face as, like, a less common perhaps type of operation?

MR. SIMON: Hmm, well, I think this is one real big challenge for growers who are -- you know, there's a there's a big movement -- I can speak for the Northeast, which is more where we have community and network, there's a growing movement of younger farmers in the Northeast who I think are really motivated to pursue perennial staple crops in agroforestry systems, largely, I think, motivated by the evidence of their value as climate -- you know, for climate change mitigation and adaptation. And a lot of those people want to do silvopasture. And currently it's -- you know, some of these kinds of rules pose real challenges to that. So that's, like, that's one challenge less, sort of, on the business side and more for the desire to do the kind of integrated regenerative agriculture that people are wanting to do.

In terms of the rest of, you know, trying to grow like an industry around a novel perennial staple grain that is currently extremely niche in the country, it's probably a longer list than you guys have time to hear. You know, it's like -- it's like we're trying to facilitate, we're trying to make it possible for people to have access to some options that they don't currently have access to and to have access to the resources that they need to be able to, like, have positive culinary experiences with those new ingredients, be excited about, you know, sharing them with others. And usually these are kinds of cultural changes that, like, play out over many human generations. And we're all in a position where we're trying to respond to climate change like very quickly. And, you know, I'm not -- I don't have any inflated sense of like our importance in that dialogue, but just to say that's the context in which I think about it.

So yeah, you know, we're -- that's one thing where we're -- we've signed up to navigate a pretty steep growth trajectory. So like I'm an individual who's chiefly responsible for overseeing the pre-construction planning and design process and the construction process for the chestnut processing facility we're building, which is going to be the biggest in the country. And, you know, it's just navigating, like, going from handling a couple thousand

pounds a year to handling hundreds of thousands of pounds a year aggregated from potentially hundreds of growers, you know, over the next probably 10 years and a huge amount of learning that's required in terms of aggregation protocols and just like building a whole supply system, making sure that we can fairly compensate growers for their produce while making, you know, maintaining food safety, maintaining quality, consistency, all those kinds of things. So there's going to be a lot of, a lot of iterative learning in that process. And they're definitely -- it's definitely already begun.

MS. DESCHENES: Yeah. Sounds like you have a fun future ahead of you. Yeah, thank you for your work, Noah.

MR. SIMON: Likewise. Thank you guys.

CHAIR JOHNSON: All right. Any other questions from the Board?

(No response.)

CHAIR JOHNSON: Well, as you're one of your consumer reps on the Board, I'm here for more organic chestnut products, so good luck to you and thanks for taking time out of your day to be here.

MR. SIMON: Thanks, everybody. I appreciate your time and appreciate the work that you do. Best for the rest of the day.

CHAIR JOHNSON: Thanks.

All right, we're going to pick up one more, Dan Langager. Are you here? I think I said your last name wrong. Hi, Dan.

MR. LANGAGER: Hi, there. No worries at all. Thanks for squeezing me in today. I appreciate it. And thanks to Michelle, you're the best.

So hello, NOSB members. My name is Dan Langager, and I manage organic policy at the Northwest Horticultural Council. We represent the growers, packers, and shippers of apples, pears, and sweet cherries here in the Pacific Northwest. Our growers produce 97 percent of the nation's fresh organic apple volume, 60 percent of the organic pear volume, and 93 percent of the organic sweet cherry volume.

To start, just a big thank you to all the NOSB members for your hard work and dedication. We know the workload has been tougher this year with only 10 members currently seated on the Board. And we hope those five new members are appointed to the board post-haste.

We also support the changes to the PPM under Section 3 for removing members who fail to participate.

On the pear ester petition, the NHC appreciates the Board sending it back to the subcommittee to revise the proposed annotation. The previous annotation would have prohibited passive dispensers and lures, the most important tools of pear ester-based mating disruption, and really the

entire purpose of the petition. The passive dispensers and lures, as well as the pest traps, do not contain any microencapsulation. So, drafting this new annotation has avoided inadvertently prohibiting those mating disruption products that contain pear ester and make codling moth management possible in organic orchards. We appreciate the Board's thorough and deliberative handling of this petition over the last couple of years, including your efforts to just better understand how mating disruption works in organic orchards.

Pacific Northwest organic tree fruit growers are looking forward to having the petition resolved and having these vital mating disruption products approved.

We support the continued listing of the crops and handling materials under sunset review that are essential for sanitizing and disinfecting orchard equipment and fruit packing lines. The chlorine materials, calcium hypochlorite, chlorine dioxide, hypochlorous acid, and sodium hypochlorite are critically important for sanitizing and disinfecting in both the orchard and the packing house. Each material has specific uses and benefits that make it the most effective and appropriate choice for a particular circumstance. Products with different modes of action are regularly used in rotation to manage both the vast array of public health microorganisms and the potential for

resistance development by those pathogens. Please see our extensive written comments for more details on the importance of sanitizers and how they are used.

We also support the continued listing of ozone gas, magnesium oxide, EPA List 3 inerts, calcium chloride as a foliar spray to treat calcium deficiencies, and parasitic acid as both a disinfectant and for controlling fire blight in the orchard.

And to close, just again, a big thank you to the Board, as well as all of the NOP staff. We truly applaud your efforts. And we always appreciate the opportunity to provide feedback from organic tree fruit growers and packers directly to the NOSB.

CHAIR JOHNSON: Thanks, Dan.

Questions from the Board? Nate, go ahead.

BD. MEM. LEWIS: All right, Dan, since we have some extra time, I just want to be crystal clear on the pear esters.

MR. LANGAGER: Yeah.

BD. MEM. LEWIS: You all support its use in traps? You support its use in the passive pheromones dispensers and can live with the microencapsulated restriction, which would prohibit the active spray type options available?

So, like, we're trying to find the balance between getting the tools to the growers with the concerns around

microplastics in the environment. And so we've drawn this line around microencapsulated formulations, and it sounds like the tree fruit growers that you're working with can, kind of, live with that line being drawn where it is as currently proposed?

MR. LANGAGER: Yeah, I would agree with the way that you characterized it, Nate. You know, the passive dispensers and lures and the traps are the most important materials. That one sprayable product not used widely, and I don't have that number off the top of my head of how many were using it or, you know, I think the manufacturer could speak better to how much they were selling it or, you know, how much was on the market or maybe on the OSPs, as well, from a certifier perspective. But I think, yes, the middle ground has been reached. And again, as I said, we appreciate how deliberative you guys have been on this issue. I think it does.

I'll just plant this seed here. I think it maybe not opens the door, but cracks the door at least in terms of the broader kairomone discussion or maybe also even just the broader microencapsulation discussion and delivery methods. I know a previous commenter mentioned that. I think that's something that we would certainly be able to do exploring if the Board decides to do so.

BD. MEM. LEWIS: Great. Thanks so much.

Appreciate it.

MR. LANGAGER: Thanks.

CHAIR JOHNSON: Thank you.

Any other questions from the Board?

(No response.)

CHAIR JOHNSON: All right, thanks, Dan.

MR. LANGAGER: Thanks.

CHAIR JOHNSON: We're going to work on our final sweep. For anyone who had signed up to speak today and has not had a chance, I saw Bruce Kaser has joined us. Bruce?

MICHELLE ARSENAULT: Just sent a message so he can unmute his mic. Bruce, if you have trouble unmuting your mic, you can hit star six. It'll just toggle and you can unmute sometimes.

MR. KASER: Got it.

MICHELLE ARSENAULT: There you go. Yay.

MR. KASER: I'm here now.

CHAIR JOHNSON: Thanks, Bruce. Go ahead.

MR. KASER: Technologically challenged. Thank you.

My name is Bruce Kaser. I represent a group of producers and have comments on the CAC subcommittee's proposal on pesticide residue testing. Is the timer running? There you go.

The proposal invokes the term "risk assessment,"

and that term involves the same rationale that is used to justify the grower group certification system, which is a hidden system that is built on supplier farms that inspect themselves, peer-to-peer, instead of the annual on-site certifier inspection that is required by statute.

The USDA's legal logic for avoiding the inspection statute is this; individual supplier farms are not the ones being certified because their names simply don't appear on the organic certificate, therefore, they don't need to be inspected by the certifier. On-site certifier inspections then become optional, left to the certifier on a risk assessment basis, and that's all according to the USDA's construct.

Now, the language of the inspection statute is mirrored by the pesticide residue statute in that the latter statute refers to only testing certified farms. So, the CAC proposal raises a very obvious question in my mind, is someone using the same untested construct to shield grower group supplier farms from residue testing?

Now, the Organic Trade Association reported that the largest grower group has 80,000 numbers. A Cather's test, which is what certifiers use, might cost roughly $200 per sample. A 5 percent sampling rate of a grower group having 80,000 farms would therefore cost about $800,000. How is that cost avoided? The answer is risk assessment,

and it likely functions to eliminate significant testing of foreign imports.

The CAC document notes, on the 16th page, that certifiers report very few positive test results for chemicals, and that should be no surprise to anyone. The Cather's test is extremely limited. It can't detect glyphosate and many and most widely used chemicals. So, if you want to look good, you let certifiers use a test that can only detect roughly 200 chemicals out of the roughly 16,000 that are registered with the EPA.

Now, here's a wild risk assessment idea, use the test that can detect the highest risk chemical under the circumstances. When an ingredient's importer is importing grain from Argentina, then based on real risk, simply test the sample for glyphosate and forget the other one. When it's grain imported from Ukraine, trans-shipped through Turkey, test the sample for the fumigant phosphine, because that's where the real risk lies.

Thank you.

CHAIR JOHNSON: Thank you.

Questions from the Board? Kathryn.

MS. DESCHENES: Thank you for your comments, Bruce.

I think some of the challenge with, you know, naming something as, like, a testing for something else is

really that, I think, as time moves on, these things might change. But what other ideas do you have for us to really get down to this, you know, risk-safe system testing?

MR. KASER: I'm sorry, could you repeat that?

MS. DESCHENES: Yes. Do -- what I --

MR. KASER: A little bit didn't come through quite right.

MS. DESCHENES: Yeah. What ideas do you have that we could implement for risk-based testing that might get us to this, you know, more detection of fraud, et cetera?

MR. KASER: Well, you're asking me for ideas about improvements, I think.

MS. DESCHENES: Yes. Um-hmm.

MR. KASER: And if you look at the historical development of pesticide residue testing, the history is actually quite interesting. There was no residue testing at all until that issue showed up in an Inspector General's report around 2010, I believe. And then a memo came out from the NOP telling certifiers to test, but there were no guidelines given about that.

And about the same time, the USDA launched a study on chemicals that were coming in on organic inputs, and they were using what's called the Cather's test. Don't ask me to spell it. It's a very limited test. It can't test anything in grain products, for example. It can only detect a

certain class of chemicals.

I'm probably one of the few people here that at one point in time in their earlier life was actually a licensed pesticide applicator, so I know a lot about the common chemicals that are used in agriculture. And it would be better practice to recognize that glyphosate is the most commonly used chemical in the world. It's sprayed on everything. It's sprayed on all the grain products. So rather than spend a couple hundred dollars for a test that can't detect glyphosate, why don't you forget that test that's not very workable and say, look, this is grain. We know glyphosate's a problem. Let's test for glyphosate at about the same cost.

And this is all about risk assessment. So where are you going to -- how are you going to prioritize risk? Why don't you prioritize risk in a sensible way? Fumigants is a big, big problem. And there's -- and I'll not go on and on about this, but there's a study out of a government lab in Stuttgart, Germany, testing for fumigates, organics along with everything else on things that they're just taking out of the market, and that study showed that organics are being fumigated at or about the same rate as conventional products. So there's a problem. Why don't you test for fumigates for soybeans that are coming into the US in bulk on ships where it is very likely that there's the

possibility for fumigation?

So I'm saying prioritize your test. Don't just use a blanket test that really doesn't apply any longer. Recognize where the problems are and do some risk assessment on testing for the problems.

CHAIR JOHNSON: Thank you.

MS. DESCHENES: Thank you.

CHAIR JOHNSON: Just to follow up on Kathryn's question for you, are you suggesting that certifiers in their discretion would decide which tests to prioritize and use? Or that that would be explicit from the NOP? Or just trying to understand a little bit more about who and when that prioritization would happen?

MR. KASER: Yeah, I don't mean to sound overly critical of anyone, why can't it be either/or? It -- the NOP tends to just throw things to certifiers and make it a certifier problem.

So as I said earlier, there was an Inspector General's report that came out around 2010. No testing had been done and the Inspector General said, hey, there's a statute that says you have to do periodic residue testing. It's in the statute. So you've got to follow the law. So the reaction on the part of the NOP back then, and that's 15, 16 years ago, was just to send out a memo to certifiers telling them you have to do testing. But there was no

instructions about what kind of testing or any kind of processes or procedures. You know, so that's on the NOP.

Why can't the NOP give some guidance about look at that area a little bit stronger than this other area, you know, and spend the same amount for testing? You know, you don't have to test 80,000 individual supplier farms in a grower group. It might be more sensible to test product where the processor is or the aggregator is.

You know, fumigation has been totally, totally ignored. That's a big, big deal. You know, that's an area that really should be looked at, but somehow you get the sense that nobody really wants to look because they're concerned about what the answers might be.

CHAIR JOHNSON: All right. Thank you for the clarification.

Nate has a question. Go ahead, Nate.

BD. MEM. LEWIS: Yeah. It may be just a little bit of a reassurance, that -- the Program, when they came out with that rule in 2012, did provide extensive guidance to certifiers who I would agree with you hadn't had much experience with residue sampling. So I do want to give the program credit for all the guidance they did provide. And the Board has provided the Program with some recommendations to update that guidance to accomplish exactly the goal I think that you're, kind of, getting at, which is that not

only should we target the more risky operations for risk-based sampling, but we should also make sure that the tests that we take are targeting the biggest risk factors that one might encounter.

And so you've brought up some really good suggestions. And, you know, I'll just note that the Cather's test is a really effective test for specialty crops in the Northwest where you've got a lot of specialty crops grown near to conventional operations, and that Cather's test is really effective for determining whether a border is effective in -- or a buffer management system is effective in preventing contamination.

So I don't want to throw the Cather's test out altogether. It is a helpful test for a lot of certification purposes. And your point around targeting testing programs to the specific contaminant is well taken. So thank you.

MR. KASER: Well, I appreciate the comment. And I want to be respectful. I think it was a couple of years ago you asked me a question about pesticide residue testing, and I'm pretty sure my answer was, I don't know anything about it, which was true at the time. I know a lot about it now. And I've looked at every document that you just referred to, and there's nothing that comes close to the type of guidance that you just mentioned. It's just not there.

Cather's is a test that works in fruits and

vegetables that have high liquid content. Watermelon, obviously, tomato, that sort of thing. Not grain at all. No grain. No grain at all. So how much grain is coming into the US? How much soy is coming into the US? What is being sprayed in buffer areas? What are farmers using? They use glyphosate. They might use a burndown chemical. Cather's can't detect paraquat, one of the nastiest chemicals that are used in ag today. I don't believe it can detect 2,4-D, a nasty chemical that's been around since the 60s. Dicamba. I mean, the list just goes on and on and on.

So yeah, it might be -- there might be a situation where Cather's is perfectly appropriate. But in so many cases, it is not. And so just to say, oh, we'll do Cather's and we're good, it's not acceptable.

CHAIR JOHNSON: All right, thank you for your comments, Bruce.

Any other questions from the Board?

(No response.)

CHAIR JOHNSON: All right, thanks for your time. I think we have a couple more folks to pick up here. Claire Hintz or Heintz. Hi, Claire. Thanks for hopping on.

MS. HINTZ: Thank you.

CHAIR JOHNSON: Go ahead.

MS. HINTZ: Hi, everyone. Thank you for having me. I apologize, I missed my slot earlier. I had a farm

emergency.

I am a full-time farmer on the shores of Lake Superior. I am here to comment on organic standards for livestock in orchards. I am not certified organic, although I follow nearly all the practices.

The ones that I'm here to talk about right now are the ones that keep me from being certified. I market my produce through CSA, direct to consumers. I aim to have fruit in every box. And so I have a perennial system, as well as market gardens. And I manage that perennial system with American guinea hogs, which if you're not familiar with them, they're a grazing pig. They're about half the size of a conventional pig. They tend to not -- well, they don't root. They might nose around the top inch of soil, but they don't root. I am using them in my orchards as pest control, so I do not see many of the apple pests that exist in many orchards that are a real challenge for organic production.

Their depositing of the manure allows me to be fertility independent. I do not buy any fertilizer for my orchards. They have to date managed three or four invasive species on my farm: Reed canary grass, Japanese knotweed, and Canadian thistle. They save -- I do not mow my orchards because of their mowing capacity, so it's saving me quite a lot of fossil fuels. That lack of machine mowing means that I have enormous habitat for birds in my orchards. Ground

nesting birds can finish fledging out their chicks because it's not disturbed territory. So biodiversity is really high on my farm.

And for all of these reasons, I keep my pigs in my orchards longer than the window that is allowable at this point in organic standards. So I see -- the pest benefit -- the pest control benefits that I see outweigh my desire to be certified at this point because I don't have to manage with any chemicals, any inputs.

And so I'm just calling out the need for closer look at the window. The organic standards, I think, were really written for spreading fertilizer in orchards and not the natural deposition from animals in the orchard. And so I want to suggest that that window should be a lot smaller, especially -- I'm not including any drops in my processing. Some of it gets processed for ciders, and then the rest goes fresh to my CSA. But I'm not -- it's all picked direct off the tree. And so I'll just stop there, if anybody has a question.

CHAIR JOHNSON: Go ahead and finish that thought if you'd like, Claire. We're doing good on time.

MS. HINTZ: Yeah, it's all picked direct from the tree. So there's nothing I'm collecting from the ground.

CHAIR JOHNSON: Thank you so much for your comments and taking the time to be here today. So helpful

to hear from producers and producers who aren't certified organic, taking the time to talk with NOSB is huge. So we really appreciate your comments.

Nate, go ahead.

BD. MEM. LEWIS: Yes, I'm curious if you have, sort of, looked into getting certified and heard from a certifier saying what you're doing would not comply? Is that -- that is accurate? Did you also hear what clarification they would need to overcome that hurdle? Or were they just like, what you're doing, we consider a manure application, so the 90/120 day rule applies? And --

MS. HINTZ: Yes. Yeah, 90/120. Yeah.

BD. MEM. LEWIS: Yeah, if you could elaborate on that experience, I would --

MS. HINTZ: Yeah, I have looked into it. So let me frame it this way; I'm here in a personal capacity as a full-time farmer. I'm also the board president of Marble Seed here in the Midwest, so I'm very familiar with organic standards. And so I have asked certifiers that I know personally, I did not formally apply, and so it's not that the certifiers are -- or that I had a negative experience with certifiers in any mean way. It's just that the 90/120 day rule seems --

BD. MEM. LEWIS: You had conversations and they said, yeah, we think that in this situation, we would

probably need to apply that 90/120 day rule?

MS. HINTZ: That's correct. Yeah.

BD. MEM. LEWIS: Okay. Now, it's really helpful. And I don't know if you were on earlier, but we're trying to explore like, how do we put some contours around this to clarify that certain grazing practices on certain crops may not trigger that 90/120 day rule, and others might actually trigger that 90/120 day rule. And I think it depends on, you know, what you do with the crop afterwards, and how you manage the animals, and what kind of animal they are, and all that kind of stuff. So --

MS. HINTZ: That's right.

BD. MEM. LEWIS: -- we're trying to, like, name the problem first, so we can evaluate what the potential pathways here are. So anyway, I really appreciate you taking --

MS. HINTZ: Yeah. Yeah, and the two things I would just point you to are some language around natural deposition from the animal is first, as opposed to me applying tons of manure to my orchard. That's one difference. The other difference that I would note is my animals are grazing on pasture. So this is not a feedlot, bare ground situation. This is an active sod under a tree canopy. And they're rotated through. And it's just the fact that they're in there longer than the 90. I mean,

okay, I'm on Lake Superior. We have a 90-day growing season, right? So I got a limited window to do stuff.

BD. MEM. LEWIS: Yeah, totally. Okay, great. No, that's really helpful. I'm -- this is great. I really appreciate you taking your time out of your busy schedule to give us some input on this really important topic. Thank you.

MS. HINTZ: Yeah, thank you for taking a look at it.

Any other questions for me?

CHAIR JOHNSON: Any other questions from the Board?

(No response.)

CHAIR JOHNSON: All right, thanks for the great work you're doing, Claire. And thanks for being here.

MS. HINTZ: Thank you all.

CHAIR JOHNSON: Okay, I think we may have one more person we missed earlier, Garth Kahl. Do we have Garth Kahl?

MICHELLE ARSENAULT: Garth is there, Allison. We're just try to get him unmuted here. Garth, if you hit star six on your phone, it might unmute you.

MR. KAHL: Oh, my apologies. I did not -- I thought I was way back in the docket. My apologies.

CHAIR JOHNSON: It's a little wild around here

today, but we're getting everyone in. Go ahead, Garth. Thank you.

MR. KAHL: Okay. Hi, my name is Garth Kahl, and I'm here representing the Organic Integrity Cooperative Guild. OICG is a cooperative of organic compliant professionals providing organic inspection, review, and internal audit services for accredited certifiers and consulting services to current and inspiring certified organic operations.

Thank you for the opportunity to comment, and as always, thanks to NOSB members for your service, and the NOP staff, especially Michelle.

I want to speak today on the CACS proposal, residue testing for a global supply chain, regulation and UREC, and also e-commerce labeling, if I have time.

Residue testing in the global supply chain. The OICG is generally supportive of the current proposal and wishes to thank the members of the Board, both current and former, for the huge amount of work that has gone into this proposal. We do, however, have a few reservations.

UREC. We agree with the subcommittee's preliminary conclusions that UREC and support the proposed updates to the NOP Handbook 2613 from the fall of 2025, i.e. keep UREC, but update improved NOP guidance. While this doesn't represent the end goal, it represents a step in the

right direction. Ultimately, we need well-informed benchmarking studies that inform criteria for the designation of UREC on or by commodity or crop assessment.

What should downstream buyers do or be required to do when they receive a noncompliance notification? We echo the concerns of other commentators who are concerned about enforcement or penalties for buyers acting in good faith. Current UREC language largely affects the producer perspective. We encourage the Board to also explicitly consider the impact of UREC detections on the supply chains of handlers and processors when detection occurs further down the supply chain of custody in the production of processed or handled products.

When residues are detected at a processing or handling facility, consider resolving the noncompliance if evidence demonstrates no failure of the organic system plan and adequate measures are in place to prevent comingling, contamination and fraud. The processor handler should not be held responsible for contamination that occurs outside of its physical or financial custody. The CB should work with upstream CBs to engage further investigation and corrective action. This should be clear in handbook guidance so as to guardrail certifier enforcement.

Testing. We support the idea of guidance directing certifiers to incorporate both risk-based and

random testing. The threat of random testing is a good deterrence measure. We also agree that certifiers should be able to pass on the cost of testing in only the specific instances outlined in the proposal. We believe the NOP should prioritize updating the NOP Guidance 2610 to establish criteria for certifiers in developing risk-based proposals.

And then lastly, on e-commerce, we basically agree with the proposal. However, we would like to recommend that the Program implement rulemaking rather than just guidance because we believe that has more teeth. And also, we would encourage the Program to harmonize with FDA and FTC in doing that.

Thank you.

CHAIR JOHNSON: Nice timing. Thank you.

Any questions from the Board?

(No response.)

CHAIR JOHNSON: All right, thanks for your comments, Garth.

MR. KAHL: Thank you. Have a nice day. Good luck with everything.

CHAIR JOHNSON: You, too.

All right, final call. Charles Benbrook, Drew Cheney, Amy Bruch, Bruce Irlbeck. We'll see if we can slot you all in for Thursday if you haven't been able to make it

back on today.

(No response.)

CHAIR JOHNSON: All right. In that case, that concludes today's public comment webinar. Thanks to everyone who provided comments to the Board today.

We'll reconvene on Thursday, May 7th at noon, Eastern. We'll see you then. Thank you.

6000(Whereupon, at 2:34 p.m., the webinar in the above-entitled matter was adjourned until Thursday, May 7, 2026 at 12:00 p.m., Eastern Standard Time.)

CERTIFICATION

This is to certify that the attached proceeding before the:

NATIONAL ORGANIC STANDARDS BOARD

IN THE MATTER OF: SPRING 2026 NOSB WEBINAR

PLACE: Zoom for Government

DATE: May 5, 2026

was held according to the record, and that this is the original, complete, true and accurate transcript which has been compared to t lished at the hearing.

Elaine M. LaRosee

_____

Elaine M. LaRosee, CDLR

Official Reporter

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In The Matter Of:

NATIONAL ORGANIC STANDARDS BOARD (NOSB)

SPRING 2026 WEBINAR DAY 2

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UNITED STATES DEPARTMENT OF AGRICULTURE

NATIONAL ORGANIC PROGRAM

NATIONAL ORGANIC STANDARDS BOARD (NOSB)

SPRING 2026 WEBINARS

DAY 2

Thursday,

May 7, 2026

Held via Zoom for Government

National Organic Standards Board (NOSB) Members

Allison Johnson, NOSB Chair
Amanda Felder, NOSB Vice Chair
Andrea Hatziyannis, NOSB Secretary
Kathryn Deschenes
Nate Lewis
Cat McCluskey
Dilip Nandwani
Corie Pierce
Franklin Quarcoo
Javier Zamora

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Erin Healy, Division Director
Jared Clark, Assistant Division Director
Andrea Holm, Agricultural Marketing Specialist
Heather Kumar, NOSB Food Technologist
Michelle Arsenault, NOSB Advisory Committee Specialist
Johanna Mirenda, Agricultural Marketing Specialist
Devin Pattillo, Agricultural Marketing Specialist
Jason Edmonson, Agricultural Economist

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P R O C E E D I N G S

(Time: 12:02 p.m. EST)

MS. ARSENAULT: So welcome back everybody who was here with us on Tuesday. And if you're just joining us today, welcome to the second day of the NOSB comment webinars. I have a couple of administrative slides to go over, and then we'll get started.

So you are able to mute and unmute yourself, so we ask that you please stay muted on the phone. We love hearing your dogs and cats and children running around. It's just nice for the speakers if we can keep the background noise to a minimum. And we'll be monitoring on our end for any Zoom bombers. We haven't had them for several years, so hopefully today will be no different.

So the chat is enabled. You should find it in the center of your Zoom taskbar. Yours may be at the bottom, at the top, floating around your screen, so you can chat with each other or relay technical difficulties to NOP using the chat. Chats aren't part of the public record and are not a public comment, and the Board members won't be answering questions in the chat.

Closed captioning is available, so you'll find that widget in your Zoom taskbar. And you can control your own view. You can see the closed captioning or not and change the size of it if you want.

The Raise Hand feature is also in the Zoom taskbar, but please don't raise your hand. All commenters signed up in advance, and those are the people that the Chair will be calling on to speak.

You can also customize your own view. So if you go to the upper right corner in Zoom, you'll see the little View menu there. And you can rearrange what you see on your personal screen, resize things, change from gallery view to speaker view.

You can also exit full screen. When we share slides, it'll take over your entire screen. So you can exit out of there and move things around. And no worries, it won't change the screen for anybody else except you, so don't worry that you're changing it for the whole crowd here.

We're going to spotlight the speaker on my Zoom tile. So we're going to switch over in a few minutes, actually, so you'll be able to see the speaker timer, which will be highlighted and pinned on the screen for everybody, so you won't be able to move that.

And again, if you're having technical problems, you can text Zoom, email Zoom, call Zoom. Usually, if you log out and log back in, it fixes all the problems. Unplug it, and plug it back in.

Also, the webinar is being recorded, and we're

going to have a transcript of the webinar and the meeting next week. Those will be available a couple weeks after the conclusion of the in-person meeting.

All right. Next slide. Speakers. So please make sure that your name is displayed in your video tile so we can locate you when it's your turn to speak. You will be able to unmute yourself when it's your turn to speak.

But if we're having trouble, you may see a pop-up on the screen that the host has asked you to unmute yourself. So if you're having trouble unmuting yourself as well, you can always try *6, which is a toggle. It will mute and unmute you if your button in Zoom is not working.

When you come to the mic, we ask that you state your name and affiliation for the record at the start of your comment. Commenters have three minutes to speak. Then we have a couple of minutes built in for questions from the Board. So when your three minutes are up, a timer will sound. And you'll see the timer counting down in my Zoom tile.

When you hear that beep, we ask that you please finish your sentence. And then at the end of your comment don't run away, because Allison Johnson, the Board Chair, will invite the Board members to ask questions of you.

All right. Now I'm going to turn the mic over to Jared Clark, who is going to welcome everybody to the

meeting.

Jared.

MR. CLARK: Thank you, Michelle.

Welcome back, everyone, to Day 2 of public comment webinars. We continue to be grateful for our ability to engage in these virtual sessions which allow for people to participate from wherever they are. Thank you all again for engaging in this process to shape policy.

Next week we will reconvene in Omaha, Nebraska. The NOP Deputy Administrator and Standards Division Director will provide a program update. The Transition to Organic Partnership Program partner will give a presentation in the Plains region on Tuesday. And the NOSB will also host a panel on organic seed. Check out the NOSB meeting page for details and access information if you're not able to attend in person.

This meeting, like other meetings of the National Organic Standards Board, will be run based on the Federal Advisory Committee Act and the Board's Policy and Procedures Manual. Allison Johnson, our Board Chair, will facilitate this session. We remind everyone that it's an open, transparent process, so we do ask everyone to be respectful of each other.

And I will now hand the mic back to Michelle, who will do a roll call of Board Members. Thank you.

MS. ARSENAULT: Thanks, Jared.

All right. I am going to start with Kathryn Deschenes.

BD. MEM. DESCHENES: Present.

MS. ARSENAULT: Thank you, Kathryn. Welcome.

Amanda Felder?

VICE CHAIR FELDER: Present.

MS. ARSENAULT: Hello, Amanda.

Andrea Hatzianas?

SECRETARY HATZIYANNIS: Present.

MS. ARSENAULT: Hello, Andrea.

Cat McCluskey is going to be with us. I'm just going to check.

Cat, are you there yet?

She had a little bit of a delay in transit and will be joining us soon.

Dilip Nandwani?

BD. MEM. NANDWANI: Yes. Good morning.

MS. ARSENAULT: Hello, Dilip. Good morning.

Corie Pierce?

BD. MEM. PIERCE: I'm here. Thank you.

MS. ARSENAULT: Welcome, Corie. Hello.

Franklin Quarcoo?

BD. MEM. QUARCOO: I'm here.

MS. ARSENAULT: Hello, Franklin.

Javier Zamora?

(No response.)

MS. ARSENAULT: I don't see Javier on the line with us just yet. We are expecting him today. So later, I'll keep an eye out for both Cat and Javier as we move on for the day.

All right. Allison, I'm going to hand the mic over to you to take it away for the rest of the day.

CHAIR JOHNSON: Thanks, Michelle.

Thanks, Jared.

Good morning and afternoon, everyone. Welcome to Day 2 of our Spring 2026 public comments. We really appreciated all the thoughtful comments that came in on Tuesday, and we're looking forward to more today.

So just to reiterate some of the points that Michelle hit on, there's a policy in the Policy and Procedures Manual about public comments. All speakers who will be recognized signed up during the registration period. People must give their name and affiliation for the record at the beginning of their public comment. Proxy speakers are not permitted.

Individuals providing public comment, and everyone, shall refrain from making any personal attacks or remarks that might malign the character of any individual. And members of the public are asked to define clearly and

distinctly the issues they wish to present before the Board. This will give our NOSB members a comprehensible understanding of the speaker's concerns.

I will call on speakers in the order of the schedule, and we'll announce the next person or two so they can prepare. Again, apologies for any mispronouncing. I'll do my best. And please remember to state your name and affiliation, and then we'll start the timer.

Board members will indicate by raising their hand if they have questions, and I will call on them in turn, and only NOSB members are allowed to ask questions.

So, with that, our first speaker.

MS. ARSENAULT: Allison, can I just interrupt you for a second?

CHAIR JOHNSON: Yes.

MS. ARSENAULT: I forgot to test the timer. I just want to make sure you guys can hear it today.

CHAIR JOHNSON: Thank you.

MS. ARSENAULT: All right. I'm going to start countdown from five seconds.

CHAIR JOHNSON: All good.

MS. ARSENAULT: Excellent. Thank you so much.

CHAIR JOHNSON: Thank you, Michelle.

All right. So first up is Harriet Behar, followed by Mike Dill, and Charlotte Vallaeys.

Harriet, kick us off.

MS. BEHAR: Hi. My name is Harriet Behar, and I'm a certified organic grower in Southwest Wisconsin and a consultant to the Organic Farmers Association.

OFA received comments to our yearly policy survey that the current manure interval time between application and crop harvest was preventing livestock from grazing in orchards during the growing season. And after our public comment on this to the NOSB, this was added to your work agenda. Thank you.

We have been in touch with tree and shrub fruit growers, grape growers, and a variety of regenerative permaculture and silviculture organizations to understand the issues better and develop a comprehensive recommendation to the NOSB on why and how to modify the NOP regulations. The Organic Farmers Association written comments provide more detail on this and other topics.

Benefits of livestock in orchards include low-impact mowing, weed and brush control, pest and disease management through eating of larvae, eggs, and disruption of reproductive cycles, improved fertility, more than one enterprise on the same land such as wool, fruit, meat, and eggs, and little to no difference of pathogenic levels between when there's only wildlife and when livestock and wildlife are present, especially when the understory is used

for grazing, meaning it is vegetated.

Our written comments include contact information for a specialist at the FDA who does not see a problem with this system. Both the NOP Final Rule and the Organic Food Production Act refer to the term manure application.

We are suggesting two new definitions to our regulation, one for manure application and one for manure deposits. These definitions were based on NRCS definitions and European Union definitions for these activities.

So here you see it on your screen. I hope that you can see it. I can see it. So the one definition for manure application, the planned placement of livestock waste, solid slurry, or liquid, by broadcasting, injecting, or surface applying to land in order to supply crop nutrients; and manure deposit, the direct excretion of waste products, feces and urine, by animals while on pasture.

And then adding to 205.203 -- I kind of put that whole section in there -- but in large, a new (iv), that raw animal manure, which must be composted, is not allowed unless deposited by grazing animals in vegetated grape vineyards, nut tree orchards, and fruit or shrub orchards, not less than 21 days before harvest of the crop. So that's the interval we're looking at.

Harvested fruit must be hanging from the vines, trees, or shrubs, and nuts harvested from the ground must

have a post-harvest method. OFA and many organic fruit and nut growers look forward to this discussion, and eventually a change to the organic regulation that allows this elegant climate and ecosystem-beneficial system to be approved by the NOP.

CHAIR JOHNSON: Thank you, Harriet. We always appreciate the specific language. It helps us do our job a lot.

Questions from the Board?

Nate.

BD. MEM. LEWIS: Thanks, Harriet. I couldn't agree with you more on the importance of figuring out how to eliminate this barrier from the access to the certification process. And I'm curious if OFA or yourself have done any thinking on recommendations we could do that don't require NOP rulemaking but could accomplish some or all of the same goals. So I think that's what the subcommittee is trying to balance now.

I really appreciate the specific language that lays it out in the regulation. And, as you know, that requires an NOP notice and comment rulemaking. Are there ways we can accomplish some or all of those goals with good guidance documents, clarifications? And I'm curious if you've done any thinking on that side of the equation.

MS. BEHAR: Yeah. So the concern is it's not only

in the regulation, but there's a 60-day interval in the Organic Food Production Act between manure application and manure -- and it's cited in our comments, so you can find it there -- between manure application and harvest of an organic crop. So then the regulations have a 90 and 120 manure application interval.

Now, if you want to try to do a guidance document that does these definitions, so where we then clearly separate an application of manure -- which we can't change that interval between manure application without some sort of rulemaking or some agreement that manure application means this definition that I have put here -- and manure deposit means something different. So I guess I would leave that up to the NOP.

I am not a lawyer. I am not a rule maker. I have read the regulations and tried the best I could to make it clear and to provide you guys with some basis for your wordsmithing. But I am concerned about its presence in the Organic Food Production Act as manure application, but there is no definition currently for what that means. So if the National Organic Program feels that they can accomplish it without a change to the regulation, that sounds good to me.

CHAIR JOHNSON: Thank you. Any other questions?

(No response.)

CHAIR JOHNSON: All right. Thanks, Harriet.

Next up, we have Mike Dill, followed by Charlotte Vallaeys, and then Bill Wolf.

Go ahead, Mike.

MR. DILL: All right. Good morning, good afternoon, NOSB members. My name is Mike Dill, and I'm representing the Organic Produce Wholesalers Coalition, or OPWC. We're a group of seven certified organic businesses that distribute fresh organic produce to eaters across the country.

OPWC strongly urges the Board to recommend to the Program a regulatory solution to the e-commerce petition. Governing how products are represented in the marketplace is not a job for a non-binding and unenforceable guidance document, which is essentially the equivalent of a "please consider doing this" type memo.

In our written comments, we have laid out a simple regulatory approach. By amending the definition of retail establishment and one addition to Section 205.300 -- the section of the Rule appropriately titled Use of the Term Organic -- will easily make it clear that all retailers involved in business to consumer, or B2C commerce, have legal responsibility when it comes to representing organic products. We urge all Board members to review the approach we laid out and vote to bring this topic back to the next meeting with a regulatory based proposal.

I'd also like to make a more general comment about sanitizers used in organic handling. As you know, sanitation is only regulated in two ways for organic handling operations. One, by a single sentence in Section 205.272 which states that a handler is required to protect products from contact with prohibited substances, and secondly, the section of the National List titled Substances Allowed as Ingredients In or On Processed Products.

This means that the organic community is asked the same types of questions regarding sanitizers at each Sunset. Are there organic alternatives? Do we need the handful of sanitizers currently allowed? When and how are they used? We do that every five years. It's time for a different approach. We don't need repetitive review of materials whose sole function is to prevent human illness and death.

Instead, we need standards that are appropriate to the various management practices for cleaning, sanitation, and disinfection as they relate to direct application on product, food contact surfaces, non-food contact surfaces, environmental sanitation, et cetera. Until then, when evaluating these materials, we caution against framing the central question as whether these materials are needed by the organic industry.

For sanitizers and disinfectants, the answer is unequivocally yes. Sanitizers are fundamental and

irreplaceable tools required to protect against deadly biological contaminants and are necessary to ensure compliance with the federal food safety regulations. This is different from why we need and how we use pest lures or natural flavors.

OPWC supports the continued listing of materials used as sanitizers, and encourages the NOSB to consider their role within the broader context of food safety. Every certified operation, aside from brokers and marketers, perform handling activities such as cleaning and sanitation, yet the Rule doesn't have a section for it.

This is one example of why OPWC has routinely advocated for the development of handling practice standards for which we have a concept document that includes a draft version of standards. I'm happy to share it again. Thank you.

CHAIR JOHNSON: Thank you, Mike.

Questions from the Board?

(No response.)

CHAIR JOHNSON: All right. Thanks for your comments.

MR. DILL: Thank you.

CHAIR JOHNSON: Next up is Charlotte Vallaeys, followed by Bill Wolf, and then Katie Jagger.

Charlotte.

MS. VALLAEYS: Good afternoon, good morning. My name is Charlotte Vallaeys, and I'm speaking on behalf of the Organic Produce Wholesalers Coalition. OPWC comprises seven certified organic produce distributors.

On the residue testing proposal, OPWC urges the Board to delay voting. First, given the central role certifiers play under the current framework for residue testing, the Board shouldn't vote when the certifier seat is unfilled.

Second, we urge the Board to delay voting until the proposal contains a more developed definition and framework for how risks should be determined and applied. Without clear, consistent criteria, implementation will likely vary across certifiers, and testing decisions will likely be shaped by logistical or cost constraints rather than a coherent assessment of risk.

More importantly, we continue to urge the Board, as we have in our previous comments, to consider an alternative approach that would shift residue testing from certifiers to the NOP's Compliance Division. Under this approach, the NOP would oversee sampling, testing, communication, and notification across the full population of certified operations.

This centralized approach would allow risk to be assessed at the system level, promote consistency in how

testing is conducted and how results are handled, and allow for alignment of testing with enforcement priorities, strengthening its role as a tool for detecting and deterring fraud. A centralized model would also allow for a more equitable distribution of costs.

As the proposal currently notes, testing costs are borne by certifiers and passed on to certified operations, regardless of relative risk. Centralization would enable more strategic allocation of resources and create a pathway for federal funding. A centralized approach would also better support downstream notification and could leverage existing recall and traceability systems rather than creating a parallel structure.

Furthermore, OPWC urges the Board to consider that downstream notification should be designed with the operational realities of the fresh produce supply chain in mind, where products often move from harvest to sale within days, while testing can take weeks. Notification shouldn't focus on product removal, but on clear communications of compliance outcomes so that buyers can make informed future decisions.

We urge the Board to prepare two positions for the next meeting, including a minority position proposing that NOP handle residue testing. This would allow the community to discuss this alternative approach to centralization.

Finally, we support the addition to the PPM, addressing the removal of non-participating Board members. But we urge the Board to add that any decision by the Chair to send a letter to the Secretary be made with the approval of the executive committee to prevent unilateral action by the Board Chair. This is an important change that should be added during the meeting before voting on the proposal. Thank you.

CHAIR JOHNSON: Questions from the Board?

(No response.)

CHAIR JOHNSON: All right. Thanks, Charlotte.

MS. VALLAEYS: Thank you.

CHAIR JOHNSON: Next up, we have Bill Wolf, followed by Katie Jagger, and then Seva Water.

Bill, go ahead.

MR. WOLF: I'm Bill Wolf with Wolf & Associates and Second Star Farm, as well as past president of OMRI and OTA. Thanks to the NOSB and the NOP for all your great work under these challenging times.

I have a lot to share, but -- spoiler alert -- my comments today will focus on how certification for small growers has become so much harder over the last 30-plus years and what we can do to make organic more friendly for low-risk producers. This topic impacts many of the topics that you are working on.

Slide two. Wolf & Associates covers a broad range of services. Slide 3. Briefly, I want to remind you about Oliver the Earthworm becoming the de facto mascot of NOSB and NOP in 2009 at the launch of the People's Garden. But, Slide 4, Oliver needs our help keeping NOP in DC and keeping a strong National Organic Program. There's a risk that he's going to be homeless.

Slide 5. Please see our Earthworm-approved written comments on many topics. I'm not going to be able to go into any of these comments, but I'd like you to review them when you have an opportunity.

Slide 6. This begins really what I want to talk about. This is some pictures from my home farm. And two years ago, we began a project to certify my home farm to see what we could learn to make it easier to bring organic farmers back to certification. Second Star is exempt under the $5,000 rule because it's a research and education, and everything we produce is given away.

Slide 7. The initial findings from that work provided insights into a number of things. Focus has shifted from improving soil health and producing vibrant crops and healthy animals to basically getting the farmer to prove a negative of not violating the laws. So we compared several certifications, Naturally Grown to NOP, and a new Common OSP, to the relatively standard certifier program.

We learned a lot.

Of note, I'd say the National List has really become somewhat of a boondoggle not really intended by OFPA, especially documentation of everything from inputs to organic seeds. It's mind boggling what the certifiers have to go through and what the farmers have to go through. I wish I had time to tell you about some of those experiences such as magnesium sulfate.

Slide 8. Oh dear.

CHAIR JOHNSON: Thanks Bill.

MR. DILL: I can't see the timer.

CHAIR JOHNSON: It just buzzed.

Questions from the Board?

Amanda.

VICE CHAIR FELDER: Yeah. Hey Bill, I am a supporter of the Common OSP, but my understanding is it's ultimately up to certifiers whether or not they adopt it. So how do you propose that OSP encourages broader adoption of using Common OSP framework?

MR. DILL: Well, what we learned from the experience was that a sophisticated program provides dropdown opportunities for a certified entity to quickly fill out the forms and avoid having to answer questions that aren't relevant to their operation. So it's really important to facilitate making it simpler. I mean, that's

the next step.

And what NOP really can do is encourage Common OSPs as an accepted format. And that, I understand, was mentioned several times by Dr. Tucker in the last two meetings. So I'm optimistic that that will happen.

Our observations of the OSP was that when we got certified to Naturally Grown, it was like what we experienced back in the 1980s and early 90s. And basically, Naturally Grown has maintained a review of soil practices, and simply had an affidavit that you're following organic practices and not using any prohibited substances.

Whereas when we were reviewed by the certifier -- and this would be true whether it's using a Common OSP or the certifier's OSP format -- all of the attention was on materials inputs and review of those and a lot of paperwork and very little time spent out in the field. So that's really kind of an overview of the challenge.

I think we need to streamline and simplify to the greatest extent possible not only about the OSP, but about having a common, a unified seed database, and streamlining the input system review. MROs were not foreseen in the way they --

CHAIR JOHNSON: I'm going to cut you off there.

MR. DILL: Yeah, all right. Okay. Sorry.

CHAIR JOHNSON: I think that was a good answer to

end the discussion. Thank you.

Nate, go ahead.

BD. MEM. LEWIS: Thanks, Bill. I want to hear more a little bit of your experience on annotations. We've started a new process on the Board to bring forward annotation recommendations in parallel with the Sunset Review, and we're actually going to hopefully codify that in the Policy and Procedures Manual at the upcoming meeting. So you mentioned something about an experience with annotations, and I'd love you to expand upon that if you can briefly.

MR. WOLF: Sure. Well, I think what's -- first of all, annotations as referenced in OFPA were simply identifying specific use or application. That was what the law specified. And that was actually how most of the original National -- most of the Materials Lists operated pre-implementation of the National Organic Program in 2002.

I actually was involved in creating some of those lists back in the 80s and 90s, and it wasn't that complicated. If a material was allowed for a specific use, that was the end of the conversation, essentially. Right now the National List is divided -- has become really divided into how it's made and then how it's used. And it's become way more complicated, and it's where most of the certifiers and the certified entities spend a lot of their

time.

Epsom salts was approved by the NOSB as a synthetic on the National List in 1995. I was at the meeting and testified about it. And it basically followed the same principle that any specialty amendment, magnesium sulfate, require a soil test. Well, taking a soil test simply meant you needed to make sure that you weren't going to create too much excess or too big an imbalance.

In our first inspection, we were told that we were using magnesium sulfate incorrectly, that we were applying magnesium sulfate -- we were told it's a non-compliance, and it was written up as a non-compliance. The detail of that, when we explained how we were using it, wasn't accepted, even though what we were doing follows classic soil management plans. And that meant we were being told what to do by the certifier rather than by soil experts. And that was caused by an annotation that could be interpreted many different ways.

I hope that helps. Yeah, I think digging into the annotations and simplifying them is critical.

CHAIR JOHNSON: Thank you for your comments.

Any other questions from the Board?

(No response.)

CHAIR JOHNSON: All right. Thanks, Bill.

MR. WOLF: Thank you. I appreciate it.

CHAIR JOHNSON: Next up is Katie Jagger, followed by Seva Water, and then Jono Neiger.

Katie, do we have you?

MS. ARSENAULT: She does not appear to be on the line with us, Allison.

CHAIR JOHNSON: Did you say doesn't appear or does appear?

MS. ARSENAULT: Does not appear to be on the line with us.

CHAIR JOHNSON: All right. We'll come back to Katie.

Seva Water.

MS. WATER: Good day, can you hear me?

CHAIR JOHNSON: Yes, sounds great.

MS. WATER: I'll turn my video on. There we go.

Hi, my name is Seva Water. I farm with my family at Nutwood Farm in Cummington, Massachusetts, and I'm commenting today on regulations around grazing livestock in fruit and nut orchards that Harriet spoke to earlier.

We are a seven-acre agroforestry farm producing hazelnuts, chestnuts, stone fruit, and meat and eggs from our small flock of sheep, ducks, and geese. We have always managed our land holistically without the use of chemicals, pesticides, or fertilizers.

Last year, we began the process of organic

certification through the TOPP Northeast Mentorship Program. But we were surprised and disappointed to learn that the NOP did not allow the grazing of livestock in orchard production, even though the majority of our nuts and fruits are hand harvested and never touch the ground.

So we decided not to go through with organic certification because we believe the value of raising our animals in an integrated silvopasture agroforestry system was greater for both the health of our animals and the trees when managed together rather than separately.

Intensive rotational grazing has been shown to build topsoil in perennial pastures faster than any other method. And grazing between trees reduces our labor and feed costs, and helps us to keep pests and diseases in check and produce more food on less land. Because we sell direct to consumer, we can explain our growing practices to our customers who are, by the way, universally in favor of supporting diversified agroforestry practitioners.

Reducing the 90 to 120 day manure application rule to a much shorter 14 to 21 day withdrawal period for integrated perennial crop and animal grazing systems would encourage more producers like ourselves to pursue organic certification. So I'm just asking today that you please consider bringing organic and agroforestry together and uniting these two powerful movements to improve and restore

the health of livestock, croplands, and small farm futures across the country. Thank you.

CHAIR JOHNSON: Questions from the Board?

(No response.)

CHAIR JOHNSON: I have one. We've heard 21 days as a window. You said 14 to 21, but also that you hand harvest. Do you think we need a time window if animals are just naturally depositing manure in orchards? Do we need a minimum?

MS. WATER: I would say zero, but I think when we were in discussions with Harriet and some of our other peers, we thought that might scare people too much. So I think it depends on the scale, and a lot depends on how you're harvesting and your land management practices. So it could vary quite a bit from the farm, but for our farm, zero days would be fine. We don't see any conflict at all.

CHAIR JOHNSON: Would you have challenges with keeping the animals out for 21 days before you were harvesting? Like, is there still a challenge there if you did have a 21-day minimum?

MS. WATER: Not necessarily, because we have many different crops growing, we could move them to a crop that's not being harvested at that time. So that could be doable. But 90 to 120 days is our entire grazing season.

CHAIR JOHNSON: Okay. Any other questions from

the Board?

(No response.)

CHAIR JOHNSON: Thanks so much for taking the time to be here.

MS. WATER: Thank you.

CHAIR JOHNSON: All right. Next up is Jono Neiger, then Jackie DeMinter, and Bruce Lundberg.

Jono, go ahead.

MR. NEIGER: Okay. Hi everybody. Thanks for having me here. I'm Jono Neiger. I'm with Big River Chestnuts, and I also do farm planning and consulting with Regenerative Design Group, and we're in Western Massachusetts. And I'm here speaking also with Seva and Harriet on the 90 to 120 day manure rule or the exclusion period.

We grow chestnuts primarily, but other crops, small fruit and other nuts as well. We grow on about 85 acres, though we're planting more acreage this year, probably another 10 acres in nut trees.

We have been certified organic in the past for a number of years. And I guess I would characterize us as beyond organic. We use really best practices, a lot of regenerative practices -- inoculating the soil and cover crops -- and the best practices that we can find, including agroforestry, which we use alley cropping. We're growing

berries between rows of nut trees.

And then a few years ago, we started incorporating silvopasture, collaborating with some grazer partners, and found that with the manure exclusion, with the exclusion rule, it was not feasible to be enrolled in organics and do silvopasture because it would limit the time period that we could graze so significantly.

And so my feeling is that the silvopasture and integrated agroforestry, integrated agriculture, was more important. And we left the organic program -- sadly, because I'm a big believer in it -- because I really would like to, but I also am a believer in this kind of integrated agroforestry.

So we have not been certified for a number of years because of this 90 to 120 day rule. So I really urge reconsideration of it. I think that it was meant to apply in a different situation and not for grazing.

Chestnuts in particular have a shell. They do fall to the ground, but they have a shell, so there's no raw nut contact. And then we go through a washing, heat treatment procedure, and then the nuts are cooked. So there really is very, very minimal to zero chance of a pathogen vector in the case of chestnuts and many of the other hard-shelled nuts that we grow, hickories, hazelnuts, et cetera.

So I just really recommend considering reducing

this and making silvopasture more feasible. I know there's many, many people who are taking up silvopasture, and it's something that could be connected to organic.

CHAIR JOHNSON: Thank you.

Questions from the Board?

(No response.)

CHAIR JOHNSON: All right. Thanks for being here, Jono. I appreciate your comments.

MR. NEIGER: Thank you.

CHAIR JOHNSON: All right. Next up we have Jackie DeMinter, followed by Bryce Lundberg, and then Leslie Touzeau.

Jackie, go ahead.

MS. DEMINTER: Thank you for the opportunity to comment. I'm Jackie DeMinter, the Certification Services Director at MOSA. We certify over 1750 organic operations in the U.S. I'll comment on residue testing, but first I want to speak on the importance of stability.

Jenny Tucker highlighted this in a recent NOP training, and NOC and other organizations spoke about it on Tuesday. Having commented at about 20 years of both spring and fall meetings, I have witnessed the incredible growth in professionalism in the organic industry. We currently see reductions and downsizing at the NOP, and we fear it will hinder continued growth. We want to see bolstering of the

organic industry and program.

Our MOSA mission is to promote organic integrity through practical, reliable, and friendly certification services. Our vision: a thriving organic world. Our values: service, relationships, quality and optimism. Of these values, human connections and ethical interactions stand out for me, and our optimism that our organic world must have balance in order to thrive.

To preserve our organic industry, we need sound decision-making and process improvement. Specifically, we must expedite cost share funding and provide resources that incentivize remaining in the organic sector. Cost share has historically served an essential financial component for certified operation, and signals confidence in the organic sector.

Furthermore, the NOSB vacancies must be filled. We appreciate Kyla's service and recognize her important work advancing recommendations, which is why it is troubling that the certifier seat is empty.

All residue testing rulemaking should proceed on a single timeline. We agree the 5% testing requirement should be both risk-based and random. Please provide additional guidance on accepted tests for non-pesticidal contaminants.

We support cost sharing for required testing provided it only applies when investigations find

intentional prohibited input use, and explicitly excludes external factors like overspray, and only requires clients to notify direct buyers when residues exceed action thresholds or are willful violations.

For UREC, we strongly recommend adopting the ACA best practices approach which determines compliance based on whether detected residues exceed 5% of the applicable EPA tolerance. Residues below this threshold still warrant investigation and corrective action but do not automatically result in declassification of the product as organic or loss of the land status. Any non-compliance or adverse action should be determined based on whether the contamination resulted from an intentional, preventable, accidental, drift-related, or confirmed UREC event.

In closing, we emphasize the need for stability and realistic expectations to grow the organic sector. Filling Board vacancies is vital to maintaining a balanced perspective. Thank you, NOSB, for your hard work and for the opportunity to comment.

CHAIR JOHNSON: Thanks, Jackie.

Questions from the Board?

(No response.)

CHAIR JOHNSON: Thank you.

All right. Next up, we have Bryce Lundberg, followed by Leslie Touzea, and then Andrii Kravchenko.

Bryce, go ahead.

MR. LUNDBERG: I'd like to thank the NOSB for this time. I'll be speaking in favor of copper sulfate listing.

I'm Bryce Lundberg, a farmer and family member with Lundberg Family Farms, a multi-generation family farm in beautiful Richvale, Northern California. Our family started growing organic rice in 1969. We've been working hard to improve organic rice farming practices since then.

We seek alternatives to copper sulfate, but at this time we still need it. Our experience leads us to believe copper sulfate is safe. I've never seen an impact to birds, fish, frogs, snakes, grass weeds or aquatic weeds. When required, we apply small amounts, and it is only active for a short period of time.

Copper sulfate use is consistent with organic standards in the U.S. and internationally. The EU, Japan, and other countries allow copper sulfate as Bordeaux, and do not prohibit it for rice. With this in mind, we request renewal of copper sulfate to control algae, tadpole shrimp, and disease.

We prefer not to use copper sulfate, using it only as needed to save a newly planted rice crop. Our goal is for rice seeds to germinate quickly and turn from white to green before shrimp eggs hatch. The rice is safe from damage by shrimp if chlorophyll develops before shrimp

hatch.

If newly seeded rice needs protection from algae or shrimp, we apply copper sulfate as Bordeaux, as an essential input. We have tried drill seeding and transplanting. Neither planting method worked. When drill seeded, weed pressure is insurmountable. The rice could not compete with the weeds.

We tried mechanized transplanting. The rice plants did not establish before weeds overtook the rice. Most of the growing regions in the world that transplant do so in shallow water and rely on hand weeding or herbicides.

We test our soil to monitor soil health, including copper, and provide tests to our inspector. Our inspector reviews our copper and soil tests and copper sulfate use to confirm NOP compliance.

Copper levels go up and down. Copper levels increase and decrease and are not specifically correlated to copper sulfate use. Copper levels in compost and manure applications can be equal to or exceed copper levels in copper sulfate applications. It is good to remember that copper is an essential plant nutrient. Copper is present in every healthy soil.

Every organic rice farmer has a different rotation plan, but most growers will grow organic rice in successive years, at least once in a seven-year period. The NOP allows

copper sulfate to be used for disease, algae, and shrimp. If an organic rice grower uses copper sulfate in successive years, it must be used in accordance with NOP requirements.

Copper sulfate is allowed in organic around the world. The EU and other countries list it approved as a Bordeaux mix, and do not prohibit it for rice. Every organic farm and region face different conditions and need tools to enable them to carefully respond to challenges. We request the NOSB approve copper sulfate for algae, tadpole, shrimp, and disease.

CHAIR JOHNSON: Nate, go ahead.

BD. MEM. LEWIS: Thanks, Bryce. I really appreciate your comments. We heard from an earlier commenter about annotations and being sensitive to the burden that those annotations may place on a grower who needs to justify the use. Can you just talk a little bit more about your procedure for complying with the annotation for copper for rice which is like -- when you look at the National List, it's like one of the most lengthy and burdensome annotations we have for that on growers.

MR. LUNDBERG: Yeah.

BD. MEM. LEWIS: And so anyway, I just want to --

MR. LUNDBERG: Well, I think it was partly my fault, Nate. You know, when this was being applied back in -- a long time ago, I gave testimony to the NOSB, and one of

the NOSB members asked, well, how often do you use it? And I would say probably on average about every other year. And then bang, if an annotation didn't come out and says you can use it every other year. And, you know, nobody farms on average, right?

My brother and I did an analysis, and in the last five years we've used it about 36% of the time. And then so that's less than 50%. But there are times when it's used successively.

So to get to your question, we comply with the NOSB. The NOSB -- or NOP -- allows for it for disease, shrimp, and for algae. And all three of those could be an option in rice, right? And so if it's used for disease, there's no annotation that applies. If it's used for shrimp, then you've got to use it every other year if it's for algae.

Do we think it's a good annotation? No, because farmers don't farm on average, right? And if that was the reason for the annotation -- but it's there and it's -- I don't think it's that easy to change an annotation, so we'll comply.

CHAIR JOHNSON: All right. So I just made a note to change the annotation to allow it one third of the time -- no, just kidding.

MR. LUNDBERG: Oh, yeah.

CHAIR JOHNSON: Did you all follow me?

MR. LUNDBERG: Slow ball. You got to be careful what you say, don't you, Allison? Sorry for that.

BD. MEM. LEWIS: No, that's interesting history. And yeah, just to follow up on another alternative technique. I was just in Italy at an organic rice farm there, and I think there's a number of factors in place, but they're not using copper.

It didn't sound like they had tadpole shrimp present, or that just wasn't something they experienced, but they also were using water and flooding the fields in a much different way than I understand happens in California. And they were flooding their fields like three or four times throughout the season to allow for certain activities to occur.

Is that a possibility in California? I think what they were doing was timing the flooding of fields around that seed germination chlorophyll transition that you're talking about, and I'm just curious if that's something that's on the horizon for you.

MR. LUNDBERG: Well, we've tried several methods of planting, right? And weeds are by far the biggest issue, right? Weeds will overtake a field, just there's so many weed seeds in our fields, right?

And so drowning weeds -- drowning grass weeds in

water -- is the key. It doesn't rain here in the summer, and so we can dry fields up, and we do for 30 days in the summer to handle the aquatic weeds. But it's that first 10 days when, after planting, that the rice is vulnerable to these issues. You've got to get the rice through the water.

We don't see drill seeded rice as an option at this point for us. It just, the weeds are just insurmountable. Even when you precision plant, and then you have precision weeding in between, the amount of weeds that are still in that same row as the rice just blow up. And so there are different parts of the world that can do things differently, but that is still the system now that has worked for us.

BD. MEM. LEWIS: Okay. Thank you very much. I appreciate it, Bryce.

MR. LUNDBERG: Thank you for your questions.

CHAIR JOHNSON: Any other questions from the Board?

(No response.)

CHAIR JOHNSON: All right. Thanks, Bryce.

MR. LUNDBERG: Thanks so much.

CHAIR JOHNSON: Next up we have Leslie Touzeau, then Andrii Kravchenko, then Doug Currier.

Leslie, go for it.

MS. TOUZEAU: Thank you, and good morning and

afternoon Members of the Board. My name is Leslie Touzeau, and I am the Quality and Accreditation Manager at Quality Certification Services. QCS is a mid-size certifier operating across the U.S. and in seven foreign countries. Thank you for the opportunity to provide comments and for your continued work supporting the integrity of the organic label.

First, we thank the CACS Subcommittee for its thoughtful work on the residue testing proposal. QCS supports requiring both risk-based and random sampling for certifier residue testing programs, while also allowing for flexibility to determine approaches at a certifier's discretion. We encourage the NOP to provide clear guidance on risk criteria to improve consistency across certifiers.

We support transparency in testing results, and we support the intention behind downstream notification of noncompliant products, while encouraging careful consideration of the practical complexities of implementation. We also support continued refinement of policies related to UREC, with emphasis on identifying sources of residues and ensuring enforcement is directed at clearly noncompliant operations. Please see our written comments for full details.

QCS supports the relisting of Sunset materials, and emphasizes that improved materials remain essential

tools for organic producers and handlers, allowing them to respond to real-world challenges while maintaining compliance and economic viability.

QCS also supports the Handling Subcommittee's proposal to reclassify sodium bicarbonate produced from sodium carbonate as synthetic, and to add trona ore processed sodium bicarbonate to 205.605(b). We do note that non-synthetic sodium bicarbonate is also used in organic crop production, so this reclassification will likely have at least some impact on the availability of crop inputs.

Regarding chlorine materials in livestock water, QCS values clarity and consistency, and supports the explicit allowance of chlorine as a livestock drinking water treatment. We question whether amending the National List is the appropriate approach as this listing could unintentionally expand certifier and producer responsibilities for testing and reviewing other water treatments. We feel additional guidance on water treatments in general would better promote consistency without altering the scope of material review.

Finally, we wish to recognize the critical role of the Board in maintaining a strong and credible organic label. The Board provides a vital forum where technical expertise and stakeholder experience come together to shape the future of organic. Your work ensures that organic

standards remain relevant and responsive to technological innovation, changes in the marketplace, emerging threats to organic integrity, and the evolving needs of producers and handlers.

A complete and representative Board, along with a fully staffed NOP, is essential to sustaining this work. We respectfully encourage continued support for the Board and timely appointment of remaining members so that all critical perspectives are represented. Thank you for your time and consideration.

CHAIR JOHNSON: Thank you, Leslie.

Questions from the Board?

Nate.

BD. MEM. LEWIS: Thanks, Leslie. Can you walk me through -- we've heard a number of commenters express the sort of hypothetical concern around chlorine drinking water proposal and the testing piece, and I don't get it. Why would this be different than like chlorine to sanitize the pots and pans? Or, I don't know, we're in livestock. So can you walk me through -- I just want to make sure, I don't want to add more testing, so I'm sensitive to that. But I don't get it. Can you help me understand?

MS. TOUZEAU: Sure, I will do my best to help you understand, Nate. This is something that we talked about with my policy team quite a bit. And ultimately we came

down to the comments that we submitted and that I've discussed here briefly because, you know, we're talking about drinking water treatments, and typically we consider drinking water treatments to be outside of the scope of Material Review. We allow materials that are used to bring water up to potability standards without Material Review.

Now, I know that livestock drinking water itself doesn't have to be potable water the way that water in contact with -- water for human consumption or in contact with organics product needs to be. But we just want to make sure that -- and I talk about this a bit more in our written comments -- but that adding livestock drinking water specifically to the annotation doesn't unintentionally signal that all drinking water treatments now require some kind of material approval.

Or if there's like a coagulant or flocculant or a pH adjuster that's added to a municipal water source, that we are then required to be testing for that to make sure that any of those materials found in water that would be used for livestock drinking water, that we're not having to make sure that we are approving those and that those materials also are required to be listed on the National List. I think that is the concern and the discussion with my team about kind of the difference between water treatments and organic inputs. Is that --

BD. MEM. LEWIS: Yeah, that's helpful. I appreciate it.

MS. TOUZEAU: Sure.

BD. MEM. LEWIS: Yeah, well, I'll dive deeper into the written comments and, yeah, I think you're raising some important concerns. So I appreciate it.

CHAIR JOHNSON: Any other questions from the Board?

(No response.)

CHAIR JOHNSON: All right. Thanks for your comments.

MS. TOUZEAU: Thank you.

CHAIR JOHNSON: Next up we have Andrii Kravchenko, followed by Doug Currier, and then we'll take a break.

Go ahead, Andrii.

MR. KRAVCHENKO: Hello. Good afternoon, Chairs and Members of the Board. My name is Andrii Kravchenko. I'm the founder of AVIROCK LLC, a U.S. entity developing scalable, cross-standard organic compliance protocols and technical training programs for U.S. organic producers, certifying agents, and cooperatives. I'm commenting on the CACS discussion document on Residue Testing for a Global Supply Chain, Docket AMS-NOP-25-0914.

I've spent more than ten years working in organic agricultural compliance, including dual NOP and Naturland

certification of commercial grain and oilseed operations. Section 205.670 was built as a domestic integrity tool, but in 2026, U.S. organic testing records are no longer just domestic. They travel with the product into the European Union under Regulation 2018/848, into Japan under JAS, and into Switzerland under BioSuisse.

These systems apply different detection thresholds, different sampling protocols, and different response requirements. The result: a single lot of U.S. organic product can be tested four or more times against four different frameworks.

A detection classified as UREC domestically can still trigger a stop-sale in Japan, loss of Naturland certification in Germany, or additional sampling at the EU border. This is a national supply chain resilience issue, not only a technical one.

First, amend the preamble to Section 205.670 to explicitly acknowledge that U.S. testing records function as evidence for foreign authorities. This costs nothing. It adds no obligation. It aligns interpretation.

Second, refine the UREC definition to distinguish between contamination unavoidable under U.S. production conditions, which should stay, and detection thresholds, which should reference the more stringent of the importing authority's method-specific limit of quantification or the

NOP's own guidance.

Third, direct NOP and CACS to develop documentation standards for UREC determinations -- analytical method, contamination pathway investigation, operator corrective action, and lot traceability -- sufficient to substantiate those determinations to foreign authorities on request.

These three steps reinforce the integrity of U.S. certification without adding substantive obligations beyond what Strengthening Organic Enforcement already contemplates. They protect U.S. exporters, and they protect the resilience of the U.S. organic sector. Thank you for your time.

CHAIR JOHNSON: Thank you.

Questions from the Board?

(No response.)

CHAIR JOHNSON: All right. Thanks so much for your comments.

All right. Doug Currier, you are up.

MR. CURRIER: Great. Thank you. Hi everyone. My name is Doug Currier. I'm the technical director at the Organic Materials Review Institute where the mission is to cultivate organic integrity through knowledge and trust. As a 501(c)(3), OMRI is in the public domain and is not owned by any individuals.

I want to begin by thanking the Livestock

Subcommittee for taking on our petition to clarify the use of chlorine materials. Thanks to the NOP as well for facilitating the petition process. We were a first-time petitioner, and the petition process seems to be working as intended, based on our experience.

I know there are other standards in organic livestock production to consider, discuss, and develop, and some may see that time spent considering and discussing a clarification on the allowed uses of chlorine to be low priority. But having clarification through rulemaking will address an inconsistency and resolve an ongoing materials policy issue.

The recommendation to amend the annotation will make it clear that chlorine materials are allowed as direct livestock drinking water treatments. If NOSB votes in favor, and rulemaking is completed, both operators and certifiers will have a clear standard to work with.

I honestly just thought last night about the PAA annotation. So PAA, parasitic acid, is another direct drinking water treatment, but perhaps that's a comment best said in 2029.

Before I shift my comment to the crops inputs, I want to pose two questions. Is it really important to make it clear in the standard that the electrolytes calcium boroglucanate and calcium propionate are only allowed for

the treatment of milk fever, and does the standard make it clear enough that the administration of these two materials is allowed through an IV?

So I want to take a quick moment to draw attention to our written comment about magnesium oxide, which is allowed for viscosity control in clay humate solutions. Manufacturers of liquid humate products are a group that we actually interact with quite a lot, and we're planning to ask this group to speak to the need for magnesium oxide as a viscosity control. In our experience, there is not a high frequency of use for this material. Many of these liquid humate solutions are treated with an alkali substance, which is a common industry practice.

Based on the 2021 TR, increasing the pH of the clay humate solution results in forces that prevent aggregation of clay and humate particles. Highly aggregated materials can thicken, and call for viscosity control. If a solution is already less aggregated through the addition of an alkali, a question then is would a viscosity control be needed?

And one final note, I'm going to read this because it's important. The Organic Materials Review Institute is turning 30 next year. There will be a party, and you are all invited. Thanks.

CHAIR JOHNSON: Appreciate the invite.

Nate, go ahead.

BD. MEM. LEWIS: I'm going to be a little bit of a broken record on the chlorine. Anyway, I want to get it right. Do you have any comments on the testing hypothetical that's been raised from a number of commenters?

MR. CURRIER: Yeah, I don't really. But I would like to understand more because the annotation does require that testing now. So whenever you're using chlorine materials as an equipment sanitizer, there's that requirement to test that the water is meeting a Safe Drinking Water Act threshold. And so the same would be true for the livestock drinking water.

So how operators are ensuring that now, I am actually not sure, but there is that testing requirement now that would presumably translate to the livestock drinking water. So that's kind of my take on that.

BD. MEM. LEWIS: Yeah, do you think that it also could be done through just like proper label -- following label instructions, right?

MR. CURRIER: Sure.

BD. MEM. LEWIS: Like doing it on the front end, and documenting that, like you wouldn't need to then test on the backend presumably, right?

MR. CURRIER: Sure. Right, right, yeah.

BD. MEM. LEWIS: All right. Yeah, I have these

similar sets of questions. So anyway, just getting all the opinions out there. I appreciate it.

MR. CURRIER: Yeah, and if I could real quickly, just the onsite delivery of a chlorine material I think is different than a municipal application as well. So I think that's what we're talking about here is onsite including of these materials.

CHAIR JOHNSON: Any other questions from the Board?

(No response.)

CHAIR JOHNSON: All right. Thanks Doug.

MR. CURRIER: Yep, thank you.

CHAIR JOHNSON: We are due for a break now, and to make math easy let's come back at the half hour.

(Whereupon, at 1:07 p.m., a recess was taken.)

CHAIR JOHNSON: Welcome back. Apologies to our next speaker that I didn't see your name before the break, but the way you saw them on the schedule I knew that you were coming up. We'll start with Tina Ellor, followed by Heather Spalding, and Nate Powell-Palm.

Tina, go ahead.

MS. ELLOR: Well, hello. Nice to see so many faces and names that I recognize. My name is Tina Ellor. I'm a mycologist. I work for Phillips Mushroom Farms in beautiful Kennett Square, Pennsylvania. I'll say right away

that I'm not an expert on either chitosan or winemaking, although I could have a PhD in wine consumption, an honorary one at least.

So first of all, thank you for your service. I did sit in your seat, gosh, close to 15 years ago. It's a tough job and one that I think is getting even tougher as there's just more and more information available. And it's been my experience, and I think this is true, that there's no one person or even 15 people who can possibly have the expertise and knowledge that it takes to make these very difficult decisions. So I really appreciate the hard work.

I'm here today to urge you to consider putting chitosan on the National List as a processing aid for organic wine production. Mushroom growers are already the ultimate recyclers, as you know.

So those of you who know me, I am a mushroom geek, and there is a good connection between chitosan, of course, and mushrooms. So mushroom growers are already the ultimate recyclers. We take waste of agriculture and forestry, and we turn them into this wonderful protein, nutritious, delicious food in the form of mushrooms.

Chitosan can be produced from our mushroom stumps, and we've seen a lot of interest in the past couple of years from chitosan producers to take our organic mushroom stumps and make them into all kinds of things. We're actually even

working with one chitosan producer who thinks that he can take our mushroom stumps and make a product, you know, crop improvement, reduction of pest control, fungicide products out of our mushrooms in the different forms of chitosan.

So the use of chitosan in our region, it's used in pharmaceuticals, nutraceuticals, crop protection, personal care products, packaging, food processing, paints and coatings, and on and on. I love that we can -- all of our waste also goes back into agriculture, and this would just give us one more opportunity to use our mushroom waste in more sustainable and broad ways.

Although chitosan can't completely replace sulfur dioxide in wine production, it could greatly reduce the use of it. So sulfur dioxide of course, as you well know, has many documented deleterious health effects associated with it in lots of adverse reaction reports. Chitosan has very little of that, especially if it's derived from fungus as opposed to shellfish.

So a lot of chitosan producers now import shellfish waste from Asia, particularly China, and make their chitosan that way. We're working with another producer who's been importing mushroom waste from China, which just galls me, and using it to make chitosan. So we're trying to get them to replace it with domestic. We certainly have plenty of mushroom stumps on our farm, and

even that's not enough. This could be an industry-wide benefit.

World Health Organization Guidelines set the acceptable daily intake for sulfates at 53 milligrams per day for an approximately 165 pound person. That would make about a half a bottle of red wine complying with the European standards.

Oh my gosh, I'm so sorry. Am I done? Anyway, I'll be in Omaha next week, and I'd love to talk to you more about it.

CHAIR JOHNSON: Excellent, thank you.

MS. ELLOR: Thank you.

CHAIR JOHNSON: Looks like you have a question from Andrea.

SECRETARY HATZIYANNIS: Yes. Thank you. We discussed this at the Board level, and that chitosan is available from different sources which are considered natural but the extraction is still with chemicals. So I didn't know if you wanted to comment on the specific extraction techniques and their suitability, or if there's new ones on the horizon. We learned about enzymatic processes, but they still need some research and broader application, from my understanding.

MS. ELLOR: Right, and that's something I'd have to talk more to our -- the people who are getting our stumps

and making them into chitosan. I'd need to get more details about that. I'm no expert on it, but we just love the elegant idea of using the waste to make all these wonderful products, especially good red wine with less sulfites.

SECRETARY HATZIYANNIS: Agreed. Thank you for commenting. We appreciate your input.

CHAIR JOHNSON: Any other questions from the Board?

(No response.)

CHAIR JOHNSON: I have a follow-up. I share your interest in seeing organic wine on the market. Are you aware of any wine producers who are using chitosan? We haven't heard much coming from the demand side around this, and we need this input. So I'm curious if you have heard anything about the supply chains and interest in using it.

MS. ELLOR: Once again, no. I mean, we've just seen a huge upsurge of interest in using our mushroom stumps to produce chitosan for all kinds of things, especially European regulations around personal care products are changing, and chitosan is going to take the place of a lot of especially preservatives that are used in personal care now. Off topic, but yeah. No, I don't know. I'm sorry.

CHAIR JOHNSON: Thank you. Thank you for your comments.

And we'll move on to our next speaker who is

Heather Spalding. Heather will be followed by Nate Powell-Palm, and Jeffrey Block.

Heather, go ahead.

MS. SPALDING: Thank you. Good afternoon, Chairman Johnson and Members of the NOSB. I'm Heather Spalding, Deputy Director of the Maine Organic Farmers and Gardeners Association, MAFGA. We certify 507 organic farms and processing operations, and we have more than 15,000 members. We're also a member of the National Organic Coalition which, as you've heard, has submitted detailed comments on this meeting's published materials.

I just wanted to take this opportunity to thank you for your unanimous decision not to allow synthetic compostable materials as compost feedstocks. We agree that the broad class of materials does not meet necessity, environmental, human health, and sustainable agriculture criteria for the National List. And we encourage you to assess the issue of the polymers present in modern papers and their breakdown in the environment to inform discussion on whether papers should continue to be allowed as an organic production material.

As you know, MAFGA has been working hard to address the problems of forever chemicals in food and agriculture. Farmers across the country are struggling with soil, water, crop, and livestock contamination from PFAS.

In Maine, many of the farm families and their neighbors have been directly -- and in some cases, devastatingly -- affected by land application of PFAS contaminated biosolids.

In 2022, Maine banned the land application of sewage sludge, biosolids, and commercial fertilizer manufactured from these materials. And we also have adopted a plan to phase out the use of PFAS pesticides, which are known to add to the contamination loads of farms.

We know that PFAS and other synthetic contaminants are present in many products described as compostable, and we should take a precautionary approach to the materials that we allow for continuous improvement of our soil health.

Through our goal to achieve zero waste at our annual Common Ground Country Fair, we're facing challenges of substituting one category of materials for another, and the reality that single use, disposability, and convenience need to be addressed on a societal level, but not fobbed off as organic agriculture's problem to solve.

We don't allow plastic dinnerware at the fair, and we require vendors to use compostable dinnerware that does not include PFAS in the manufacturing process. We compost all of our food and animal waste so we do not apply it to certified organic land, and testing of our compost continues to suggest that even compostable dinnerware marketed as made without PFAS may still have forever chemicals.

Until we turn off the tap of persistent and bioaccumulative chemicals in the food and ag system, compost feedstocks for organic production should include only plant and/or animal products. I hope you'll consider coming to MOFGA's 50th Common Ground Country Fair on September 25th, 26th, and 27th. Thank you so much for your continuing leadership in upholding the integrity of the organic label and ensuring organic continues to meet consumer expectations.

CHAIR JOHNSON: Thanks, Heather. Some great invites coming out today.

MS. SPALDING: Yeah.

CHAIR JOHNSON: Thank you.

Questions from the Board?

(No response.)

CHAIR JOHNSON: All right. Thanks for all your work to reduce waste, and thanks for your comments.

Okay. Nate Powell-Palm I think may not be on yet. Man on the move usually. We'll come back and try to pick up Nate at the end.

Jeffrey Block, and then you'll be followed by Berit Dockter, and Andrew Page.

Jeffrey.

MR. BLOCK: Hi, everybody. Thanks for this opportunity to speak. I'm Jeffrey Block. I come wearing a

couple of hats. I'm the Chairman of the Organic Committee for the American Seed Trade Association. I'm also the Organic Manager for Grow Alliance.

To wear the first hat really quick, as the American Seed Trade Association has submitted written comments to the National Organic Standard Board, and what we want to hammer home is just organic seed usage is a very important topic to the entire American Seed Trade Association membership from the organic side. I've been chairman for three-and-a-half years, and subjectively that has been pretty much the number one topic that people want to chat about.

But I mostly want to switch hats back to my industry place as an organic hybrid corn producer with Gro Alliance. We're one of the largest independent seed companies in the country. I've been organic manager for 10 years, hired to produce organic seed. We work with most of the major seed companies that produce seed corn at one time or another.

And organic seed usage for organic hybrid production, organic seed usage is dying. From a marketing perspective, from where we're at, we are getting hardly any clients who want to produce organic seed. When I started the job, we wanted to learn. Part of it was it's a new industry learning how to produce organic seed. We figured

it out. We know how to produce organic seed for corn.

And just to back up a step -- this is a very corn-centric view, for sure -- but it is one crop that, on the field corn side, we figured out how to produce it. But because of the loophole and because of the fact that most of the client companies are exploiting the new loophole to produce seed, there is no pressure for us to be able to contract seed.

When I started the job, it was building a seed network, building a network of organic growers. I've worked with dozens of different farms. I'm down to just a handful. Acres are being left on the table that could be producing organic seed corn but because of the pressures of the industry and the fact that many seed companies are addicted to selling non-organic seed to organic customers, where the loophole has actually become the standard, and this just really needs to be addressed.

It's a really multi-pronged issue. There's a lot of variables involved on it because I'm -- from a field corn side we got one thing -- but every crop, every cropping system, every marketing channel is different, so it's not a small topic. But the organic standards have been around for a couple-plus decades now with the idea of building this organic seed industry, and it's dying on the vine.

It's less than being built. It's more that it's

disappearing. And if we're deciding that we don't want organic seed for organic farms, let's decide that, because that's essentially what's happening. Anyway, thank you for the time. I urge you to put organic seed usage at the top of the list for the coming time.

CHAIR JOHNSON: Thanks for your comments, Jeff.

Any questions from the Board?

Cat, go ahead.

BD. MEM. MCCLUSKEY: Thanks, Allison.

Thanks, Jeff, for taking the time to submit comments and for taking the time to give oral comments this afternoon. I am curious if Gro Alliance -- you mentioned how complex this issue is, and we are very aware as Board members of the numerous data gaps that exist to help inform a slow down approach and recommendations here.

And so I'm curious if Gro Alliance, and possibly ASTA more largely, has a sense of how many U.S. based organic seed growers are contracted with through the industry and/or the dollar amount of contracts within the organic seed industry with U.S. based organic growers.

You might not have that number, but I'm wondering if that data is something that Gro Alliance would be interested in providing, to look at different trends, but also ASTA on a larger scale within the organic committee.

MR. BLOCK: So this is a topic that I believe the

organic committee is wrestling with moving forward. The absence of data for organic seed usage is absolutely massive. I believe that drives the problem from your end and from our end.

We don't have that data. I mean, it's a very opaque -- you know, corn is a good example because it's a very opaque industry. IP people hold the cards close to their chest. So coming up with that information is difficult, and there needs to be a centralized way to do it which -- I don't really have an answer for it.

This is a topic that has come up within the organic committee because, I mean, even for the NOSB side I understand that rulemaking is impossible because we actually probably have better data for corn than a lot of other crops, and other crops it's just completely unknown how much organic seed is being used and sold.

So I don't have a good answer for you on that, Cat, other than that is probably a number one issue that the NOSB should look at and try to handle ways. The American Seed Trade Association Organic Committee would love to collaborate with information sharing with you all on that as well.

BD. MEM. MCCLUSKEY: Thanks, Jeff. I just want to be clear. So the American Seed Trade Association would be interested in collaborating on some of this data collection

around usage and grower --

MR. BLOCK: Well, we need to. It's something we need to bring before the committee, but it is a topic that we are aware of. So, yes, absolutely.

BD. MEM. MCCLUSKEY: Yes.

MR. BLOCK: We need to be involved in this conversation. You know, the American Seed Trade, we have like 80 to 90% of the organic seed companies that do business in the United States as part of our members. So it's something we could easily bring to our members and work with.

BD. MEM. MCCLUSKEY: Thank you so much for your comments, Jeff. I appreciate it.

CHAIR JOHNSON: Thank you.

Dilip, go ahead.

BD. MEM. NANDWANI: No, he's already answered. Thank you.

CHAIR JOHNSON: Okay. Great.

Any other questions from the Board?

(No response.)

CHAIR JOHNSON: I have one more. So we're kind of caught in this chicken and the egg problem with seed, right? If there's supply, then you'll use it, but there won't be supply unless you have the demand, so round and round. If an organic corn grower wanted to come to your company, how

would they know what seed is available? And if they checked with you, could they still go back to their certifier and say they couldn't get organic seed?

MR. BLOCK: Yeah, so we are a contract seed company, and we work with other seed companies that will sell organic seed under their brand. So they wouldn't come directly to us. They would come to one of our client companies. And in that situation, the farmer would go to the client company, and they'd either have it in organic or have not.

I will say this. We have client companies that very much, very carefully do not produce seed in organic variety so that they could tell the organic growers that they don't have it organic, and sell it to them conventional. And the way the industry works for field corn is each client company has their own name for that seed, so they hold all the cards when that happens. Kind of leads back to the chicken and the egg problem.

CHAIR JOHNSON: It does. Yeah. So if there was a time horizon built in for the commercial availability search -- so say the grower says I can't get it for this season, and the certifier says, okay, how are you going to get it for next season -- do you think that could make a difference in making sure that availability is there?

MR. BLOCK: Oh, absolutely, because that's how the

business works in field corn where the seed gets contracted the year before for organic sales for the following year. That absolutely would be a driver to help push that into the future. I mean, you've kind of hit the nail on the head, at least from the field crop side, one of the major limitations in that. So that timeframe is a possibility.

CHAIR JOHNSON: Thank you.

Any other questions for Jeff?

All right. Thanks for your comments. Next up, we have Berit Dockter, followed by Andrew Page, and then Mark Lipson.

Go ahead, Berit.

MS. DOCKTER: Thank you. I'm Berit Dockter, representing the International Food Additives Council, or IFAC. We're a global association representing manufacturers and end users of food ingredients, including substances permitted for use in organic food production. IFAC's comments address the Sunset Reviews of handling substances. And we support relisting of agar agar, animal enzymes, calcium sulfate, carrageenan, cellulose, potassium hydroxide, and silicon dioxide, as well as a response to a proposal on the sodium bicarbonate.

So agar agar is a seaweed-derived hydrocolloid that provides stability in a wide variety of food applications including organic products and those certified

as halal, kosher, and vegan. IFAC is not aware of any developments in natural alternatives, nor do we believe there is enough agar agar being produced using non-synthetic extraction methods.

Animal enzymes such as rennet and lipases have been used in the manufacturing of various cheeses and other dairy products for centuries. Animal-derived lipases also provide essential enzyme activity for the manufacture of traditional cheeses such as Asiago, Provolone, and Feta.

Mined calcium sulfate functions as a coagulant, firming agent, stabilizer, dough conditioner, and pH regulator. While other calcium salts are available, they do not provide equivalent functionality, sensory performance, or processing reliability.

Carrageenan is extracted from several species of red seaweed and used as a thickening or stabilizing agent. Carrageenan is safe, does not have a suitable replacement in many applications, and is used in products that are certified halal, kosher, and vegan.

Since NOSB's last review, there have not been any new credible or relevant publications refuting the safety of carrageenan and its intended uses in foods. Carrageenan remains a permitted food additive by a number of regulatory agencies around the world.

Cellulose is primarily used in food applications

as a filtering aid, as a component of processed meat casings, and as an anti-caking agent. IFAC is not aware of any organic cellulose currently available.

Silicon dioxide is an essential ingredient that functions as a defoamer and/or anti-caking agent in a variety of applications including organic products. IFAC is not aware of any health or safety concerns with the use of silicon dioxide in food, and IFAC's understanding is that it is not an engineered nanomaterial as defined by both the National Organic Program and FDA. IFAC believes that if NOSB were to revise the annotation to only include SAS, the current annotation limiting it for use only as a defoamer should be removed.

And lastly, for sodium bicarbonate, while IFAC could be supportive of the proposal to reclassify sodium bicarbonate to 205.605(b), we are concerned regarding the proposal to prohibit the use of sodium bicarbonate produced using the Solvay process. While production in the U.S. relies solely on the trona mining, given the global supply chain we are concerned that proposed limitation may disrupt utilization of sodium bicarbonate used in organic products in the U.S. Thanks.

CHAIR JOHNSON: Thank you. Any questions from the Board?

(No response.)

CHAIR JOHNSON: All right. Thanks for your comments.

MS. DOCKTER: Thank you.

CHAIR JOHNSON: All right. Next up is Andrew Page, followed by Mark Lipson, and then Brian Baker.

Andrew, go ahead.

MR. PAGE: I appreciate the chance to speak. Thank you to the Board. My name is Andy Page. I'm representing NomadX Holdings. We're an Idaho-based company that's focused on farm-to-fork food safety, both diagnostics and sanitation. And I just would ask the Board regarding their consideration of the use of chlorine materials in livestock drinking water to consider some aspects that we consider really critical in terms of differences in chemistries.

One of the central concerns that's been raised in prior comments is the formation of disinfectant byproducts when these chlorine-based disinfectants are used in water that contains organic matter. That concern is definitely well-founded, especially when considering hypochlorite-based systems which can react with organic matter to form chlorinated byproducts such as trihalomethanes and haloacetic acids. Both of those compounds are environmentally persistent, and they raise both environmental and health considerations.

Chlorine dioxide, however, behaves very different than hypochlorite-based systems. It acts as a selective oxidant, and does not chlorinate organic matter in the same way. As a result, it avoids the primary formation pathways that are required for these chlorinated disinfection byproducts to form.

Instead, it forms chlorite and chlorate, which are well-characterized. They're regulated under the drinking water standards, and they're really relatively easily manageable within a properly controlled system. And further, under typical environmental and soil conditions, chlorite tends to be reduced over time to chloride, which limits the long-term environmental persistence when compared to chlorinated organic byproducts.

Further, chlorinated or chlorine dioxide systems, there are really meaningful differences in many of those systems, and there are newer high-purity and ultra-pure gas-phase-generated chlorine dioxide approaches that are designed to minimize precursor carryover and reduce the formation of chlorite and chlorate during the reaction process, which ultimately reduces it in the downstream solution.

So these really result in lower overall chemical burden, and they still are able to deliver effective microbial control. So my key point is that not all chlorine

materials behave the same.

CHAIR JOHNSON: Thank you.

Questions from the Board?

(No response.)

CHAIR JOHNSON: All right. Thanks for your comments.

MR. PAGE: Thank you.

CHAIR JOHNSON: Okay. Next up, we have Mark Lipson, followed by Brian Baker, and Nicole Dehne.

MR. LIPSON: Hi, everyone, I'm Mark Lipson. I'm a member of Molino Creek Farming Collective since 1983 in Davenport, California. I'm the founder and policy program leader at both California Certified Organic Farmers and the Organic Farming Research Foundation, and I served as the USDA pioneer Organic Policy Advisor during the Obama terms.

Currently, I am still on the farm. I provide consulting part-time, including with organic specialists Wolf Pack, and I'm a pro bono staff affiliate with the University of California Santa Cruz Center for Agroecology. In that last capacity, I serve as firsthand memory and historical institutional memory of our organic policy architecture. So I will start with some remarks there and then mention a quick list on current items.

I was the original instigator in 1988 of the

process that resulted in the Organic Foods Production Act. The Act was ahead of its time in many respects, yet already obsolete before its passage in other respects. But the Act was not constructed for the world that we live in today, especially its assumptions about being able to update the regulation based on NOSB recommendations.

Despite the increasing contradictions within the system, the organic label does remain the gold standard for the manifestation of positive values in the marketplace. It's a vital but mature ecosystem that you are stewarding, a lot of parasitic and pathological pressures, and overwhelming institutional climate change around it that's accelerating.

The Secretary's failure to appoint new members is only the most ominous indicator that the system is devolving. Don't assume that things will return to a previous state. There's no basis to believe that. You can only say be prepared to pivot and adapt, conserve the core values, look to the reservoirs of genetic diversity in the system, resist attachment to form over function.

Very briefly on current topics, pesticide residue testing, yes, a targeted component of the testing portfolio should be integrated, but the path of applying risk assessment here is still largely unmapped. We've got to get past the oversimplistic characterizations of risk, and that

work should proceed now.

Likewise, public access to residue testing data, recommendation to cross-reference 205.670(f) with 205.504(b)(5)(3) is a logical start, but only a beginning.

On e-commerce, don't wait for the FDA to do anything. That's not likely to happen.

Agroforestry with livestock grazing. I don't have any window into the verbal update that's mentioned in the meeting agenda, but this is a really important topic. Should be a relatively solvable dilemma.

Research priorities, this is an obsolete effort. It pains me to say that, but the list just gets longer every year with no feedback or interaction with USDA's research managers. It's a relic. As you triage the Board's diminishing capacities, that is one job you could let go of.

Sending my awe and mad respect for all your micro and macro-perceptivity -- looking at you, Nate and Allison in particular -- and also to all stakeholders engaging in this process with such dedication and acuity. Thank you.

CHAIR JOHNSON: Thanks, Mark.

Nate, go ahead.

BD. MEM. LEWIS: Thanks, Mark. I appreciate all your ongoing leadership, and I like your wisdom and ability to reach back into the annals. And I have curiosity around the livestock grazing question that you kind of referenced

there, and whether you have some insight into the flexibility within the Rules in terms of looking at this without changing the number of days in the regulation that we're hearing.

Some folks want to change the number of days in the regulations, and there's also another way to approach it which is, you know, livestock don't make a manure application. And I'm just curious if you have some insight in how we can gauge flexibility in the law and regulation to kind of thread the needle in that way, and so that historical context I think could be really helpful here.

MR. LIPSON: Well, I think you have to try both. I don't think rulemaking is going to be viable. I mean, for a while at least. And I do think that there's enough kind of wiggle room to do it without a reg change.

BD. MEM. LEWIS: Okay. Great. It's on the record. I appreciate it.

MR. LIPSON: Thanks, Nate.

CHAIR JOHNSON: All right. Any other questions from the Board?

(No response.)

CHAIR JOHNSON: I have one. Mark, you said don't wait for the FDA on e-commerce. Do you think there's a risk to organic handlers if we were to make a recommendation on labeling that doesn't ultimately align with what the FDA

does? If they indicate that that is like semi-imminent, are we setting producers up to make a set of changes and then make another set of changes that would be burdensome?

MR. LIPSON: I think that's pretty low risk. Yes, that risk exists, but I just don't think it's likely to happen. I don't think the FDA will move on that, semi-imminent. You know, even before the current situation the FDA could go 20 years in that posture, and has on other things.

CHAIR JOHNSON: Thank you.

Any other questions for Mark?

(No response.)

CHAIR JOHNSON: All right. Thanks for your comments.

MR. LIPSON: Thanks.

CHAIR JOHNSON: Next up, we have Brian Baker, followed by Nicole Dehne, and Deborah Attwood.

Brian, go ahead.

MR. BAKER: Thank you. Thank you for the opportunity to comment on your good work. I'm Brian Baker, with over 40 years of experience in organic agriculture as a researcher, organocrat, inspector, farmer, networker, and troublemaker. The opinions expressed are my own and don't necessarily reflect any of my clients past, present, or future, future/former employers, any organization to which

I'm affiliated.

I want to speak on three topics. One, unavoidable residual environmental contamination, two, organic seed, and three, Materials Review.

OFPA requires the NOSB to advise the USDA about UREC. The current definition is, and the regulations are unworkable, and they've already been subject to legal challenges. So it's my opinion that UREC should be set based on health risks and the empirical levels found in the environment and in organic food.

Seed, the regulation requires organic seed to be used unless it's commercially unavailable. The regulation is practically impossible to implement. It has not made progress in the adoption of organic seed in the 20-plus years since implementation. The reasons are primarily economic.

Even though the guidelines say cost is not supposed to be a consideration to consider organic seed commercially unavailable, it's impossible to verify. The market failure holding back organic seed requires economic analysis and a market-driven solution before the NOSB can make recommendations that will effectively get us unstuck.

Review of substances. Petition for the National List -- this is Materials Review -- and items on the National List subject to Sunset Review take up a

considerable amount of the NOSB's time. I suggest that the NOSB request an audit to see how much time and money the process takes and how it's mandated tasks can be conducted more efficiently.

The NOSB statutory mandate to evaluate petitions and Sunsets comes with the authority to convene technical advisory panels. These panels can help the NOSB reduce the burden of Materials Review. Technical reviews can then be performed on a dynamic, continuous basis across all materials rather than having these static and sometimes duplicative technical reviews.

You know, I was actually a token member of the NOSB in the first National List votes. So I was the certifier rep when I worked at CCOF, and they let me sit at the table with the grownups and you folks. And I was able to see the behind-the-scenes wheeling and dealing that led to many of the vexing annotations we see today.

So, you know, the annotations are there for a reason. If you didn't have the annotations, the substances probably wouldn't be on the National List. So once something is on, it's on and it's not going to come off. Sunset doesn't work. Thank you.

CHAIR JOHNSON: Thank you, Brian.

MR. BAKER: Questions?

CHAIR JOHNSON: Questions from the Board?

(No response.)

CHAIR JOHNSON: I appreciate overall the reflections on, you know, checking in, how is this whole process working, and giving us some motivation to look at some of these big picture issues. So, thank you.

MR. BAKER: Thank you for listening.

CHAIR JOHNSON: Always.

All right. Next up is Nicole Dehne, followed by Deborah Attwood, and then Charles Benbrook. Nicole may or may not be on. Do we have Nicole?

MS. ARSENAULT: It looks like Nicole's not quite on yet. And when she registered, she asked to be after 2, so --

CHAIR JOHNSON: We'll get back to her. So then moving to Deborah Attwood, followed by Charles Benbrook, and then Drew Cheney.

Deborah, go ahead.

MS. ATTWOOD: Thank you. Good afternoon. My name is Deborah Attwood, and I'm the leader for Global Regulatory Compliance at W.R. Grace & Co. I'm speaking on behalf of both Grace and the Synthetic Amorphous Silica and Silicate Industry Association, SASSI, regarding the Sunset Review for silicon dioxide.

SASSI represents the U.S. manufacturers of synthetic amorphous silica, known as SAS, and Grace is a

SASSI member. SASSI and Grace support the continued listing of silicon dioxide on the National List. We also support the written and oral comments submitted by the International Food Additives Council on this topic.

SAS has been approved for use in organic food processing for at least 25 years. It was on the original National List established in 2000, and has been reaffirmed as necessary to organic production in every Sunset Review. Four years ago, FDA had no questions on a cross notice for silica gel for direct use in food, and just 18 months ago, the European Food Safety Authority concluded that silicon dioxide presents no safety concern for use as a food additive in all population groups.

I review that history because it demonstrates that what was true in 2000 remains true today. SAS is safe, essential, and irreplaceable in the production and processing of foods, including organic products.

Whether considered as a food additive or processing aid, silica is used for its physical properties, for anti-caking, clarification, and other uses. It's not a colorant, flavor enhancer, or a preservative, and there is no single substitute for SAS, and the regulators continue to support its safety for all of these uses.

SASSI confirms that the SAS used to manufacture food is not an engineered nanomaterial under either the

NOP's policy memo or FDA's nanotechnology related guidance. SAS is not deliberately or purposefully manipulated to control particle size, produce novel size-related properties. All currently known SAS powders are placed on the market as micron-sized agglomerates. During food processing, SAS aggregates cannot be readily broken apart. There are no single primary particles in commercially available SAS.

SASSI also believes that the current listing for silicon dioxide aligns the National List with the FDA's regulations and with international standards. That said, SASSI believes that the term synthetic amorphous silica does reflect the product that is currently used as a food additive or processing aid on the U.S. market today.

Finally, SASSI supports the Subcommittee's suggestion that the annotation for organic rice hulls be limited to products labeled as organic. Thank you for the opportunity to speak today.

CHAIR JOHNSON: Thank you.

Questions from the Board?

(No response.)

CHAIR JOHNSON: All right. Thanks for your comments.

MS. ATTWOOD: Thank you.

CHAIR JOHNSON: Okay. On to Charles Benbrook,

then Drew Cheney, and Amy Bruch.

Chuck, do we have you. Hi.

MR. BENBROOK: Yes, thank you, Allison. And thanks to all the members of the NOSB for your service. It's a huge commitment of time, and very important to advance our community, so thanks.

Brian and I have visited with you over the last two or three years about the progress in building the ORG-Tracker system which will take the results of all the residue testing that certifiers do and put them into an integrated database, and then use the data to produce analytical insights into both the levels and risks associated with residues in organic food compared to conventional food, U.S. grown food compared to imports, and combinations of the above.

We've built the system. The first set of tables are working on the ORG-Tracker website. HHRA is looking for some new funding to keep the development going, but it's ready for use and looking for a new home.

I also want to reinforce the comments of Mark Lipson and Brian Baker about UREC. Brian and I stressed in our comments the last two or three years that when the concept of UREC was debated in the organic community and put into the regs, there was a relatively small number of compounds, most of them chlorinated

hydrocarbon insecticides that were the focus. But now there's probably a few hundred persistent chemicals that are being picked up in agricultural systems that are going to pose challenges for organic certifiers, organic farmers in the community.

And it is absolutely essential for OFPA to be amended and/or NOP regulations changed to modernize and expand the scope of the UREC policy that's currently part of the fabric of the organic community to differentiate between a low-level, inadvertent residue that isn't worth a certifier tracking down, isn't worth the consideration of an enforcement action, and compared to those that do pose some possible public health risks. We know how to do that now. It's going to happen one way or another.

Last, I had a great week. The week of April 27th in DC, I got to attend the preemption oral argument at the Supreme Court, which I had been involved with. And I was there for the whole week of debate, and the results on the Luna Amendment that stripped the preemption language from the Farm Bill with 73 Republican votes really was a stunning political development, and suggests there may be more room for legislative changes than we have thought. Thank you.

CHAIR JOHNSON: Thank you.

Any questions from the Board?

(No response.)

CHAIR JOHNSON: All right. Thanks for your comments, Chuck.

Next up we have Drew Cheney, followed by Amy Bruch, and Bryce Irlbeck. And then we'll start looping back around.

Drew, go ahead.

MR. CHENEY: Hello, my name is Drew Cheney. I'm here on behalf of Machado Family Farms in Linden, California. I'm the operations manager. I'm here to speak to all of you -- thank you for your time, by the way -- about reducing the PHI for grazing animals within orcharding systems.

Specifically, I'm going to talk to a couple of different points around food safety, some cultural practices, and also the social side of things. For me, I'm speaking strictly -- so my experience is walnuts. So please keep that in mind.

From a safety standpoint, pasture ruminants with no supplements, specifically supplements made from animal sources, they're not going to carry pathogens. They're less likely to carry pathogens especially if they're not coming from a crowded feedlot or from a crowded barn situation.

If they're pastured animals, they're out in the field, we see there's less disease because of less stress. And the fact that they're moving constantly, you're having

less of a parasite load too, which will then cause stress, which then could also help with disease.

I personally went out with my bare hands and collected gallon freezer bags of sheep droppings, and had them tested at a local lab for three years in a row for Salmonella, Listeria, and E. coli 0157. Never got a single hit. One of our handlers also did their own tests. No hits.

Talking about the actual load in the field when it comes to the risk there of the animals naturally depositing. Let's argue 40 pounds per acre when you have animals in there versus 5 tons to the acre when you're applying manure as a farmer. So that's, I really want to point out the scale there.

Also the sheep pellets are dry. They're small enough to be mechanically excluded either by air or by the actual machinery itself during harvest. So there's a reduced risk thereof as well.

What's interesting is herd animals actually exclude wild animals from the orchards. So you'll have less of a risk of wild animals that could be bringing in pathogens that we've seen in the past.

From a cultural and crop perspective, according to Amelie Gaudin of UC Davis, there's a fourfold increase of nutrient siphoning within similar systems. So everything

being equal, you're going to have an orchard with a fourfold increase if you're terminating it with sheep versus a mower. This means it's easier to drive cultural practices and improve soil health without relying on the input of the treadmill, I call it, from conventional organic systems.

So no mowing, no spraying, a much lower carbon footprint. It creates extended market opportunities for shepherds and associated services. And you have healthier food sources for the crops and meat because it's local.

From a local standpoint, you're increasing national security due to less reliance on inputs sourced out of the country, and locally sourced protein and crops leads to further reduction of fossil fuel usage and reduced energy consumption to store it. And seasonality is actually reduced by doing that.

With one second to spare. Okay.

CHAIR JOHNSON: Thank you, Drew. My daughter always wants to hear stories at the end of the day, and she's definitely going to hear about the farmer who hand-picked up sheep poops to make sure his walnuts were safe today. That's real dedication. Thank you for sharing that.

MR. CHENEY: Three times.

CHAIR JOHNSON: Excellent. Well done.

MR. CHENEY: Any questions?

CHAIR JOHNSON: Corie, go ahead.

BD. MEM. PIERCE: Yeah, thanks. I appreciate your putting some numbers to the difference between a mechanical manure application versus the animals grazing through. Could you say where you got that again? Was that like your own calculations or -- and also like who's doing more of that research? Because I think that's really important information.

MR. CHENEY: That's a wonderful question because, as of yet, I've seen no one do actual research-research like from a UC or another institution. For me, it was I went out with our shepherds and talked about when it comes to paddock sizing and the density what they would do for grazing. So I myself, in organic blocks, I mean we're putting five tons to the acre of compost on. It would be the same thing for manure. That's kind of a nice medium ground. So I'm looking at that as a standard operating procedure.

From the pellets, what we did is we were looking at a three- to four-day rotation, usually four-day rotation. We got out, and I actually marked off an area -- this is going to gross some people out -- and again, I picked up every single piece of sheet poop on the ground and measured it, because our trees are 24 by 24, so it's very easy to figure out your acreage.

And so in that particular block, because there was less lambs that had dropped yet, it was 27.6 pounds per acre

of droppings. And that's fresh, mind you, so that weighs more. But so that's, to me -- I feel comfortable saying that, okay, let's call it 40 if you had really dense grazing and if you had a lot of lambs in there as well.

BD. MEM. PIERCE: Okay. Thank you. I appreciate that.

CHAIR JOHNSON: Nate, go ahead.

BD. MEM. LEWIS: Thanks, Drew. This is great. I really appreciate all these growers coming on and helping paint the picture of what your types of systems you have in place. Can you paint the picture for what the ground cover looks like in terms of, like, is there bare ground? Is it permanent pasture? Or is it somewhere in between? Or does it vary?

And the thing I'm trying to drive at is just whether or not dust and its potential to get on the crop is something we should be throwing into the mix of this conversation. Is the ground cover an important factor or not?

MR. CHENEY: From your latter point for dust, from a production standpoint I would have to say that, yes, you need to think about dust in a sense. And I'm speaking just from walnuts again, but this can be applied to almonds as well, specifically in California during the harvest process is that, remember, unless you're using a catch system of

harvest, you are harvesting from the ground.

In order to harvest from the ground, you have to have it clear during harvest. The rest of the time, what I'm hoping to do to have sheep in is right now I cover crop every single block we have. So that's walnuts, almonds, cherries, and olives. Everything gets cover cropped.

And so I have a relationship with our shepherds. We developed a mix together, and so I seed everything. They bring their ewes on so they can lamb in the spring because it is a much more nutritious mix than just grazing wild plants. And so not only do the ewes, they gain faster and are healthier, but also the lambs gain faster.

So if you do it right, you can get regrowth throughout the season. And so up until the point of harvest, I personally would like to have maintained cover on the ground. That's what I'm going for instead of having to trim it and then maintaining it low.

As far as fecal matter, possibly getting up into the trees, for me it's a moot point since the walnuts are harvested to the ground. And so during the harvesting process of the walnuts, the harvesters themselves, they're using air to exclude leaves, sticks, dust, other detritus.

And so when they get into the hopper, and they get to me at the huller, they're relatively clean. And then from there, there's also an extensive cleaning process

before they even go through the hulling machine itself and then into the dryer. So from that perspective, you're never having the edible portion of the crop exposed to any type of pathogen.

And so I can't speak to other crops. You know, obviously fruit, that's different and whatnot, depending on how their post-harvest processing takes place. But from walnuts -- and also I would argue even almonds as well, and possibly other nuts -- is that dust really isn't an issue in the sense of the process of mechanical separation as well as by air, you're reducing that. Make sense?

BD. MEM. LEWIS: Yeah, totally. That's really helpful.

And Allison, just a quick follow-up, if that's all right.

And apologies if you said this and I didn't capture it. Do you currently apply a 90 or 120 day withholding time as the organic -- required on your farm?

MR. CHENEY: Oh, yeah. For me, specifically for FSMA just because, I mean, FSMA follows the NOSB, and that's why I'm here because I would like to see if there's a little trickle down effect.

It's interesting, according to the FSMA guidelines, it's actually up to the handler if they would be willing to accept something that is grazed within the 120-

day PHI. And so right now the handlers are like, well, you know, if there's a kill step for that.

If we can show that there's more safety and their inherent risk is reduced, that's good. Because a handler, if they want to, they can sanitize their line after. I could bring a load completely contaminated to them, and they can clean it. The issue with that is cost and downtime.

So I strictly follow the 120 day because of that. So for my early varieties, I actually, yeah, I've got a couple more days. May 15th, I kick them out of the early blocks, and June 15th they're out of the handlers.

BD. MEM. LEWIS: And you're obviously dealing with a very long-season crop in the great state of sunny California where you're grazing season is like 270 days a year, so you do have some advantages here. But that's all super helpful. Thank you so much.

MR. CHENEY: Yes, well, selfishly for me, I would like to push it as close to harvest as possible just for the sake of reduced mowing, reduced anything when it comes to a crop, but also water infiltration, nutrient cycling. But selfishly, I mean, I would have the sheep drive the harvest equipment if they could. I mean, that's -- I think they could literally be day of.

But also for our shepherds as well, they would completely change the way they run their animals, their

breeding cycles. It really would be a win-win for everyone.

BD. MEM. LEWIS: Got it. Point taken. Thank you so much.

CHAIR JOHNSON: Any other questions from the Board?

(No response.)

CHAIR JOHNSON: I have one. I think most of the producers we've heard from on this topic so far have had a full-closed organic operation, including the animals, or aspire to be that. Should there be any distinction between organic animal deposits and bringing in animals that are not certified organic to graze and potentially deposit?

MR. CHENEY: So this is where we start getting into a murky area. This is kind of like bottle of wine discussions in the sense that me, personally, I feel -- from a previous biology standpoint, my background -- I could argue that I wouldn't really differentiate between organic and nonorganic sourcing. To me, I would differentiate how the animals were raised in the sense that they come from a feedlot or were they from open pasture before they came to you.

So let's say you get a thousand head of sheep coming in from Dakota from a feedlot. The chance -- and I'm just saying the chance -- of them already basically coming in to inoculate your field because they're carrying a

pathogenic bacteria or fungal, you know, whatever you want to call it, the chance of them coming from an intense system to an open crop system increases the risk of them already bringing on something.

If they come from a pasture environment or like our shepherds, they're constantly pastured. They have never seen the inside of a building. I think a differentiation needs to be made there.

Whether they're eating organic or inorganic cover crop, that to me -- I think that's a point that needs to be taken up with a certifying agency and whether they feel that's going to make a difference specifically of how the cover crops are grown. I mean, if I'm spraying a bunch of herbicides on a cover crop or adjacent to it, yeah, I would question that. To me, that's a bit of a practice no-no, in my opinion.

So as far as the sheep moving -- let's say you have a shepherd bringing sheep from ranch to ranch -- goes organic, inorganic, organic, conventional, organic, conventional -- I think it really has to be taken in a case-by-case basis, unfortunately.

But the method of grazing, to me, is more important from a safety standpoint than what their actual food source is. Second place, then, would be food source, and are they being exposed to any type of chemical input

that then could be brought in and deposited.

Like, to me, what scares me is I work so hard to try and increase the soil health of our soil. So, you know, trying to increase bacterial and fungal loads for these trees, let's say the sheep were in an orchard that had just been sprayed with a fungicide and it is able to go through their system, and they deposit it in an orchard, and all of a sudden there's a fungicide coming into this orchard, and now it disrupts the microbiome within my soil. I mean, yes, it could be repairable, but from an organic standpoint, as far as a systems approach, that would scare me.

CHAIR JOHNSON: Really helpful. Thank you.

Any other questions?

MR. CHENEY: I don't know if that's helpful or not.

CHAIR JOHNSON: I'm already imagining the poop certification program that grows out of this conversation. Just kidding again. All right. Thank you so much for your comments.

And we'll move on to our next speaker. We've got Amy Bruch up next, followed by Bryce Irlbeck, and then we'll loop back to pick up folks we've missed, starting with Katie Jagger.

Amy, welcome.

MS. BRUCH: Hi everyone. Hi Allison. I'm Amy

Bruch, I'm an organic farmer. Good afternoon, and thank you to NOSB members for your service. I also appreciate the option to provide virtual comments. We're in the heart of planting and weed management. Everything's kind of happening at once, and rain's scheduled this weekend, so it's really important to have the virtual access in this moment. I really appreciate that.

I want to start with some context. Farmers are operating in a tough environment right now, and that puts pressure on the long-term sustainability of the family farm. As subsidies are nearing a third of gross receipts on a conventional row crop basis, that's just not sustainable.

Organic remains an important opportunity to preserve family farms, support rural communities, and provide food consumers trust, but only if the market has integrity and the USDA seal truly means something. Having a market that is real is a catalyst for increased organic production. We must ensure the products in the market are, in fact, organic that have the seal on them.

Organic is a public-private partnership. USDA provides the regulatory authority, and the private sector implements it. That means the system must be more than a show-and-tell with these documents. Documents must be verified, reconciled, and truth-tested against what's happening in the field. Super important.

Today, much of the system relies on mass balancing based on documents that are not even reconcilable. I can't set up equipment without known calibration mechanisms. We need reconcilable documents when we're going to implement integrity in this program. We need transaction-level reconciliation, production to movement to sale, and verification of what is actually happening, not just written.

We have to grow with our program. We're over a $70 billion industry, and we need to adopt technology to ensure integrity is high.

Consider scale. Soybeans are planted on my field at 225,000 plants per acre, and corn's at 34,000 plants per acre. Myself and a team of five manage over 310 million plants every year in a very limited timeframe. We're highly mechanized with no plastic on the ground. These operations leave clear, observable signals of legitimate production, and those should inform the verification on-site inspections are necessary for this truth testing.

Field level verification is variable. We're in the fields 10 plus times. You can see tire tracks on the end rows, dig seed, check for treatment, run quick GMO tests that are available within minutes, and assess whether scale, equipment, and inputs are realistic, especially nitrogen. For example, hauling fertilizer over 100 miles, chicken

litter, that doesn't pencil out. So we need to understand how this is actually going on in these operations.

That's why we need good questions by inspectors and certifiers. We need to modernize the verification based on the size and complexity of certified operations to increase the bandwidth and hone in on what actually matters. And pairing physical observation with agronomic understanding and technology is going to be super important for the organic program to adopt.

Today's organic supply chains are global, and because we can't regulate overseas the same way, strong verification and accountability is essential. With that context, I strongly support the 2026 regulation review proposal that includes downstream communication. Non-conforming product cannot be sold as organic.

What's missing is the infrastructure to ensure that once an issue is identified, it stops moving through the system. Downstream communication closes that gap. It protects certificate holders who follow the rules by preserving fair access to the markets and helps provide a pathway. My ask is, focus on verification, testing, and accountability, and pass the regulation review proposal.

I see I'm at time. So I will turn the mic back to you guys. Thank you so much.

CHAIR JOHNSON: Amy, thanks for fitting this in

today. I know you've got a lot going on.

Questions from the Board?

(No response.)

CHAIR JOHNSON: All right. Well, I know you put a lot of work into some of the things we'll be discussing next week, so thanks for all your work to give us here and for commenting today.

MS. BRUCH: No problem. I'm excited to stay tuned. Good luck to you all.

CHAIR JOHNSON: Thank you.

All right. Bryce Irlbeck, then Katie Jagger, and Ellie Hudson. Do we have Bryce?

MS. ARSENAULT: We are not finding Bryce on the line with us today.

CHAIR JOHNSON: All right. I'm going to give one more try at the end. Katie Jagger, and then Ellie Hudson, and Nate Powell-Palm if you've made it on.

Katie?

MS. JAGGER: Hello. I'm here.

CHAIR JOHNSON: There you are. Hello. Go ahead.

MS. JAGGER: Okay. Thank you so much. I'm currently planting. Little bit unexpected being this early.

I'm Katie Jagger from Saltwater Seeds. We're a very small, employee owned and run seed company based on the Olympic Peninsula. We grow seeds for local markets, mostly

packet sales, but also on contract sometimes. We're certified organic. And I just want to talk a little bit about small-scale organic seed growing.

I would advocate for strengthening the regulations around organic seed usage requiring farmers to use organic seeds. I realize this is going to be a pretty tough pill for a lot of farmers to swallow, and I do think that it should be done carefully with as much consideration of organic farmers as possible. But if we were to require organic seed usage, it would create an enormous market for organic seeds.

Also, I wanted to touch a little bit on, if this is to happen, there would need to be somewhat of a way for conventional varieties to move to organic. So there would need to be, you know, organic seed growers would need to be able to trial conventional varieties in order to make them organically available.

As you all know, right now organic seed companies are limited to organic seeds of any variety that's organically available. But sometimes the best strain is going to be a locally adapted strain that is grown by your non-certified neighbor. And it's important for us to be able to use those locally adapted strains.

I am very interested in helping to make sure that this isn't too burdensome on organic farmers, getting the

organic seed usage a little bit stronger, and I think that's about it. Thank you.

CHAIR JOHNSON: Thanks, Katie. We appreciate you fitting us in while you're in the middle of planting.

Questions from the Board?

Franklin.

BD. MEM. QUARCOO: Katie, thanks for that comment. If you can just expand a little bit on what do you mean by treading carefully in product items in making the transition and how it will impact small-scale farmers.

MS. JAGGER: Yeah. I know that a lot of small farmers depend heavily on non-organic seeds, and margins are tight for all farmers. And I know that the availability of organic seeds doesn't currently -- the traits available of the organic varieties are not sufficient yet to meet the needs of organic farmers.

And I do think that as soon as the NOSB or the National Organic Program requires 100% -- or moving towards 100% -- organic seed usage, it will spur an enormous amount of investment in organic seed. And there will be a lag, but that lag will catch up very quickly because the market demand will be there.

And I know that there are some pretty smart people who are thinking about how to do this in a way that would work for smaller-scale farmers or for any organic farm. And

I know that there are models in other countries that seem to have worked where there is an analysis of each crop, and understanding which crops already have suitable organic varieties -- enough suitable organic varieties -- that wouldn't be too difficult for farmers to use 100% organic seed for that crop. I would advocate for that as one strategy.

And then, as more and more crops become more available with suitable traits for a broad enough range of growers organically, then they would become required. That's one strategy that I've heard of that seems like it could work, but I'm sure that there are other strategies out there that could work.

BD. MEM. QUARCOO: Thank you.

MS. JAGGER: Does that answer your question?

BD. MEM. QUARCOO: It does.

MS. JAGGER: Okay. Thank you.

CHAIR JOHNSON: Thank you.

Any other questions from the Board?

(No response.)

CHAIR JOHNSON: Okay. I'll ask you the same thing I asked Jeff earlier.

So if an organic producer came to you and said I want to buy seed from you this year, and you weren't able to provide it organically, if there was a time horizon attached

to their commercial availability search -- so if the certifier said, okay, you couldn't get it this year, what are you going to do to make sure you get it next year -- would that, do you think, increase use of organic seed?

Like, for example, would that give you time to plan to bring a new variety into your mix and offer it if you knew that someone was going to need to buy it next year? Or on some other time horizon?

MS. JAGGER: It's a great question. We are so small, and we do look for input from our local organic farmers as far as what varieties we will grow. One year is a pretty short timescale, especially for biannual crops which obviously take two years to produce seed.

Generally our planning gets done in December, planting happens April through June, harvest is September through the following July. So I think a little bit more than a year notice would be required, yeah.

CHAIR JOHNSON: That's really helpful. Thank you.

All right. Any other questions from the Board?

(No response.)

CHAIR JOHNSON: I want you to get back to planting. Thanks so much for your comments.

MS. JAGGER: Thank you so much for slogging through all of this. I really appreciate it. Great work, everyone.

CHAIR JOHNSON: Thank you.

All right. We're down to our last few. Ellie Hudson, followed by Nate Powell-Palm, and then Nicole Dehne.

Ellie, are you with us? There you are, go ahead.

MS. HUDSON: Hi. I'm Ellie Hudson, Executive Director of the Accredited Certifiers Association, or ACA. We are a 501(c)(3) nonprofit representing 62 certifiers and other members of the organic community that share in our mission of consistency and collaboration in organic certification.

On behalf of ACA, I thank Board members for your service, noting as others have that the current vacancies have placed a greater percentage of the work on each of you. On that topic, I will also state for the record that ACA is especially concerned with discussions taking place without certifier representation on the Board.

First, an update on risk-based certification. As we've commented before, leaning into a risk-based approach enhances certifiers' ability to verify compliance and ensure organic integrity while allocating certification and inspection resources more efficiently.

ACA is driving this transition to risk-based certification through significant investments in education. Our Academy online platform, and Academy Live, its in-person

and regional counterpart, continue to provide necessary training for more sophisticated, critical decision-making.

On Residue Testing for a Global Supply Chain, the ACA's Residue Working Group has finalized practical tools and best practices to help certifiers evaluate and respond to the detection of prohibited substances. ACA supports incorporating risk criteria into residue testing, noting that this aligns with current practices.

However, we are concerned that limiting the cost recovery component to cases only where intentional application can be proven, this risks inconsistency. We recommend a risk-based approach for allocating testing costs.

And last, on the organic workforce, many dedicated professionals across the country have been supported by TOPP funding to build innovative programs and facilitate transition to organic. Their work -- spanning technical assistance, event planning, workforce development, and more -- has guaranteed that essential resources reach those who have needed it to ensure the program's ongoing success. Shout out to the TOPP people.

As the TOPP program sunsets this year, I want to issue a call to action to all of us. We need to do everything we can to retain this dedicated workforce into positions where they can continue to contribute to organic.

Not only will it be a lost opportunity if we fail to retain this brain trust, it is also the right thing to do. We all need to get to know our local and regional TOPP people and take care of them.

Finally, we want to acknowledge our partners at NOP, public servants who are committed to the organic sector. Organic is a public-private partnership success story, and none of it would happen without all of this collaboration. More detail on our positions, including these topics as well as e-commerce labeling and organic seed usage, is available in our written comments.

CHAIR JOHNSON: Thanks, Ellie.

Questions from the Board?

(No response.)

CHAIR JOHNSON: All right. Thanks for your time.

All right. Nate Powell-Palm is up next, and then we'll do a final sweep to see if we've got Nicole Dehne or Bryce Irlbeck.

Hi, Nate. Go ahead.

MR. POWELL-PALM: Hi, everybody. I'm Nate Powell-Palm. I'm an organic farmer in Montana. First, I want to thank the Board and the USDA staff for allowing me to provide my comment later in the schedule today. As many of you know, we're deep in spring field work on our farm, and I'm incredibly grateful to be able to spend time tending to

the farm while also participating in this process, so thank you.

More importantly, I want to express my deep appreciation for you Board members and the staff who continue carrying this work forward. The work of the NOSB is often demanding, technical, sometimes exhausting, but it matters just tremendously.

We're operating in an increasingly volatile world. Consumers are facing uncertainty, economically, socially, environmentally. And in this environment, organic continues to serve as a refuge for consumers and eaters seeking to participate in a food system built on integrity, having transparency, and providing just a fair shake for farmers and consumers.

And that integrity does not exist by accident. At the foundation of the organic system is a simple but incredibly powerful act. Every single certified organic operation is visited every single year by an actual person, the organic inspector. That annual inspection requirement remains one of the most important differentiators between organic and many other claims in the marketplace.

Organic is not simply a marketing term of self-attestation. It's a verified system grounded in documentation, observation, and accountability. As we move forward, I would encourage us not to reduce or weaken

inspections in the name of efficiency. Instead, we should focus on making inspections even more robust, targeted, effective, especially through the use of modern tools and improved verification systems.

There are enormous opportunities to strengthen reconciliation, your mass balances, traceability, and oversight, while still supporting inspectors and certifiers in conducting meaningful on-the-ground inspections.

I want to specifically applaud the Compliance, Accreditation, and Certification Subcommittee's work as well. The committee's efforts to elevate downstream notifications when organic integrity has been compromised represents an important and practical step towards strengthening trust throughout the supply chain.

Rapid communication and transparency are essential to maintaining confidence in the organic seal, especially as markets become larger and more complex. And at the end of the day, organic succeeds because consumers believe the system is real, that it is enforced, and that the people involved are operating with integrity.

Finally, I just want to close out with a heartfelt shout out to all of my fellow NOSB-ers and the NOP for the incredible work serving organic farmers, eaters, and everybody who is just hoping the world gets a little bit better. So thank you, everybody.

CHAIR JOHNSON: Thanks, Nate. I appreciate you taking time to be here.

Questions from the Board?

Cat, go ahead.

BD. MEM. MCCLUSKEY: Hi, Nate. Good to see you. Thanks for taking time during planting season to come give comments. Can you elaborate on your comment about organic seed and consumer trust in the label?

MR. POWELL-PALM: Sure. I don't know if I mentioned organic seed, but I'm happy to talk about it. So I see organic seed as this really -- foundationally, I see it the way that the Seed Rule works right now as such an important component of making sure that organic has access to the most excellent genetics everywhere.

When we look at all of the varieties developed around the entire country, and how regionally specific they are, it's really cool that we have a way to identify the goalpost -- which is all organic seed usage -- but also a path of saying, first and foremost, we're going to use the best seed we possibly can.

I would circle back, and this idea has been brought back a lot of times. There is an information deficit for what organic seed is out there, and how it's being described as whether or not it's appropriate for the geographic area that farmers are working in.

Specifically, I look at when the organic seed search is applied, and a farmer describes where they looked or what they looked for -- I say this with all love -- a lot of farmers are looking for brand names, and they're not looking for specific traits that could possibly be available. They're looking for X Brand 102, and they're not saying I want a 95-day corn that has this sugar content and these other characteristics.

And so I see it as this really cool opportunity to try to make just a more robust data set, either through a database or some other publication, saying what seeds are available in your area. And I think that just kind of clears the air.

From a policy point of view, I am looking at just the marketplace as it currently sits. It's tough out there. There's a lot of hardship farmers are experiencing. And I really appreciate what an opportunity the seed discussion presents for seed sellers. I have not heard, nor do I possibly prescribe to myself, the idea that it's going to be a big help to farmers. And I think that's where we want to strike that balance.

We do want better organic options, but we also want to make sure organic farmers have the absolute best genetics available. And I think we just clear this all up by having a really awesome, well-publicized central database

of what could I get for my wheat crop in Montana, where would I get it, and does it have the attributes.

And I can easily then say to my inspector, this is proof that it doesn't have the attributes. Or my inspector can say to me, this is proof that there's no reason you're not buying this. And we can kind of just call a spade a spade.

Is that what you're asking, Cat?

BD. MEM. MCCLUSKEY: Yeah. Thanks so much, Nate. Yes, I continue to read and hear comments around an organic seed database, so I just want to note that, and availability, transparency.

Nate, your comment about seed sellers versus farmers, where do you put a seed farmer on that spectrum?

MR. POWELL-PALM: A very important but very acute minority. When we look at the number of acres that go into producing seed, it's going to be tiny. And so I am an organic seed grower. So I say this with all of my own self-interest on the table, that I love growing organic seed, and I love seed houses that buy my organic seed because it's usually a better price for me, honestly, than my regular food crops.

But it's also a very small part of my operation. And I think it's going to be a pretty small part of most people's operations. And so when I think about what's going

to keep me on the land and give me hope that my kids are going to be able to farm as well, I'm not going to put growing the seed into that bucket.

And it's an imperfect world, you know. I want to say, like, seed growing is awesome. It's really, really fun. But I have to weigh it against my overall farm viability, and my ability to produce excellent food grade crops outweighs the seed markets that are available. And I would say with some confidence that's going to be true for almost all seed growers.

BD. MEM. MCCLUSKEY: And are you talking about all crop types?

MR. POWELL-PALM: I would say all crops too, yeah.

BD. MEM. MCCLUSKEY: Thanks, Nate. I appreciate your comments.

MR. POWELL-PALM: Thanks, Cat.

CHAIR JOHNSON: All right. Any other questions from the Board?

All right. Thanks so much, Nate.

MR. POWELL-PALM: Bye, everybody.

CHAIR JOHNSON: Okay. Last call for Nicole Dehne or Bryce Irlbeck.

(No response.)

CHAIR JOHNSON: All right. In that case, that concludes today's public comment webinar. Thanks to

everyone who provided comments to the Board today and Tuesday. I can't reiterate enough how much your comments are crucial to our work. So, grateful for all the input that has come in today and Tuesday, as well as in writing, and we'll hear a few more next Tuesday in person.

So thanks to all of you for participating in the process, and we'll see you -- some of you at least -- in person in Omaha. And you can also follow along on Zoom when we meet next week, starting on Tuesday. Take care, everyone.

(Whereupon, at 2:54 p.m., the virtual hearing in the above-entitled matter was concluded.)

CERTIFICATION

This is to certify that the attached proceeding before the:

NATIONAL ORGANIC STANDARDS BOARD

IN THE MATTER OF: **SPRING 2026 NOSB WEBINAR**

PLACE: **Zoom for Government**

DATE: **May 7, 2026**

was held according to the record, and that this is the original, complete, true and accurate transcript which has been compared to the recording accomplished at the hearing.

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Elaine M. LaRosee, CDLR

Official Reporter

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In The Matter Of:

NATIONAL ORGANIC STANDARDS BOARD (NOSB)
SPRING 2026 BUSINESS MEETING DAY 1

Vol. 1
May 12, 2026

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UNITED STATES DEPARTMENT OF AGRICULTURE

NATIONAL ORGANIC PROGRAM (NOP)

NATIONAL ORGANIC STANDARD BOARD (NOSB)

SPRING 2026 BUSINESS MEETING

DAY 1

Tuesday,

May 12, 2026

Embassy Suites by Hilton

Omaha Downtown/Old Market

555 S. 10th St.

Omaha, Nebraska 681020

National Organic Standard Board (NOSB) Members

Allison Johnson, NOSB Chair
Amanda Felder, NOSB Vice Chair
Andrea Hatziyannis, NOSB Secretary
Kathryn Deschenes
Nate Lewis
Cat McCluskey
Dilip Nandwani
Corie Pierce
Franklin Quarcoo
Javier Zamora

National Organic Program Staff

In Person:

Jennifer Tucker, Deputy Administrator

Erin Healy, Division Director

Jared Clark, Assistant Division Director

Michelle Arsenault, NOSB Advisory Committee Specialist

Johanna Mirenda, Agricultural Marketing Specialist

Andrea Holm, Agricultural Marketing Specialist

Penny Zuck, Agriculture Marketing Specialist

Alexis McInerney, Program Analyst

Virtual:

Andrew Malone, Assistant Deputy Administrator

Heather Kumar, NOSB Food TechnologistDevon Pattillo, Agricultural Marketing Specialist

Jason Edmonson, Agricultural Economist

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P R O C E E D I N G S

(Time: 9:00 a.m., CST)

DR. TUCKER: Okay, good morning, everybody. Welcome. My name is Jennifer Tucker. I'm the Deputy Administrator of the National Organic Program. Welcome to all our Board members and our audience, both in the room and online. It is my honor to officially open the Spring 2026 National Organic Standards Board meeting. Yay. (Applause.)

DR. TUCKER: Okay, let's start with some official business. This meeting, like other meetings of the National Organic Standards Board, is being run based on the Federal Advisory Committee Act and the Board's Policy and Procedures Manual. I am your designated federal officer. Transcripts for all segments will be posted once completed.

Just a little bit of housekeeping as we're in a new space together. Restrooms are out and to the left or the right as you're walking down the hall. The exits are immediately outside if you need an emergency exit.

As part of our opening, I would like to introduce the National Organic Program team. First, I'd like to thank our most visible staff member, Michelle Arsenault, our Advisory Committee Specialist. Thank you, Michelle.

(Applause.)

DR. TUCKER: We also have several other team members from NOP here: Erin Healy, Jared Clark, Andrea Holm, Jo Miranda, Penny Zuck, and Alex McInerney -- Alexis McInerney. Sorry, Alexis. And listening in virtually, we have Andrew Malone, Heather Kumar, Devon Patillo, and Jason Edmundson. All of them play different vital roles to make this meeting as successful as possible.

Thank you all for your work and dedication.

(Applause.)

DR. TUCKER: Okay, after our welcoming speaker, I'll turn the meeting over to Allison Johnson, our Board Chair, who will facilitate Board introductions. After some Board reports, we'll do a Program Update and hear from members of the Transition to Organic Partnership Program or TOPP. After a break, we'll spend the afternoon listening to public comments. Thank you to all who came to speak. Tomorrow, we'll begin subcommittee work, which will continue into Thursday. We'll close with Other Business and A Look Ahead.

So now, I am pleased to introduce our welcoming speaker, Sherry Vinton, who is the Director of the Nebraska Department of Agriculture or NDA. Director Vinton was appointed in January 2023 and oversees all programs of the agency. This includes animal disease

traceability programs, regulatory programs for plants and animals, food safety and consumer protection programs, and the promotion of Nebraska agriculture and its products.

Starting in 2019, and just prior to becoming NDA's director, Director Vinton served as Vice President of Nebraska Farm Bureau. She was also a member of the Board of Directors of the Nebraska Farm Bureau for six years. She is a lifelong Nebraskan and is a fifth-generation rancher. We truly appreciate her taking her time out of a very busy schedule to welcome us today.

Director Vinton, I turn it to you. Thank you for being here.

(Applause.)

DIRECTOR VINTON: Well, thank you very much, Jenny.

Good morning, everyone. It is truly a pleasure to welcome you here to Omaha for the National Organic Standards Board meeting. I just want to say we love having company in Nebraska, so thank you for being here. Truly, we are a state that is an agricultural powerhouse, but we don't have many people here, so it's always fun when new people come and we get to learn new things. As Director of Agriculture, it is so important to see people here for the future of agriculture that are ensuring consistent, enforceable standards for our consumers and to

protect our farmers and ranchers and what we produce.

Here in Nebraska, we're known as the beef state, and that has been my livelihood my whole adult life. In 2023, Nebraska ranked third in the nation for gross agricultural receipts, but if you put that on a per capita basis, we're actually first. Nebraskans are very, very hard workers, and it's a testament to the profound impact that farming and ranching have on every Nebraskan. One in four jobs in our state is directly attributable to agriculture.

So this year, on January 1st, we're known, as I said, as the beef state. It's a great place to have a steak while you're here. We had over 2.8 million cattle on feed, and we surpassed Texas. In Cherry County, Nebraska, it is the number one cow-calf county in Nebraska. We also have number two and number three, Kester and Holt. So that forms the basis of what we call the Golden Triangle, or a value-added circular economy here in Nebraska.

Now, that basis is on 24 million acres of rangeland. In our state, it's half rangeland and half crop ground. And so it's very complementary here for what we do and we try to make the most of it. Forty percent about of our one billion bushels of corn we produce every year goes to livestock feed. A great portion of that goes

to producing over 2.5 million gallons of ethanol every year. So the basis of that would be -- I think we're competing with a survivor-style wedding event -- so I would say agriculture was the original survivor event, wouldn't you?

(Applause.)

DIRECTOR VINTON: Yes. And agriculture, we all know, is the basis of everything. And we can talk regenerative and we can talk organic, but that's what agriculture was to begin with. We gave it new names, but truly, what I was going to talk about was our sustainability here in Nebraska.

You are on top of the deepest saturated thickness of water in the world in our great sand hills. And when you think of the Ogallala Aquifer, many people think of it as like one big underground pool. Well, it's compartmentalized. It's different and there are different geographic formations underground. I'm not a hydrologist, but it's been explained to me. So here in Nebraska, we're very unique. We're pioneers in sustainability as far as the aquifer goes.

In the 70s, they created something called our Natural Resource Districts, which integrated surface water, groundwater, and soil conservation all together based on watersheds or water basins, of which we have 23.

We have 80,000 miles of rivers in Nebraska, too. So we're actually a water machine. And that's part of the reason why our agriculture has become so successful.

Originally, it was pretty hard scrabble, especially in the arid western part of the state. In Nebraska, for every 50 miles you go west, you lose an inch of precipitation annually. So while you might have 35 or 40 inches of moisture here in Omaha, you're down to maybe 16 when you get to the western part of our state as you head towards Colorado. So that's part of the reason that irrigation was invented here in Nebraska.

Center pivot irrigation, we have the four major companies here in Nebraska that are world-renowned. And off of that, there's been many spin-off technologies where you can apply fertilizer. You can apply an organic fertilizer. People pump that through their pivots with precision. And other technologies have come off of that. I think there's a product called the Zipper that they use to funnel traffic. That was actually invented by Valmont. So anyway, one of the unique things here is our natural resource districts and our water.

As you know, and what you do that is so important is measuring, monitoring, and verifying. And Nebraska was a pioneer in that area. Our consumers demand it. It's important. And they're willing to pay more for

it. And we found that here. And it's important to the farmers and ranchers that there's integrity in that program. If we're going to go to the work to meet a certain production standard, measure, monitor, and verify, it should mean something and be enforceable.

Nebraska also has another unique feature, and it's called our unicameral. We are the only state in the nation that has a one-house legislature. We only have 49 senators. It is nonpartisan, and it is a very interesting animal. Lobbyists have told me they love it and they hate it because sometimes it's easier to have things happen, but things can happen so fast there, too. It was originally started in 1931. The reason the unicameral came about was a cost savings measure. We met fewer days a year, and we paid less legislators, and Nebraska has a balanced budget. We don't have deficit spending in Nebraska. And that also started back then. So because of this unicameral, and I think that might be the reasons why a very unique bill, the first in all the nation passed this year, and it's a data privacy act for farmers. And what it does is it guarantees that you own your data. Your data cannot be sold or given or transferred to somebody else without express consent, not just the user agreement. It was very much lobbied against by certain equipment manufacturers and people, but nonetheless it

passed. So it'll be very interesting to see how the rules and reg process goes for this particular piece of statutory legislation.

As I said, a successful model of agriculture in Nebraska is truly a full value added model. Value added agriculture, we also call it the bioeconomy. Nebraska has the largest campus for fermentation and wet milling, I believe, anywhere in the world. The Cargill campus is at Blair. They have seven co-locators, and they, through wet milling and bioprocessing and further fermentation, they create plastics. They create enzymes. They have lactic acid. They have omega-3s, all sorts of products, in addition to traditional animal feeds, sweeteners, those types of things you think about. It's truly, truly amazing if you ever get an opportunity to visit it.

But one of the things that's very interesting I'm finding is the organic standard for the bioplastics that they produce, which are truly an environmentally friendly, biodegradable product, how do we verify that all the way through so it can go into landfills? And how can we guarantee it will biodegrade? So that's some of the important work that you're doing that goes through.

Let me see. We do stand out for our agricultural innovation. As I said, center pivots were invented here. I would also say that some of the early

guidance control systems for farm equipment were invented here. There are some gentlemen that are Mennonites out in the western part of Nebraska, and I think they're actually credited with inventing one of the early guidance control systems back in the day.

I want to share our state's motto. I think it's a bit of a gem. It is "Equality Before the Law," and it reflects our commitment to fairness, to opportunity, and the values that resonate both in our governance and I would say in our approach to farming. So I hope you'll carry that spirit forward as you finish your conference, because we all want to create a sustainable, productive, and equitable future.

While focusing on organic excellence, I would say that there are a few truly unique Nebraskan foods. One of those is Dorothy Lynch salad dressing, and I think it has a high component of high fructose corn syrup and soybean oil. Whether it's organic or not, I don't know. It's a bright orange. It's world-renowned, and you either love it or hate it. I would encourage you to order Dorothy Lynch on a salad and at least give it a try.

The Reuben sandwich was invented in Nebraska at the Blackstone Hotel not far from here. There was supposedly a late-night poker game, and there was a Lithuanian-born grocer, and his name was Reuben Koloski,

and he requested a sandwich, and there was a well-trained chef there, and he created the Reuben sandwich for him.

Nebraska is also famous for Renzes. Renzes are a fresh-baked dough that's filled with seasoned ground beef and cabbage, and they're excellent, even with maybe some Dorothy Lynch salad dressing on the side.

And, of course, Kool-Aid was invented in Nebraska. So, some people thought it was a childhood staple. Personally, that's not what my mom gave us; we had water, orange juice, or milk, but Kool-Aid was invented here in Nebraska, and I think it's interesting, it's all about the marketing. The name was originally called Fruit Smack, so do what you want with that.

Nebraska established the Tractor Test Lab, which is still in operation, and maybe that's why we're so serious about data privacy here in Nebraska and realize that. I think it will probably morph into something like that. I don't know. But in 1920, there were many false claims about equipment and tractor performance, and so, in the name of fairness, Nebraska started testing all tractors. And so, to use a tractor in Nebraska, you had to have a permit, and it had to be tested, and it became nationally known as a US testing facility. So, a few things that I would encourage you to take advantage of while you're here.

Another thing Nebraska is known for is Union Pacific, and it will soon be the first truly transcontinental railroad. Omaha is headquarters to Union Pacific Railroad, and their motto was always, "We Can Handle it for You." Well, as you know, producing your products doesn't mean anything if you can't process them and ship them where you need them to be shipped to, and so that's another part of our circular value-added economy is Nebraska is actually a hub for transportation as you're here.

So, one of the things you can see, and it's only a short two-minute walk from here, you can Google it, is Durham Museum, and what Durham Museum was, was the busiest Union hub for passenger trains back in the 1930s. They handled 64 passenger trains a day, over 10,000 passengers, and it is a beautiful art deco facility for the Union Station there. It's completely restored. They have revolving exhibits, so if you have a little bit of spare time, like I said, it's only a two-minute walk, and it's a wonderful facility to visit.

Something else Nebraska has is a world-class zoo. We've got the Henry Doorly Zoo, and it has surpassed what used to be the San Diego Zoo as the best zoo in the nation. It's got the world's largest indoor rainforest, the Lead Jungle. It's one-and-a-half acres, and it

features many exotic animals, like pygmy hippos and tapirs, and it attracts over a million visitors annually. So, I don't know if you have any events planned there. Sometimes events are planned there in the evening, but I would encourage you to take advantage of that attraction while you're here, as well.

So, with that, once again, welcome to Nebraska. We're excited to have you here. We're excited about the work that you do. I have always said years ago when I was on the ranch, words matter. Standards matter. What we do matters.

So, thank you very much, and I hope you have a great conference.

(Applause.)

DR. TUCKER: Thank you very, very much, Director Vinton. We appreciate your being here.

DIRECTOR VINTON: Thank you.

DR. TUCKER: Take good care.

Okay, and now I will turn the mic over to Allison Johnson, our Board chair. Allison will be introducing Board members, all of whom devote hours and hours of volunteer time to serve the organic community. Let's give the full Board a big round of applause and appreciation.

(Applause.)

DR. TUCKER: All right, Allison, thank you in advance for a great meeting.

CHAIR JOHNSON: Thank you, Dr. Tucker.

For those of you watching online, we have a raucous wedding planning survivor-style conference going on next door, so lots of extra cheering, and I think we can match that energy here for organic of the room. So, really happy to be here with you all, and if we have some strange expressions, it's because there's a lot of noise coming in.

So, welcome everyone who's here in the room and online. We're gonna kick off with Board introductions, and then we'll go through the run of show for the next few days. So, Dilip, let's start with you, and then we'll go clockwise around.

BD. MEM. NANDWANI: Good morning. Thank you, I'll just make it. It's good now, Michelle? Thank you. Good morning, my name is Dilip Nandwani. I'm a professor at the Tennessee State University. My program is on organic agriculture. You've been hearing me the past four years. This is my fifth year, and I'm serving here on the board on environmental conservation as a scientist seat. Glad to be here. Thank you.

BD. MEM. QUARCOO: My name is Franklin Quarcoo. I'm from Tuskegee, Alabama. I'm a faculty member there.

I'm an entomologist by training. And I currently occupy the environmental protection and resource conservation seat. Thank you.

BD. MEM. PIERCE: Good morning, my name is Corey Pierce, and I'm a farmer up in northwestern Vermont. I own Bread and Butter Farm. We grow vegetables and grass-fed beef cattle. And I'm sitting in a farmer's seat. Thank you.

MS. DESCHENES: Kathryn Deschenes. I live in Colorado and work for Danone US. I am sitting in the handler's seat and starting my second year.

MR. MERCIER: Good morning, I'm Dr. Cat McCluskey. I'm the executive director of Organic Seed Alliance. I sit in the environmental protection chair as well, and this is my second year.

BD. MEM. ZAMORA: Good morning to everyone. Javier Zamora from Watsonville, California. Certified organic farmer, survivor for 14 years. It's tough for small family farms. Happy to be here and happy to have a little bit of a piece of this table for the organic movement in our beautiful Salinas Valley that feeds the world. Thank you.

BD. MEM. LEWIS: I'm Nate Lewis from Olympia, Washington. I'm in my fourth of five years. I sit in the resource conservation seat representing the interests of

the farmland protection community. I work for Washington Farmland Trust. Thank you.

SECRETARY HATZIYANNIS: Hi, I'm Andrea Hatziyannis. One of the senior business managers for Sprouts Farmer's Market. One of the leading natural retailers in the United States that focuses on organic and natural products. And I'm sitting in the retailer's seat. This is my second year. I live in Phoenix, Arizona.

VICE CHAIR FELDER: Hi, Amanda Felder. I'm based in Salinas, California. I work with Taylor Farms. I am on your handler seat. And I'm also your vice chair.

CHAIR JOHNSON: And hello again. I'm Allison Johnson. I'm a senior attorney with the Natural Resources Defense Council based in Oakland, California. And this is my fifth and last year on the board in the consumer public interest seat. Really excited to be here with you all today.

So we're going to do a quick overview of the agenda just to orient you to the next few days. I think we have a slide coming up here. Oh, I'm in charge of the slides. We do have a slide coming up here. So today is a lot of business. We'll have our Secretary's Report, the NOSB Report. We'll hear an update from the Program. And then we'll hear from the Transition to Organic Partnership Program some presentations. We'll have a lunch break.

And then this afternoon will be public comments.

Tomorrow we'll have our Livestock Subcommittee, an expert panel on seed, followed by the CACS Committee, and then lunch. And in the afternoon we'll have the Crops Subcommittee.

Thursday we'll have Materials, and Policy Development, and Handling. And then a break. And we'll finish up with Other Business, go over our Work Agendas Looking Forward, and have a few closing remarks.

So with that, I will next turn it over to Andrea, our secretary, to give the Secretary's Report.

SECRETARY HATZIYANNIS: Thank you, Allison.

I have read and reviewed the minutes from our Fall 2025, which was really hosted in January of 2026 due to much delay. Wanted to ask the Board Members if they have also read and reviewed the minutes, and if there are any updates or edits that you'd like to submit?

(No response.)

SECRETARY HATZIYANNIS: None at this time.

I'd also like to thank Michelle and the NOP staff for preparing the Secretary's Report and the Minutes. Thank you. All right. We can conclude that we put the minutes into record. Thank you all.

CHAIR JOHNSON: Thanks, Andrea.

All right, so I'm going to give you our 2026

NOSB report. We're going to spend the meeting over the next few days debating how we can make organic better, less harmful to the environment, more protective of human health, and more appealing to farmers and consumers alike. But before that, I want to ground us in how good organic is already, because it's amazing how good it is.

I sit in the consumer and public interest seat on the board. And lately, there's been a new wave of deep concern about chemicals in our food system, from synthetic pesticides and fertilizers to food additives. We're concerned about raising kids on foods with traces of harmful chemicals. We don't want to breathe toxic air. We don't want to drink polluted water. We don't want to farm in contaminated soil. We don't want to see chronic diseases rising and wonder how much of that is due to chemicals in our food system. And we really don't want to feel trapped in a system that doesn't give us much choice in the matter.

But unlike so many problems we face today, we have a solution to this one. It's organic. This sector has been producing healthy, delicious, sustainable food without these chemicals for decades. And we're continuing to innovate and ask the right questions. What's really necessary? What inputs do we need? What additives haven't really panned out overall?

I'll highlight just one of hundreds of examples. Neonicotinoids, or neonics, are neurotoxic insecticides that are applied to most of the corn seed planted in the United States, along with many other field crops. These chemicals are highly effective at killing bugs. And when they were brought on the market, they were considered a safer alternative to other synthetic insecticides. But a couple decades later, we're learning that lesson that we've learned over and over; if something sounds too good to be true, it probably is.

These chemicals are actually extremely harmful. They're driving pollinator die-offs. They're linked to mass losses of birds, to fisheries collapse. Research is also connecting the dots between neonics and developmental issues in mammals, including humans. These chemicals have been found in half the US population. More recently, they were found in 95 percent of pregnant women. Think about that.

But farmers need them, right? No. Research has also found that these seed-drivens rarely provide an economic benefit to farmers. But guess what? Every single organic crop is already grown without neonics on the seed or otherwise. Organic farmers are taking a close look, asking the right questions, and choosing our collective health. And they show that it works.

And so the process continues here. At these meetings, we're always thinking about how to do more, how to make organic even safer, and the part that is so important from where I sit, how to make sure more people can and do eat organic. Organic should be for everyone.

So with that grounding in our mission for the next few days, we have a lot to be thankful for. First, a big thanks to Dr. Tucker and the NOP staff, and especially Michelle, for always going above and beyond to make sure these meetings run smoothly. Your experience and commitment to the work is at the core of the Organic Label's success, and we really couldn't do this job without you all.

Really thrilled to meet some of our newer board colleagues in person for the first time and get to be here in community with you all. This group has been doing impressive work with a slimmed down team as we wait for the appointments of five new members. It's been a tough workload to juggle at two-thirds capacity and without the benefit of some of the really key perspectives on the board, but we're forging ahead with what we have. We're listening to stakeholders and moving the work forward deliberatively. We'll discuss some of it this week, and we'll do a lot more in the fall.

Serving on this board is a beautiful balance of

challenges and rewards, and I hope you all out there are thinking about applying to fill three more seats, including mine, that will turn over in January.

I want to also extend an extra thanks to the stakeholder community. We were so grateful to have our fall/winter meeting in January, but we know for you all that means engaging with three meetings this calendar year, and that is a lot to juggle. We're really appreciative of your grace and flexibility and the ongoing advocacy to keep organics strong and healthy.

And finally, just a heartfelt thanks to our network of support that allows each of us to be here to serve on the board and take time away from our other duties in life, from covering crucial farm work to caring for kids and pets and parents and other loved ones. Life just doesn't stop because it's NOSB meeting time, and so we're so grateful to the big NOSB family that makes this work possible.

So with that, I'll turn the mic over to our wonderful vice chair, Amanda.

VICE CHAIR FELDER: Good morning, everybody. I want to warmly welcome all of you to this year's NOSB spring meeting in person. It is truly exciting to finally meet in person again after a year of virtual meetings. While our virtual meetings allowed us to stay connected

and continue important work, there is something special about being able to gather face-to-face and be human, to share ideas naturally, strengthen relationships, and review the sense of camaraderie that makes this organization so valuable. This past year reminded us the importance of adaptability, resilience, and collaboration. Even from a distance, this group continued to demonstrate commitment, professionalism, and a shared dedication to our mission.

I especially want to acknowledge the resilience this board has shown while operating with fewer members as we await new appointments. Despite those challenges, the work has continued, responsibilities have been carried forward, and everyone has stepped up where needed. That level of dedication speaks volumes about the strength and commitment of this team.

Today is not only an opportunity to continue our work, but also a chance to reconnect, learn from one another, and build momentum for the future. I encourage everyone to take full advantage of the conversations, discussions, and networking opportunities throughout our time together these next few days. We have an exciting agenda ahead. I'm confident our time together will be productive, engaging, and inspiring.

Thanks again for being here, all of your

continued support for the work that we do, and your commitment to organic. Look forward to a successful meeting, and seeing what we can accomplish together.

Thanks, Allison.

CHAIR JOHNSON: Thanks, Amanda.

All right, so next I'm going to hand the mic over to Dr. Tucker for the NOP updates.

DR. TUCKER: Thank you very much. Thanks for the great comments to open us up and set the stage here.

So we've been at this for about a half an hour, so I'm going to, before I start, because I'm going to talk for a little bit, Erin Healy's going to follow me, and then we're going to have Q&A. So before we go into that, let's just stand up and just shake it out a little bit, because it's been a half an hour, and it's the morning. Just a second. Please don't leave.

(Pause.)

DR. TUCKER: Yeah. All righty, I have learned the power of stretching recently, and it's life-changing.

Okay, welcome again to the National Organic Standards Board meeting. This is our NOP Update. Again, I'll be talking about a few things here, and then I'm going to turn to Erin, and then we'll open it up to Q&A with the Board.

I'm doing this one a little bit differently.

Often, I kind of do a big, long run-through for everything going on in the Program. We just did that in January, right? So today, I actually decided to focus into three key topics.

First, I am going to give an overview of Program priorities and recent updates, particularly some of our successes in import oversight and enforcement. I then want to spend some time talking about the Common Organic System Plan, or Common OSP. So last time we were in person, I did a Call To Action, and the community responded. So I would like to give kind of an overview of both the history of it, because I think it's important in understanding where we are and the current status. And then I'll wrap up with a discussion on advancing sound and sensible risk-based certification. This is a conversation that has also started in the last couple of years, particularly given what has felt like a lot of added work from the three regulations that we put in place in the l administration. So I want to talk about what that looks like and some of the challenges that that involves.
So that's a road map there.

Okay, let's take a look at key Program priorities. And these have not shifted since we last got together. These are the things that we are focusing on across the Program, across the different groups in the

Program. And so I'm going to take them a bit in order of talking about some of our successes.

Import oversight is the key activity that we engage with at the Program, and it touches a lot of these other topics as well, but is a initiative unto itself. And so I want to first highlight the role of our partnership with Customs and Border Protection, CBP.

So CBP actively works collaboratively with us to block fraudulent, noncompliant products from coming into the country. Since November of last year, when we returned from our shutdown, we've intercepted more than 1-1/2 billion dollars in fraudulent and noncompliant shipments. This has included targeted sampling on more than 12 cargo vessels, resulting in actions that compelled the re-exporting of more than 10 metric tons of commodities.

So the commodities that this involves has been soy in various forms. Soy continues to be a high-risk product, and we spend a lot of time focused on that commodity. However, we've also blocked some plant-based protein powders, teas, baking flour, dried herbs, and oil seeds. And so some items on that list have been consistent with last fiscal year, and some are, kind of, new players in the game here.

We are using import data to objectively

highlight where we need to be based on market import -- impact. So we noticed that our top imports, I reported on this in January, our top import is beef, and it comes primarily from Australia and Uruguay. And so that's the number one import consistently of organic product. And so that led us to put boots on the ground to do country commodity assessments in both of those countries. So we went to Australia, we went to Uruguay with teams to assess nationwide compliance of USDA organic operations with the standards. And we found, in general, that the system is working. And we do have some challenges in Uruguay, particularly with respect to enforcement of the origin of livestock new rule. And so we have found differing interpretations in Uruguay of how origin of livestock is implemented, and we are getting on top of that right away.

So that's one of the powers of strengthening organic enforcement. It helps us know where to go, what to do when we get there, and then what to do when we get back. So I think that's been a big win over the past year.

We've also worked with certifiers in the Black Sea region, we keep going back to that region, to identify and elevate oversight on 20 -- more than 20 suspect operations. We've continued monitoring new exporters, continued enforcement actions against handlers, and

directed sampling to test West African imports. A lot of our work is through certifiers, and certifiers continue to build and deepen their capabilities.

We've also strengthened the oversight of fresh product imports from South and Central America. So that's included investigating 15 organic shipments that were found to be fumigated at entry. And strengthening organic enforcement gives us the tools to detect that immediately so products do not enter the market.

We also launched two investigations of raspberries imported from Mexico. One case resulted in the destruction of more than 190 cartons. The second case involves multiple growers and exporters, storage facilities, connected operations in Mexico, three high-volume US importers, seven certifiers, and a referral to Canada's organic program. Overall, the compliance and enforcement team has resolved 392 complaints and has completed 305 investigations just this fiscal year. So they've made a lot of process improvements to take action quickly where needed.

I do want to just continue to emphasize the role of importers and their certifiers in protecting the market. As Allison said, if it sounds too good to be true, it is. And so importers, you have a responsibility to make sure that product is actually organic. This is

not a paper chase. This is integrity. And so we want to, as a community, continue to highlight the need for joint protection of the brand.

The Organic Integrity Database is an important tool for helping us do that. It continues to support an average of more than 4,000 monthly users, which is a lot of technology support needed, and generates more than 3,000 organic import certificates each month. So keeping that system up and running, responding to key certifier needs continues to be a really high priority.

We've also supported US producers by working with the International Trade Commission to establish more than 20 new harmonized tariff schedules, they're called HTS codes, for high-value, high-risk organic products. Little technical, little bit wonky, but it forces a change in the import system, where if a product is organic, brokers must claim it as such and must have an import certificate in order to move forward with the import paperwork. That's a big deal. Most of our imports are now covered by HTS codes, which is a huge win. So these give greater visibility into supply chains and strengthen our enforcement efforts.

We're continuing to resolve more than 80 percent of incoming complaints and inquiries within six months of receipt. Between mid-November and mid-April, we closed 26

appeals cases, and we conducted 16 on-site and remote accreditation audits of USDA-accredited certifiers. We conducted training with over 1,200 certifier staff and inspectors in person and online in the US and in Germany, and we continue to hold webinars and Coffees with the NOP to provide information and training to the certifier and inspector communities.

We are also continuing work on streamlining certification. We see the common OSP as an important component of this. I'll be talking about that in a couple minutes. And we continue to work with trade partners to facilitate trade and protect the market. We have team members in India right now doing a peer review with the Canadian Organic Program. That's an example where we're both overseeing the market and collaborating with trade partners to make their systems as strong as possible and to see how they're doing out there in the world.

Also, most recently, to open up new markets for US producers, we worked with industry, the Foreign Agricultural Service, and the United States Trade Representative to negotiate the Korean government's acceptance of USDA-certified wines produced with organic grapes as being equivalent to Korea's Organic Program. This secured labeling flexibility that creates significant cost savings for US winemakers and exporters.

I'm going to talk about standards in just a minute, but I wanted to take a look at the full breadth of Program activities over the last few months here. Okay. let's look specifically at standards. We do have an open proposed list rule right now. It's a proposed rule on the street. Comments close the 22nd of this month. You still have time to get in your comments on that. That was a big rule. We're looking forward to your feedback. We have gotten approval for and are drafting an inerts proposed rule. We are drafting a sunset renewal notice. We are continuing to analyze input on the compost topic. The Board finished its work on that in January, so we are looking across all the work done to date on that and working with the administration to decide next steps.

We've also taken the steps to start to renew the NOSB Charter that expires this summer, and so that is a process that goes through many offices at USDA. But that process has begun. And we continue other National List and different types of analysis work based on administration questions and on the work recently done by the Board.

So for example, the Board passed some recommendations in January. We are reviewing that and, kind of, determining how to likely combine those with other recommendations as they're generated by the Board.

Okay, I am going to pause for a second to drink a water and to allow everyone to think for a couple minutes. And then I'm going to go into the Common Organic System Plan.

(Pause.)

DR. TUCKER: Okay, so here is kind of just a brief overview. In late 2024, it was the last in-person NOSB meeting, we communicated the need for and a Call For Action for a common OSP. So the anticipated outcome, high level, is an updated compliant OSP template that's posted on the NOP website that can be adopted by certifiers. So for folks who haven't been around this for -- yet, this is kind of where we're going here, is an updated set of OSP templates on our website certifiers can choose to adopt, it's not mandatory.

And so I want to highlight what the problem statement is. The current template OSPs on our website have been at the Program -- on our website as long as I've been with the Program, which is like more than a decade, okay? So this has been a known big problem that we needed to update our OSP templates on the website.

And this has become a whole lot more than just a bunch of templates, okay? And so I'd like to talk a bit about how having a common OSP streamlined certification. Yes, we need updated templates, but again, this is more

than that. This is part of the overarching goal to streamline certification. The goal is to establish a common baseline and expectations for showing how to comply and how to assess compliance. It's both for operations and for certifiers. We've had a lot of new rules. And so looking at a fully compliant OSP that says, when you're holding that, it is compliant with a full set of regulatory requirements, is a big deal.

It will also support information sharing for investigations. Often we are encountering multi-supply chain -- multi-operation supply chains, multiple supply chains in the same investigation. Having a common OSP would make it much easier to look across those investigations to help create a full picture of what's happening.

It should also reduce the learning curve across inspectors and others who are working with multiple certifiers. Inspectors are open to this. They're also interested in having a common inspection form that goes with it. So one of our goals is to manage some of the human capital challenges with a shortage of inspectors. If you're starting with the same tools in the same language, it's easier to serve multiple certifiers. We have a lot of independent inspectors out there.

It also facilitates changes for operations if a

certifier exits. There are times where certifiers decide they don't want to do organic certification anymore. They exit, and operations have to find a new certifier. But more importantly for us at the Program, it will help detect changes by those switching certifiers. Unfortunately, particularly in the international market, when a bad actor knows the gig is up, they surrender and just go to another certifier. If there was a common OSP, we'd be able to look more quickly across the different applications to detect any inconsistencies as they move between certifiers. So those are some of the benefits of doing this.

The time is right for this. There have been some objections to a common OSP. Some certifiers have a great deal of pride, and they should in their OSPs. They see it as a competitive advantage. And there are a lot of operators who have been working with the same OSP for a long, long time. So the idea of changing is hard, and I acknowledge that. And continue to repeat the fact that this is an optional tool.

That said, I think the time is right for this. I think the time is right. And so what I'd like to do is just tell a quick story of how we got here to help, sort of, paint the picture of how much work has gone into this, and what a solid foundation we really have on this. And

so this project has actually spanned several years. So I mentioned before, we've known that outdated OSP templates were a problem for a long time. We knew we were going to be issuing a bunch of rules, so it was going to become more critical. But we hadn't started the process. So this was, sort of, during the pandemic and coming right out of the pandemic.

So I got a call one day from a guy named Frankie. Frankie Grundler. He's the head of a software company called Quick Organics, and he asked to meet me to talk about developing an OSP platform. Frankie's not the first guy who's come to talk to me about a common OSP platform. I have met with software vendors for years on this problem, and no one has been successful. So I talked to him, and I was like, Okay. you've got to go talk to certifiers and find out what they need. Oh, what's a certifier? Frankie had done his homework. He already understood the full certification system. He had already built something, because he had looked across certifiers and determined that a large number of components in the OSPs were common. They truly were already common. No one had done that work before, to look across the OSPs that were available to him. And he found, actually, we could build something here.

So I talked to him a few times, still pretty

skeptical. But he continued to do his homework, continued to build a base of farmers who were trying out his software, continued to evolve the software. He had a grounding in organic farming, and again, had really done his homework on looking at the overlap between the existing OSPs. So that was my first sense, that this person could actually pull this off. And it could actually help us drive forward a common OSP.

Sometimes the work begins with paper. Sometimes the work actually begins with technology. And in this case, it was my first sense that, gosh, we could actually get this done. We could get this done. So I strongly encouraged Frankie to connect with the Accredited Certifiers Association and other certifiers, and together, they ran with this. They did some really great work together. ACA tried really hard to get the common OSP done. But as I mentioned right up front, this was a big change management project. And they have a very consensus-based process. Consensus is wonderful, and it can make it very, very hard to get to closure. So they saw that challenge, and ACA very, very smartly reframed the task and came up with a transition production plan in March 2024. That was a tool we really needed for TOP. So it's still on our website.

It's a still great tool for farmers who are

thinking about becoming organic, but don't want to do a full OSP. It's called the Transition Production Plan. It's for crops and livestock. It was an important milestone. It did not, however, give us the common OSP for certified operations, which we really, really needed. So a few months later in October 2024, I decided to open it up and to try a different way of completing the project. ACA had done a lot of work, and it really needed a concentrated group to drive it forward and get it across the finish line. So I invited everybody in this community to step up and build a coalition. Any group could have heeded that call. In the end, though, it was three organizations who decided to go all in and to work this through.

And so I want to acknowledge those primary contributors as Quick Organics, so that's Frankie Grundler's company who first approached me, Wolf & Associates, and the Accredited Certifiers Association, again, ACA. So Frankie continued to work closely with group, and we had another person emerge as a absolutely key leader, Connie Carr.

Connie had worked for months to get this project to where it is today. She has invested a tremendous amount of time and effort. She was helped by consulting expertise from Wolf & Associates and working with ACA.

She got active participation from multiple certifiers across the ACA network. They've had a tremendous amount of structured feedback provided through review processes and ongoing input through existing working groups and informal collaboration challenges. Channels, sorry.

I want to note that this project was not funded by USDA, and it did not go through the Board process. This was a group of emergent leaders who decided to invest the time and resources to get it done. I've heard some cynical views on this. "These commercial companies are just in it for the money." "They're just being supported by deep pockets." And you know what? Maybe someday they will make some money. And certainly trying to build something makes you an expert that others may want to consult with or leads to a product that you can sell.

But I'm going to share that the leaders I've engaged with on this have been all in, and they've been all in because they think it's the right thing to do to move this sector forward. They've contributed substantive time, expertise, and labor because the work is worth doing for the betterment of this community. They've taken a lot of personal and business risk in doing so. These are not deep pocket folks, okay. I'm personally grateful to them. They've taken -- these are the folks who are in the arena. They're getting hit with arrows at every turn, they've

stayed standing, and they've gotten it done. So through this work, they've also built readiness at a level that we probably wouldn't have gotten if we tried to build this ourselves in NOP or tried to go through a public comment process.

So Quick Organics has continued to develop the software, and certifiers and farmers are using it. NOP has no connection to any software company for this, including Quick Organics. We do not endorse any software. We've not given them any money. And we have no access to their data. And farmers and certifiers are paying attention to the availability of this software. So market signals are pointing towards early adoption and a good amount of momentum.

Eleven certifiers in the US are currently willing to accept the common OSP documents. Some have already used -- are starting to use the compatible Quick Organics products to run their certification programs. So adopting certifiers collectively represent more than 12,000 certified operations, which is about 40 percent of all operations in the United States. So this level of early alignment, before we even posted the common OSP, signals more than adoption; it signals a convergence in the market.

We are establishing a shared language for common

certification that goes beyond the regulations as a tool, where operations, certifiers, inspectors, and reviewers can work with the same core structure and expectations. There's historically been fragmentation across forms, formats, and interpretations. We're translating into something more united. So again, something that goes way beyond templates. It becomes a common framework that can improve clarity, reduce redundancy, and strengthen consistency.

This happened because of broad industry engagement, direct feedback. Everyone who's touched this project has made a -- taken a critical role in grounding the work. It started with certifiers, but there's also been a common chorus that farmers should be involved. And so we invited the Organic Farmers Association, the National Organic Coalition, and both the Western Organic Dairy Producer Alliance, and the Northeast Organic Dairy Producer Alliance to be part of the feedback process. That feedback has been enormously valuable, and we thank everybody for their time and insights.

We're ready. We're getting very, very close to being able to launch a common OSP that's not just template, but again, foundational infrastructure that can help drive the future of certification. Obviously, at the NOP, we are going to strongly encourage its use.

I wanted to take the time to tell the story, because it's a very different way of doing things in the NOP. I wanted to make sure folks understood the arc of how it was that we got here today. So let's look at where we're going next.

The common OSP is very near completion. We're going to be posting Word templates on the AMS website. Again, we strongly encourage common OSP adoption and use. We will be working with the ACA on governance strategy. So we need to get this thing published first, then we will turn to governance, because what we don't want is me to be here in another decade talking about how our templates are out of date, right? We need a mechanism for involving many people across the sector to help us maintain this tool. And so we'll start that this summer, because that's when we re-opt ACA's agreement with us to work on this. It is time for us to pay to have this project move forward.

Next up, we hear constantly, love a common OSP, but only if it has a common inspection form. So that will be the next step of this initiative, which again, we'll start this summer and fall.

Okay, whoops. One more slide, but before I do that slide, I'm going to stop for another drink of water and for you to think a little bit.

(Pause.)

DR. TUCKER: Okay, so the common OSP is one piece of streamlining certification and moving to more sound and sensible risk based oversight approaches. This is a super hard project to do. And so I wanted to take a little bit of time in talking about what risk based sound and sensible kind of oversight is going to require to move to those more nuanced ways of assessing compliance. This is an area where we are building the plane as we're flying it, and there need to be a lot of planes for this to be successful.

So this is very fundamental change management. It needs to happen at all levels amidst a lot of complexity and variability. And so risk based sound and sensible oversight at its heart is making the right decisions at the right time to protect the integrity of the seal.

Now that's a big picture statement, but it really comes down to critical thinking and how we spend our time. So we're spending our time on the actions that will ensure compliance and ultimately make sure that we are keeping fraud out of the system and protecting the farmers that are truly playing by the rules. And so we are taking at the NOP a more risk based approach in how we approach our own audits.

I mentioned because of SOE, we now have import data that can really support our audit activities in a more focused way. So our auditors work closely with our compliance and enforcement staff to identify high risk and high value commodities that should be targeted for file reviews or witness audits.

We are able to tell more about operations due to updates to the organic integrity database. For example, we can identify operations that are newly certified where we can assess the certifier's application processes. We can also better identify which operations are grower groups, which ones have a wide variety of commodities, or which ones are smaller or larger. So these help us in focusing on high risk operations.

We've also really focused on staff qualification and training requirements to find out how folks are doing in their certification activities and out in the field. That allows us to prioritize who we talk to when we're doing audits and to evaluate whether certifier staff have the expertise to review and inspect the operations that they are working with.

Auditors are reducing the number of certification files required from certifiers because they are more focused on, sort of, multi-hit looks. So for example, if you have one operation that is a non-

compliance, a notice of proposed suspension, there's mediation, and a settlement agreement, the auditor can assess all of those different activities at one operation rather than going to another operation that doesn't have any of those things. So it makes for a more full file review.

Again, we're no longer doing random sampling of certification files. We are acting in concentrated ways to be able to detect both compliance and non-compliance faster. That allows us to look at more things or different things, and it may ultimately lead to shorter audits. So our audit planning process is much more intense before we go on site. We know how we want to spend that time for the best outcomes.

We're also training our auditors to allow certifiers to demonstrate compliance rather than having a rigid interpretation of what compliance looks like. So certifiers should be allowed to decide what works best for their own certification system and their types of operations as long as they're complying with the rules.

So we also are looking for evidence of streamlining certification or challenges through the annual reports and appeals process. So for example, recently in an annual report, a certifier proposed a change to their procedures that was not at all sound and

sensible. It was specifically related to fraud prevention plans. And so working with that certifier to come up with an example of how to think differently about that. Yes, a fraud prevention plan really can be two sentences. Really can. It's okay. But noticing when a fraud prevention plan can be two sentences versus when it really needs to be 15 pages is part of risk-based oversight.

In another case, we've had a couple of appeals cases recently where we needed to tell certifiers to withdraw a notice of proposed suspension because the action they took did go way beyond the regulations. So part of sound and sensible is also staying with the regulations and not going beyond them.

Let's move on to certifiers. As we've done with our audits, certifiers can and should be making sound and sensible decisions about how inspections should be discovered -- conducted based on past performance and risk. For this to be fair, they need to have criteria and a process for doing it. There's nothing in the regulations that prevent them from applying sound and sensible risk-based approaches. I often say I would rather have an inspector spend four hours on an inspection and detect fraud than eight hours and not detect fraud. So that's how we're spending time effectively.

This is a really key challenge for many

certifiers. We have seen a good amount of certifier turnover in leadership ranks and in inspection staff. And there have been long leadership gaps. This is a big challenge. And it's a challenge both to continue to fly the plane, but also to think about how to rewire it at the same time. So instead of static checklists and policy, it requires moving to more fluidity, if then criterion, conditioned-based branching. So if you find something at an inspection, do this or this other thing, depending on what you see. That is a new way of thinking for a lot of our certifiers and inspectors.

So we have given funding to the Accredited Certifiers Association to work with certifiers in this area. We do certifier training and Coffee with the NOP to talk through scenarios and examples, but it's going to take time at all levels.

It's critical to recognize the inspector role in this work. Our inspectors are asked to do a tremendous number of activities in a very short time. So go verify the full OSP, find fraud, and visit every single field. And could you please do that in two hours? And the answer is no. Like, we can't. And so it's time to be realistic and very, very strategic and thoughtful about how we train our inspectors to make really smart decisions on the ground and empower them to do so. So there's a bit of a

debate as to whether inspectors should just be the eyes and ears. So I follow my script, I take down my notes, I do the checklist, I am the eyes and the ears, and then I bring all that back to the certifier.

Sound and sensible risk-based oversight requires a different model. It requires the full inspector's intellect and tacit knowledge and decision making and trusting them to make the right decisions on the ground, even if they come back and say that they did not have the ability to look at these other things because they pulled a particular thread that they found important. That's hard. That takes a lot of trust from the certifier. It takes a lot of empowerment at the inspector level, and a lot of the ability to shape things in the moment and sometimes environments that can be very stressful with a lot of high emotion. So more inspectors -- more experienced inspectors tend to have the tacit knowledge to do this, but often they move on to other roles and we lose that experience at the ground level. So this is a shared challenge across the sector.

So finally, I do want to talk about farmer feedback. Farmers are enormously important in this process. And unfortunately, I often hear, oh, well, you know, farmers aren't going to appeal or farmers aren't going to push back because they're worried about their

relationship with the certifiers. This is only going to work if we have full feedback. And so it is certainly possible for the farmer to contact the certifier and say, I had some concerns about how my inspection went. The inspector spent a lot of time here. They didn't look at this at all. If I were an inspector, I would ask them different questions of the farmer and, kind of, just see what happened. But we need -- what happens. We need that feedback from the farmer to both help our inspectors grow, but also make the system better. And so if a farmer or a producer or a processor is getting a non-compliance, the rebuttal process is an important part of the regulations. And it should be used. The farmers are protected by the regulations. And I think the more we can move to a collaborative process there where everyone is part of the feedback loop, I think is very, very, very important.

There are inspectors who shared with me that they don't actually find out what happens with the operations they inspect. They don't get a copy of any final non-compliance. They don't find out if there's a proposed suspension. I think that's a feedback loop that's really important. So if you're a certifier that's not giving feedback to your inspector about what happens, I encourage you to think about how you could do that. Because it involves them in the process, it involves them

in the learning, it involves them in the feedback.

Okay, that was a lot. So I am now going to turn it over to Erin Healy to wrap up the NOP Update. And then we will open for questions and answers. Thanks for listening.

MS. HEALY: And I like the idea of standing up to take a quick stretch, if people want to do that for a moment. And there will be a break after this, as well.

(Pause.)

MS. HEALY: Glenn, I see you working out over there. Should do a Zumba intermission next time.

Okay, so what I'm going to talk about is how stakeholders can shape final policy and decisions. And this is going to be old news for some of you that do this every day as part of your jobs, but I thought this would be good for people who might be new to the community, and also because we get a lot of questions during public comments and just in general when we're meeting with stakeholders about how stakeholders can influence or provide input. So I wanted to outline some of these processes.

This is us at the Standards Division, small but mighty team. Jared is the assistant director. And we're loosely organized according to National List and Practice Standard Rules. So we have Heather, who's listening

online, she's the food scientist that helps the Board. Andrea is Jane-of-all-Trades. We have Michelle, who's the Board liaison. And then on my sub-team, we have Devon and Jason and Jo, who are all really strong rule writers and also doing a lot of different things.

So I asked chat GPT to tell me how stakeholders can influence final policy, and this is what it came up with. Not too bad, but some of the images are a little off. So pardon the image for industry and businesses. I felt like the rest of it, it pretty much caught the gist of what we're talking about.

So stakeholders provide written or oral comments to the National Organic Standards Boards -- Board at these meetings and also in writing. Sometimes the Board also asks for technical reports or panels. And then the stakeholders will sometimes also give testimony. The Board uses all that information and then sends us at the Program a recommendation for rule making.

Once we receive it, we have to vet that recommendation. And I'm going to go into what that looks like in a later slide. But we go through a process of analyzing the recommendation. If we go out with a proposed rule, there's another opportunity for stakeholders to provide public comment. And again, I'm going to go into more depth in what your public comment

should and could include in a later slide. We may or may not then go into a final rule. And then it goes into implementation and enforcement. And our sister division, Compliance and Enforcement, takes the lead from there, as well as certifiers, of course.

Okay, this is an animated slide because it's going to get pretty busy on this slide. And it's because there's so many different modes of communication between stakeholders and USDA. So stakeholders, as I mentioned, provide both the Board, NOP comments. That could be written comments during a proposed rule, written comments as part of this board meeting process. Also, it could be letters that stakeholders send to either of us. We then communicate with each other and back with stakeholders by posting things on our website. We send out announcements through our Organic Insider email. And if you're not already signed up for that, I highly suggest signing up for that. That's the best go-to for all the information coming out of NOP. The Board sends us their recommendations. We post that online. And then we respond by sending the Board a memo, a response to their recommendations. And for a few years now, we have included a regulatory analysis section in that that gives you a full update of where we are with all of the regulations. And so that will give you some background on

what's going to come next.

Now, I want to highlight this other mode of communication. Any stakeholders are always welcome to write a letter and/or request a meeting with the political administration. So that's, for instance, the Undersecretary or the Secretary, although probably more likely to get a meeting with the Undersecretary than the secretary. And that does shape and influence final decisions. Also, NOP cannot move forward with any rulemaking activity unless we have approval from the political administration. And that's regardless of what administration is in place. So all of that then shapes what we finally come out with, a notice or a rule, and that's what becomes a regulation.

So we are communicating all the time with our stakeholders. As I mentioned, there's a few different ways we do that. The notices and rules that are open for public comment. We provide webinars. Presentations at conferences. We have meetings with stakeholders. But also, NOP communicates regularly with the certifiers. So at the annual ACA training, we have NOP -- a whole group of NOP staff and Jenny go out and do a training, do presentations, answer questions. We have Coffee with the NOP where we meet with certifiers. And then, again, all the other things I just mentioned with the comments, the

memos, and their responses after these meetings.

The Board and NOP also communicate outside of this twice-annual public meeting. So the Board has weekly subcommittee meetings. And we do have, I would say, two to four NOP staff that listen to those calls. They are there for administrative support and also technical support. They are regulatory experts that can answer questions about the statute, about OFPA, about our regulations, sometimes just about food science in general.

I also want to highlight another process that you may or may not be aware of that we've refined over the years. And that's the work agenda process.

So if the board is interested in working on something, they send NOP a work agenda request, and we then look at it to make sure it's within our statutory authority. So we vet it to make sure we even -- even within OFPA, and we can work on it. We also have any -- if we have any questions, there's a back and forth process between NOP and the Board to really refine what that work agenda will look like.

And then from there, that turns into a topic that the Board works on. They take it to their subcommittees. They refine it over time. They might ask for a technical report. There might be public comments. And then that turns into a final recommendation.

Sorry, I'm going to take a drink of water.

(Pause.)

MS. HEALY: And this is the rulemaking pathway. So the work agenda request, as I mentioned, it goes to the subcommittee. It turns into a recommendation for rulemaking. Then it comes to us. We review it. We vet it. We have to seek approval to move forward. Then it can go to rulemaking. And we sometimes get questions, well, how long is that going to be before the rule is published? And we are not lying when we say we don't know, because it goes to so many different parts of USDA, sometimes also to FDA or other departments, other agencies. We have to wait for their feedback. We have to have a lot of conversations. It goes to the Office of Management and Budget. It goes to economists. They analyze it, as well. So it could take a long time. It also depends on what else is in clearance. If there's another rule that's taking priority over ours, ours could be pushed to the back burner or vice versa. So we estimate sometimes it could take a few months to a year. But we really don't know. It's very, very difficult for us to predict.

Okay, so I mentioned that the Board gives us recommendations, and then we vet those recommendations. So these are the top three buckets we use when we are

vetting a recommendation. The first and most important is do we have statutory authority? If we do not have statutory authority, if OFPA says we cannot do it or it's completely outside of our scope, we cannot move forward with it. So it's really, really important that first and foremost, any topic gets vetted for statutory authority. We will not be allowed to move forward with rulemaking if our Office of General Counsel shows us we don't have statutory authority. So that's the most important.

We also try to check if there are external third party standards that it's referring to. That's not to say that it can't be done, but it just becomes much more complicated.

The second thing we look at is what is the need? And this is where public comments are really important. If we hear from a lot of different stakeholders, and there's consensus among stakeholders that something is important and that they need something, that holds a lot of weight, as opposed to only hearing from one or two or hearing conflicting comments. If there's too much conflict in the comments, it's really dangerous for us to move forward because we don't want to have a negative impact on industry. We also try to know, is it urgent? What's the timeline? For instance, is there something expiring and we need to take action fast?

The third is what is the impact? And again, we want to make sure we're benefiting the organic industry and not having an unintended negative consequence, so it does take time for us to analyze that. And again, that's when it's really important for us to hear from all of you, really think it through all the way through implementation and enforcement. Would this have a negative impact? If so, we need to be thinking about that. And we either need to tweak the draft rule or perhaps not go to a final rule.

So this is the OFPA criteria that we are always looking at to make sure that we can, number one, even work on something, and that, number two, we can go to rulemaking. So this is really important, the OFPA criteria. If you want to take a picture of this slide, if you're not used to OFPA's -- I know some people are looking at this all the time, but some may not be -- and it's really important in your public comment to hit on these criteria. Tell us or tell the Board how and why do you feel that your request is meeting these criteria. And if it's not, it's going to be really difficult, if not impossible, for us to go to rulemaking.

I want to talk about petitions really quickly for a couple of slides. Some of you may have submitted petitions or plan to. Others, maybe this has nothing to do with what you're working on. But I just want to remind

everybody of a few great lessons based on patterns that we've seen over the years with petitions. So the three things, please clearly describe what you are petitioning, how it is used, and why it is needed. Again, it comes back to, is there a need for it? And just a reminder, only generic substances can be petitioned. They have to meet the OFPA criteria. So if we get something that is already not meeting the OFPA criteria, we cannot move forward with that petition. It will have to get sent back, because it's not within the statutory authority.

Also, a friendly reminder to include a label for your product. And you will need to submit the label for the ingredient you are petitioning. And mention any state or federal laws that regulate that product.

If you are petitioning for a synthetic substance to be added to the National List, then that top table, those four criteria, is what it has to meet. If you are petitioning for a natural substance to be prohibited, then you have to show the last three criteria on the bottom table.

I just want to note that if you're petitioning to add a synthetic food processing aid, there's a whole bunch of additional criteria that I'm not going to get into right now, but that is on our website under "Petitions."

Okay, now, how to make your public comment count. So I just want to remind everyone we have an online learning about this. We have a microlearning. We also have a fact sheet. And after, I think, five years of being in this position and talking with my team, these are the things that really help us when you're crafting your public comment.

Number one, is please directly and clearly tell us what you're wanting. I can't tell you how many times somebody has gone really into the details, and then at the end, we don't know what they're asking. So please, first and foremost, say it very simply, "I want you to add XXX to the National List." Or "I want you to prohibit XYZ." Start with that.

Then secondly, tell us why you need or want it. How is it going to make your life as an organic producer easier? Or your life as an organic certifier easier? So explain that to us big picture.

If you want to include any recommended reg text language, please do. There are sometimes excellent, excellent public comments we get, excellent creative solutions that we didn't even think of, and that ends up being in the final rule. So please don't be afraid to offer that.

If you want to get into the details, and

sometimes it really is necessary to do that, I suggest adding that at the end or attaching it as an appendix, but not starting with that in your public comment, because sometimes the audience won't be able to go right into the technical details with you.

And I only have a couple slides left, so bear with me. Really important for your comment, know your target audience. So I talked in the beginning about sometimes it's NOP, the Program, but sometimes it's a political appointee who's your target audience, for instance, the Undersecretary. So really know who has the power to make the decision you are asking for. We hear a lot of public comments that are about decisions that are made way above the program level. And so it's not to say that you can't make those comments to us, but I want to make sure that you understand to also make that comment to the political level or the level above us that is making that decision. So you want to make sure you're hitting the right person who has the power to change what you're asking to be changed.

And then tailor your comments to that audience. So if you're talking to an undersecretary, it's probably not the right time to really get super technical and start citing reg, you know, numbers. They're not going to know what you're talking about, right? So keep it big picture,

high level, what are you asking for and why?

Then, when you're talking to NOP, that's when you can get really into the weeds. Jo will love that, right? Jo and Jared will love all those technical weeds and regulatory citations. But the Undersecretary is probably not going to be able to follow it.

And don't be afraid to clarify process. Really great questions we've been asked are, what is the next step? Who do we ask? Who should we talk to? What is the process? So just make sure you're understanding who's involved at each level.

As Jenny mentioned, we do have a proposed rule that's open for comment now, so you can practice all these tips and tricks that I just gave you.

If you are new to providing public comments, what you're going to do is go to regulations.gov, and you're going to see it's highlighted in red. On the top right, it will say "Submit a Public Comment." You're going to click on that. You can search for the rule by the docket number. Really, really important, when you go into the rule, please check the section that says "General Information." And the subsection says, "What should I consider as I prepare my comments for AMS?" We put those questions in there because we don't have the answers. And we desperately need your help. So please make sure you're

reading through those questions and answering as many as you possibly can. We really need your help, and that's why we're asking them. We want to understand what's going on in your world that we are not seeing and we're not living day-to-day so that we can make sure we're making the best decision when we're writing that rule.

These are resources that are all on our website. We have the work agendas all listed on our website. We post the NOSB recommendations. We post our responses. Sign up for Organic Insiders if you're not already. OFPA is our statute. We have the regulations, guidance, and fact sheets. And then we have our online learning center.

And then really quickly, we have what's called a Petition Substances Index, which I want to thank Andrea for really putting together and refining. You can search any substance in the PSI, and it will give you all the information in one place. It will show you the NOSB recommendation, the technical report, if there was a rule, when it expires. It's an excellent, excellent resource.

And because I always have to plug this, just a final reminder that we've put together this Consumer Education Kit. Please do download it. You can scan that QR code from the screen. I also have some with me today. It includes graphics, messaging about what the organic label means, the four pillars. And it also includes any

copy and paste talking points you may want to use in social media or on your website.

And that's it. So thank you all for bearing with me for that.

(Applause.)

CHAIR JOHNSON: All right, thank you, Dr. Tucker and Erin. Always helpful to be grounded in what's happening at the Program and all these different ways that there are to get involved.

I hope the takeaway from all that is we want to hear from you. There are lots of ways you can let us know what you think. So do continue to stay engaged, because this is one of the areas of law that I've witnessed as being most shaped by active consumer engagement. And we want to keep it that way.

For example, just looking at the NOP regulations, I remember when I first started in certification reading through, and I was shocked to see in US law, there's a law that says you must maintain or improve the natural resources of the operation. That's a law. That's amazing. And that's there because people cared so much about making this organic program strong. So just an example to ground you in all this information.

We have a few minutes now for Q&A from the Board. Do we have any questions? Raise your hand, and

I'll call on you. Nate.

BD. MEM. LEWIS: Yeah, thanks to the Program for all the important information and the updates. I appreciate it. I always love a good tutorial on how to comment on public process. That's great.

My question's related to wild seafood. It's been an issue I've been curious about and eager to work on on the Board. Congress directed the Agency to allow for wild-caught seafood to be labeled as organic in the Organic Foods Production Act, and I'm curious whether the recent opening of the Office of Seafood at the USDA provides a new opportunity to engage on that issue? Thanks.

DR. TUCKER: So thank you, and thanks for the question.

I do want to mention the slides do go up on our website. It usually takes a day or two, but the links that Erin had in her presentation, which is a great index of resources, those are all workable once it's up on the website. So if you're looking for those links, look on the meeting web page.

So Office of Seafood was just established, and we don't know their full scope yet. And so lots of different programs within USDA serve seafood interests. I think they're trying to bring it all together, but I don't

know what the full scope of that will be. It's a good, kind of, opportunity to revisit where are we with that. And so you mentioned that OFA enables the development of wild-caught seafood.

Years and years and years ago, there was an initiative to establish two working groups, one for aquaculture and one for wild-caught seafood. The Aquaculture Committee was stood up, worked on recommendations that went to the Board. The Board worked on recommendations, and in the end, there was a proposed rule that never got published. So in Erin's long journey that she just went through, it died before a proposed rule was ever published.

Wild-caught seafood never had a committee established. At the time, there wasn't -- I don't know actually why, I was told it was just there weren't enough people to stand up a committee. The last that we've engaged on this topic, Congress asked us in 2021 to explore perspectives on the topic of wild-caught fish standards. So they wanted to hear from the Program more about how different stakeholders felt about this. And so at that time, we did do a listening session to gather input. Those slides and the chat are online. The sector was very, very split on whether we should work on this or not. And so that diversity of opinion was communicated in

a report that we gave to Congress. That was not designated as a public report. And so this is interesting. If you're ever pushing for a report in like the Farm Bill or other tools of Congress, if you don't specify that you want the report to be public, it won't be. So that's just something to be aware of. So that report is with Congress. It was not made public. And they have not asked us to do anything on this since.

So I think if an Office of Seafood was established we would give them that full history. I assume working on that would require support both from the administration, but also given Congress' interest, Congress would need to express interest, as well.

CHAIR JOHNSON: Thank you. Other questions? Kathryn.

MS. DESCHENES: Hi, Dr. Tucker. I was hoping you could address the status of the mushroom and pet food rule.

DR. TUCKER: So in December of 2024, we published a final rule on mushrooms and pet foods, a Practice Standards Rule, so final rule in December 2024 was not yet fully implemented. So when the new administration came in, as all new administrations do, they took a look at all the regulations that had been passed but weren't yet implemented. So they weren't yet

in their compliance period, and they decided to propose to rescind that rule. So it was a proposal. It went out on the regulations.gov. And a lot of people commented on that proposed revision. It was like six- or eight thousand people, right? Something like that. It was a lot of comments on the proposed rescission.

We synthesized those comments into a report for the administration. We provided that summary of comments to the administration. And there's been no action since. So at this point in the game, the final rule that was published in December still stands. And so I know many of you, kind of, click "Refresh" on regulations.gov every morning, and so we are not currently working on a final rescission rule. We are standing by for any feedback from the administration. If nothing happens, the rule will go into full implementation this coming January. So January 2027 is when we move into what we call the compliance date.

MS. DESCHENES: Thank you.

CHAIR JOHNSON: Thank you. Our dogs hope that that rule makes it through in January.

Any other questions? Javier.

BD. MEM. ZAMORA: It's not so much of a question, it's mostly like a comment, and we'll probably get to a comment period sometime during these two, three

days. But I wanted to say that I think we should really be cautious on how this new application for streamlining things. There's always good things and bad things. I think the good thing about having all the certifiers use just one, you could probably say generic application is really good because it gives you an idea to really pinpoint who the cheaters are, who's, you know, making false statements, or whatever it is. But the other side is, I wonder the real certifiers that were very blessed that I'm certified by one of them, the people that began this movement, you know, they do their very best to tailor to the small family farms. And so when you have this one big thing that comes from the federal agency, it kind of scares a lot of the small farmers. And it gives a huge opportunity to the larger farmers to get away from things that they shouldn't be getting away with. And so that's one thing.

The other thing, I really appreciate some of your comments that you made that I believe $1.5 billion worth of food that they were calling organic wasn't organic. And you got to -- you put a lot of energy to really identify, you know, what people are doing out there and bringing to this country things that perhaps they shouldn't be called organic. So I think we need to put a lot more attention to those things and try to really

identify what -- how can we do these things that can keep small family farms in business and not scare them away.

So I encourage you to, you know, have the certifiers and maybe minimize the amount of certifiers that people have from one place to another. And then really, really do not leave the farmer towards the end.

Finally, we talk to the farmer and see what they think. All of these things, it's just because of the farmers and the end consumer, that's why we're here, so we should never forget that.

DR. TUCKER: Thank you very, very much for the feedback. I think that's a really thoughtful statement. There are so many nuances to risk-based oversight, and we need to make sure we're including everyone. And so thank you.

CHAIR JOHNSON: Any other questions? Cat.

BD. MEM. McCLUSKEY: Dr. Tucker, thank you for the Program Update, it's really helpful.

My question is regarding work agenda and the Board. So the work agenda on consistency in organic seed usage is critical and complex, to be sure. And the community is really actively working to identify and address platforms and data gaps needed to inform NOSB's recommendations. We've seen that clearly in the comments over the last couple of years. To work most effectively

with the organic community on definitive recommendations to address consistency in usage, the Board really does need to be at full capacity.

And so my question to you is if you can please update us with a concrete timeline and a process for appointments? When the nominations for the next round will open? And to ensure that this work agenda item stays on the NOSB's work plan until all Board seats are full, and that the Board delivers clear recommendations to NOP. Thanks.

DR. TUCKER: Thank you. And I'm actually going to split that question, because there are kind of two components to it.

So, first, we certainly appreciate the Board's in-depth work on this topic. You've got a panel tomorrow on this topic, so I know there's been a lot of in-depth work. There's also been a lot of recommendations over time here. So what we will do is once the Board is done, I call it the pencils down for those of us who, you know, filled in bubbles for standardized tests when we were in elementary school, so when you were done, the teacher said, "Pencils down."

So once your pencil's down, we will take that. Generally, our next step is to develop a policy paper for the administration to consider. So here are all the

recommendations. Here are all the possible steps that we could take. That might include handbook updates. It could include training. It could include investing in a cooperative agreement with the private sector in a public-private partnership model. It could include regulatory changes. So we don't know yet. So we want to let you finish your work.

I appreciate the importance of having a full board to do that, and I do want to make sure that we pause and thank you, because we appreciate that we've got 10 people doing the work of 15 right now, and so that's --

(Applause.)

DR. TUCKER: Give the Board a round of applause. These are volunteers doing double-duty here.

So, the Board can continue to operate with 10 members. So the Organic Foods Production Act says that a majority of board members constitutes a quorum, and that's how we were able to have this meeting and allow you to continue to do that work. Also appreciate that you want a, kind of, a full complement here. I don't have a timeline.

This is -- so a nuance about the board is everyone on staff, including me, we are all career employees, but the board appointments are political appointments. And so once the applications came in, we

did summarize all the applicant, kind of, profiles for the administration, so they have our summary of candidates. But now it's very, very much part of the political process. So we have certainly talked with the administration about the appointment process, the importance of having a full board. But ultimately, there are a lot of people involved in that. So it is Undersecretary level, marketing regulatory programs, but there's also an office of White House Liaison that gets very involved in different appointments. There are lots of different political teams within the government that are interested in FACA appointments. So we'll have to let that process play out. I don't have -- I do not have a timeline of when the appointments will happen.

I suspect that we will hold back on a new call for nominations until those folks are in place, is what I'm guessing is likely going to happen here. And so -- because part of this is, you know, we had a lot of applicants last summer that they applied; I don't know if they all still want to do it anymore. So we have to -- life changes, right? So if we ended up, you know, not being able to fill all the seats for whatever reason, we might want to change a call for nominations going out. So I do see those as likely somewhat connected. It is something that we do ask for updates from the

administration on and continue to talk about the importance of the board.

I wish I had a more concrete answer for you, and I don't.

BD. MEM. McCLUSKEY: Thank you. I appreciate the update. And I know the community does, too. We've seen it throughout the comments, of course, in asking for that, so appreciate it. Thanks, Dr. Tucker.

CHAIR JOHNSON: Yes, thank you.

And just to connect back to Erin's presentation, there were some political and administration -- administrative ways to engage with the process, so political.

Any other questions from the Board?

(No response.)

CHAIR JOHNSON: I have one final one. You know, the Board is so grateful for the collaborative relationship that we have with the NOP and the expertise and the deep institutional knowledge you all maintain, and the staff and your support for the sector over the years, and we really hope we'll continue to have that relationship going into the future.

I know there has been a lot of change at USDA recently and wanted to see if you have any updates on the plans for relocation of offices and how NOP staffing may

be affected?

DR. TUCKER: Yeah, I don't have updates on that. Short answer.

You know, for folks, again, who aren't around all this every day, the USDA had -- they made a big announcement last summer about an intent to reorganize USDA. That was public, and there is a public page on the reorganization initiatives. They have been doing announcements. They've been public, so you can find the press releases on them for all the different mission areas. So we are organized -- agencies are organized into different mission areas. We are part of marketing and regulatory programs, and so they've made announcements for about half of the mission areas at USDA in terms of what the reorganizations may look like.

We do not know the current status of any decisions related to marketing and regulatory programs. We do not know potential impacts related to relocation or staffing at this time.

CHAIR JOHNSON: Thank you for the updates.

All right, any final questions?

(No response.)

CHAIR JOHNSON: Thank you for taking the time to walk us through what you're doing and all the hard work your team has continued to put into the sector. We're

really grateful for your leadership.

DR. TUCKER: Thank you. You're running a great meeting. We appreciate it.

CHAIR JOHNSON: Thank you.

All right, with that, we're going to move to a 15-minute break. Erin, can I click?

Oh, thank you, Andrea, out there silently clicking.

So we'll have about a 15-minute break, and then we'll come back to hear from the TOPP Plains Region. Thank you.

(Whereupon, a brief recess was taken.)

CHAIR JOHNSON: All right, welcome back, everyone.

We're excited to have Amanda Brewster here from the Plains Region TOPP. I'm going to hand it over to you to introduce her. Go ahead, Dr. Tucker.

DR. TUCKER: My tablet went to sleep while we were on break, so I need to wake up my tablet. Hold on, sorry.

(Pause.)

DR. TUCKER: Okay, so Amanda Brewster has served as executive director for the Organic Crop Improvement Association International since 2010, leading the organization with a strong commitment to its mission and

the broader organic community. She was raised on a farm, and she brings both hands-on agriculture experience and professional training in business management and accounting to her role. She has worked with farmers across the US, Canada, Mexico, and Peru, gaining meaningful insight into their operations and the challenges they face, and building trusting relationships throughout the global organic sector.

Amanda has been deeply involved in the Transition to Organic Partnership Program, where she has helped strengthen regional collaborations and supported the next generation of organic producers. She and her husband live in Nebraska.

I didn't know you lived in Nebraska. Wow, so you knew all about the Reuben thing. All right.

So she and her husband live in Nebraska with their three kids, who keep them busy and entertained with their many activities. I do want to say I have a very special memory of Amanda when I called her to say we were standing up TOPP, and we wanted OCIA to be a regional lead. Because I called all these people thinking, okay, I need you to help me stand up a program in the next week and a half. Can you do that? And Amanda's like, yeah, we can figure that out. And it was so calming. It was so reassuring. She understood, kind of, the power of what we

were trying to do here, and yet was so pragmatic about thinking immediately about who needed to be involved and how to get it done. And so Amanda's been just a tremendous, pragmatic, and very successful partner for this region.

So Amanda, thank you, and welcome.

MS. BREWSTER: Thank you, Jenny. Thanks for the introduction. And I'll say I'm not a Cornhusker fan; I'm a Hawkeye fan.

Anyway, all right. Thank you. Good morning. Thank you for the opportunity. You want me to start singing, too? I could do that. Thank you for the opportunity to present today. I'm here representing OCIA International and the Transition to Organic Program in the Plains region.

Today, I'd like to share an overview with you of the work we've been doing across the Plains states supporting producers in transition to organic agriculture. I'll discuss how our region network is structured and the types of support we provide, some of the outcomes we've seen so far, and several key lessons that we've learned throughout the implementation.

As many of you know, transition to organic production is not a quick or simple process. Producers often face financial risk, operational uncertainty,

changing of market conditions, and steep learning curve when adopting new production systems. What we found through the program is the producers are much more successful when they have access to strong local networks, experienced mentors, practical technical assistance, and opportunities to learn directly from farmers and ranchers. That combination of relationship building, technical support, has really been the foundation of our work throughout the Plains region. We appreciate the opportunity to share both the successes and challenges we continue to see across the region.

I'd like to begin by expressing our sincere gratitude, first to the USDA National Organic Program for their leadership and continued investment in the strengthening of organic agriculture throughout the United States. Programs like TOPP have created opportunities to build meaningful partnership and expand support systems for producers who are interested in transitioning to organic production. We'd also like to recognize the regional and national TOPP leaders teams who have helped guide implementation, coordinate collaboration among partners, and provide ongoing support throughout the program.

In addition, we truly appreciate the work of the National Organic Standards Board and your continued

efforts to strengthen and advance integrity of the organics sector. The organic community depends heavily on collaboration, transparency, shared learning. Programs like TOPP demonstrate what can happen when organizations, educators, producers, certifiers, and technical experts work together toward a common goal. We're very grateful for the opportunity to continue to work and to share our regional experiences with you today.

There we go. Current -- the Plains TOPP region is built on a very strong collaboration network. Currently, we work with 24 regional partners across the multiple states throughout the Plains region. While I can't list every organization today, I do want to emphasize how valuable each of these partnerships have been. Our partners include universities, nonprofits, extension programs, producer groups, conservation organizations, agricultural service producers -- and agricultural service producers. Each organization brings a different expertise, local relationships, and regional knowledge to help strengthen the overall program.

One of the most important aspects of this structure is that it allows us to provide both regional and coordination and local relevance at the same time. Conditions across the Plains region are incredibly diverse. We're working in areas with very different

climates, production systems, water availability, soil conditions, and market access challenges. Because of that diversity, there is no single approach that works for every producer. Our partner network has helped us tailor programs to local needs while still maintaining consistent regional goals and communication.

For example, producers in western Nebraska may face very different challenges than producers in eastern Kansas, central Oklahoma. Some operations are focused on grain production, while others on livestock, specialty crops, grazing systems, and other mixed operations. By working collaboratively, we've all -- we're able to connect -- whoops, technical difficulties -- with producers, with organizations and individuals who understand the realities of farming, ranching, and their specific areas.

This network helps us expand our in-reach significantly. No single organization could cover -- could effectively cover the entire Plains region alone, but through the collaboration, we've been able to share resources, coordinate events, reduce duplication of efforts, and build strong support systems for producers. That coordination has been essential in developing mentorship, technical assistance, educational programming, and relationship building opportunities at scale.

At its core, Transition to Organic Partnership is focused on helping producers successfully transition to certified organic production. Within the Plains region, our work includes North Dakota, South Dakota, Kansas, Nebraska, Colorado, and Oklahoma. These states represent a broad range of agricultural system production environments, which means our program must remain flexible and responsive.

Our programming is delivered through a regional partner network, allowing us to meet producers where they are, both geographically and operational. Some producers who enter the program are just beginning to explore organic systems, may still be evaluating whether transition is realistic to their operations. Others may already be several years into transitioning and are seeking support with certification requirements, soil fertility management, weed control strategies, record-keeping systems, and market development. Because of this range of experience, we've worked hard to keep our approach practical, accessible, and producer-centric.

Producers often want information that can directly apply to their own operation. They want to hear from producers who have successfully navigated transition under similar conditions. They also try to support systems that acknowledge the economic operational risk

associated with transition. It also helps build confidence, connect producers with resources, and create opportunities for long-term support and learning.

One of the things we've consistently seen is that successful transition depends heavily on relationships and trust. That's why so much of our work focuses not only on education, but also building networks, strengthening connections with the organic community.

Core focus. Our work throughout the Plains region is centered around three primary focus areas. Community building, mentorship, and technical assistance. These three areas are closely connected and designed to support producers at different stages of transition. Community building helps reduce isolation and creates opportunities for producers to learn from one another.

Mentorship provides individualized guidance from experienced organic producers who understand the realities of transitioning and operation. And technical assistance offers practical support related to production practices, certification requirements, compliance, and operational decision making. Together, these focuses -- focus areas help address both technical and social barriers that often prevent producers from pursuing organic certification.

Transition can be overwhelming, especially in regions where organic production is less common. By

combining technical resources with peer support and relationship building, we've been able to create more supportive environment to producers exploring organic systems.

Community building. One of the strongest lessons we've learned through this program is that relationships matter. Organic farming, ranching sometimes feels isolating, particularly in regions where fewer operations are certified organic. Creating opportunities for producers to connect, ask questions, share experiences, and learn from one another has been a major component of our work.

Across the Plains TOPP network, we've directly hosted 240 events to date. These events have included workshops, field days, farm tours, conference sessions, educational presentations, networking opportunities, and producer discussion groups. Through those directly hosted events, we've reached more than 9,400 producers interested in transitioning to organic.

In addition, we have hosted directly by TOPP partners, our organizations have participated in 179 events where TOPP resources and information were shared with an additional 10,700 attendees. These external events are especially valuable because they allow us to engage producers who may not initially attend an organic

focused event.

Often those conversations begin with simple questions about soil health, input cost, weed management, grazing systems, and marketing opportunities. What's especially encouraging is that many of these events become starting points for ongoing regulations. We regularly see producers connecting with partners, mentors, and other farmers at the conclusion of events. These peer networks often continue well beyond a formal programming itself. Providing spaces where producers can discuss concerns, ask questions, learn from experienced operations help reduce some of that uncertainty. Overall, these activities have helped strengthen regional networks and create more opportunities for collaboration and shared learning across the Plains.

Mentorship is another core component of our work. Farmer to farmer learning has consistently proven to be one of the most effective ways to support successful transition. There's a tremendous value in connecting producers with someone who has already navigated the challenges of implementing organic systems, managing certification requirements, and adapting overall operations over time.

Through the program, we've engaged 56 mentors across the Plains region during the program period. These

mentors represent a variety of production systems, bringing extensive practical experiences to the program. As we approach the end of the program period, we currently have six mentors actively working with 12 mentees. While those numbers may appear relatively modest, it's important to understand the depth of the intensity of these mentorship relationships. There's not short term or service level interactions. Mentorships often involves ongoing communication, farm visits, operational discussions, troubleshooting, and individualized support over an extended period of time.

Producers are able to ask questions openly, receive guidance from someone who understands the reality of transitioning firsthand. In many cases, mentors help producers work through very practical concerns. That may include discussions around crop rotations, weed management strategies, fertility planning, grazing management, equipment considerations, certification work, record keeping, or marketing opportunities.

The long-term peer support is incredibly valuable because it strengthens the overall organic community and creates ongoing opportunities for learning and collaboration. We believe mentorship will remain a central component of successful organic transition efforts moving forward.

Technical assistance is the third major focus area within our program. This work includes one-on-one support, group education, certification guidance, production planning, compliance assistance, and ongoing problem solving with producers. Many producers entering transition are managing complex operations' decisions while trying to understand organic regulations, certification requirements, and challenges within the production practices. Providing individualized technical assistance helps make the process more manageable.

To date, 414 producers have received technical assistance through the Plains TOPP network. That assistance has covered a wide range of topics, including soil fertility management, weed and pest management strategies, conservative practices, crop rotation, livestock management, grazing, record keeping, certification planning, and organic compliance. Importantly, 40 operations have achieved organic certification as a result of this work. Together, those operations represent more than 21,000 new certified organic acres across the Plains region. Even producers who ultimately decide not to pursue certification often adopt practices to improve soil health, diversity operations, and strengthen the long-term sustainability. Having the knowledgeable technical assistance provides

available -- or providers available to answer questions and walk producers through requirements can significantly reduce confusion and frustrations.

Another important factor is trust. Producers are often more willing to explore transition when they have access to technical experts who understand regional production realities and can provide practical, realistic guidance. Overall, technical assistance can be one of the most important aspects of the program and remains a critical need throughout the region.

Key insights. Based on our work through the Plains regions, there are several key insights we'd like to highlight.

First, barriers to transition remain significant. Producers continue to face substantial financial, operational, and logistical challenges when considering organic transition. The three-year transition period can create economic uncertainty practically when producers are adapting -- particularly when producers are adapting management practices without yet receiving organic price premiums. Input costs, labor demands, weed management concerns, market access, risk management all influence producer decision making. In addition, many producers are balancing transition decisions with broader economic pressures facing agriculture today.

Practices that work in one region may not be feasible in another. This reinforces their importance of local relevant education, technical assistance, and mentorship. Programs must remain flexible enough to account for those regional differences. Technical information alone is often not enough to help producers successfully transition. Many producers need components to connect with others who are -- who have firsthand experience managing organic systems under similar conditions. Many producers spend significant time gathering information, attending events, evaluating risk, and exploring different approaches before making operational changes. This is a strong -- there is a strong interest in organic systems throughout the region, but producers need access to practical resources, long term support, in order to navigate transition successfully. Programs like TOPP help create the infrastructure partnership necessary to support that work.

At this point, it would be helpful for our -- ASU is going to come forward and speak about the more detailed -- about the program over -- outcomes, evaluation efforts, and broader impact on the metrics following my presentation. Their work has been instrumental in helping us better understand program reach, participation trends, and long-term value of these collaboration efforts across

the region.

With that, I'd like to say thank you again for your time and attention today. We sincerely appreciate the opportunities to share the work taking place throughout the Plains TOPP region. We're very proud of our partnerships that have been built and the producers we have engaged with the program over the past several years. Continued investment in technical assistance, mentorship, education, regional collaboration will remain essential to supporting success of organic transition efforts moving forward. We appreciate your continued support of organic agriculture and programs like TOPP that help create opportunities for producers across the country.

We'll have questions at the end as soon as Arizona State's University Swette Center team presents. Thank you.

(Applause.)

MS. GIRAUD: Thank you so much, Amanda. Thank you, everyone. It's an honor for us to be talking to you today. Thank you so much. To be presenting the data to all of you and to the Board, especially, and to the NOP, we're going to be presenting the numbers that we have collected since -- on Fiscal Year 2025, so keep that in mind. It's the federal fiscal year, so it goes from October 1st, 2024 to September 30th, 2025.

And so at the Swette Center, we are working on collecting the data nationally among all of the 230 TOPP partners. So we are helping -- we're working with all of the partners quarterly to do reporting that is being then fed to the regional leads and to the NOP.

So before I start, I want to say thank you immensely to all of the partner organizations that are entering their data on a quarterly basis. It's an immense amount of work. They're on the field doing incredible work, building these connections, supporting the farmers, and they also take the time to report to us in filling these surveys, and so we have immense gratitude for all that work. And it's important to paint the picture.

Also, you'll -- I don't know if you can all see, and sorry for those who are online, but we have a national data brief, it's just a two-pager that is available outside, and so that's going to also present you some of the numbers we're going to be talking about today. So if you want to have that document, hard copy, it's there.

All right, so my name is Esteve Giraud. I am the research director at the Arizona State University Swette Center for Sustainable Food Systems. I've been joining the TOPP program in 2023, pretty much as soon as it started for the data collection. This is my colleague.

MS. BEVACQUA: Hello. Hi, my name is Elora

Bevacqua. I also work with the Esteve at the Swette Center. I joined TOPP in 2023 when I was a student worker and had done various projects since then, but now I'm full time with helping the data [sic].

MS. GIRAUD: So just very briefly, I want to introduce the Swette Center. So our vision is a world where all communities enjoy nutritious food produce from thriving, equitable, and environmentally sustainable food systems. We work on various research projects and also have educational degrees, so we have undergrad, grad, and certificates programs that we run. But organic, advancing organic research and policy is one of our core seven strategic priorities. Our executive director is Dr. Kathleen Merrigan that I don't need to introduce, I think, here. Most of you probably know her. And so her work is really inspiring our division for the center.

And so our role in TOPP is twofold. In Arizona, we are supporting transitioning producers. So we -- so Arizona is a big state, but it doesn't have a lot of organic producers, and so we are working with the farmers and the handlers who are interested in becoming certified. And so we manage the mentorship program for Arizona and support technical assistance, whether it's on one-on-one, you know, farmer to TA provider, or whether through a lot of different events that we organize. So that's for just

the state.

And then, as I was saying before, at the national level, we're doing data collection and reporting. And this is what we are going to be focusing on in this presentation. Just I want to -- because it can feel really confusing to think about how is it that we're, you know, getting all of this data, so I just want to explain really briefly what's the process for us to put all this data together.

You see on the screen, we're using the platform Airtable, and that has interfaces that help producer -- no, not -- sorry, not producers, partner organizations input their data on a quarterly basis. And so there is one unique per region. So it's customized. I mean, it has a lot of similarity, but it has elements of customization for all of the regions. And the regional partners go in every quarter during a two-week time period, and they enter all of their progress. What is it that they've done during the last three months? You know, what are their successes? Their challenges? If they need help with anything? What's the result of their mentorship? If they're doing mentorship, how many events they've organized? Et cetera. And they're submitting all this data, and they're also submitting their invoice for reimbursement. So that's creating some -- a process that

we're trying to make as easy as possible for the organizations.

And this is the general TOPP reporting structure. So you can see we are on the bottom left of that graph, and we're working directly with the regional partner quarterly for them to submit their data. We clean them, remove duplicates, make sure we all -- as much as possible, that we're all speaking the same language, and then we synthesize this and work with the regional lead and tell them, okay, this is what's happening in your region. This is what this partner said, et cetera. So, you know, the regional is being FOG, MOSA, Oregon Health, PCO, CIS, NOSB and CCOF. And then they themselves go into a different system that was built especially for the NOP, and then, on a quarterly basis, will enter the data for their region, which allows the NOP to have quarterly updates on what's happening on the field. And then they can report it up to the USDA. So this is how it works.

MS. BEVACQUA: Great. Thank you, Esteve, for the overview.

So next we'll just cover some of the key metrics that we have found for 2025. This slide, this map, is actually from 2024 fiscal year. It is available on the national TOPP website, and it shows the events that partners hosted throughout the country, so you can see

just where they were coming up throughout the US. And for this year, we will also be creating another map to reflect for 2025. And on the left, and they're a bit small, but you can see fiscal year 24 and fiscal year 25, the total number of events including attended and hosted. And you can see that the number is strengthening between the two years, which is great to see.

Next, to break down a little bit, what are events that are happening through TOPP? And as Amanda mentioned in the presentation, events are very important for community building, so partners can get that technical knowledge and producers can get technical knowledge, but also meet each other and have these communities. So for attended, the number one event was conferences, so that's partners going to conferences throughout the US. And then for hosted, field days and workshops were the biggest number. And so the red is what they hosted, and then the yellow is attended, just to clarify there. And then the two numbers just break down the different categories of events, so partner events and then attended events for Fiscal Year '25.

So moving on to mentorship, so another key program area of TOPP, we were seeing that this past year there was 357 mentors and 595 mentees. And this was an increase of 35 percent and 29 percent between Fiscal Year

'24 and Fiscal Year '25. And the data brief has these numbers on it, and that will also be online, so you can follow up with that, as well. And also the clarified mentorship are those one-on-one connections that are for a full year, where a certified producer supports a transitioning producer to get to certification.

So another type of TOPP service, which Amanda, again, provided a great explanation for, was technical assistance. So this is phone calls, it could be meetings, it could be walking a farm, and it's more an as-need-basis service for TOPP, so it's when a producer needs help on a specific issue, then they'll get technical assistance. So for Fiscal Year 2025, we had 1600 recipients and 2800 engagements.

So this past year, we implemented a new system for collecting data, where partner organizations that work directly with farmers will send us a list of names of people that they helped in a given quarter. And then at the end, we aggregated all those names and cleaned them to remove duplicates and whatnot. So this is the first year that we were able to see the exact number of people who were receiving technical assistance, whereas in previous years, we were just getting a number of engagements, which means, well, some people could get engagements multiple times and could be double-counted, so that's the

difference between those two numbers of why engagements is a bit higher. So it was really helpful to get those names of producers who were receiving assistance.

So that's for the national data, and I'll pass it back to Esteve.

MS. GIRAUD: Thank you.

Yeah, and I just want to clarify; this is only for the one-on-one TA recipients. It's not all of the TA recipients. So we --there are two types of TA, the way we're counting it, some of it takes place at events, which -- large events. And so you can have a big field day, for example, in which case, it's the number of attendees, but it's not being reflected here. Here, it's only the people who are doing one-on-one TA, meaning phone call or a visit at an office with a TA provider, or a TA provider comes just to their farm only, right? So this is -- these numbers are lower than the overall amount of people throughout the country who are receiving TA in general. This is just one-on-one TA. It's very specific.

Oops, sorry about that. All right, so just to follow-up on Amanda's presentation on what's happening in the Plains only, so this is a map of all of the individuals, Fiscal Year '25 still, who are involved -- the producers, sorry, who are involved in the TOPP program. So it's in green is the one-on-one TA

recipients. And as you can see, it's the most of them. There are 161 last year. And in orange, oh, that -- well, orange is the mentees, sorry. And then in blue is the mentors. And so we had, at the end of Q1 2026, so that's in December, we had six mentors in the Plains region and 12 mentees. So it's less, but it's because one-on-one TA can be a lot more flexible, and not everybody wants the whole structure of the mentorship program, but all of it is really important. And as Amanda was saying, the depth of the relationship that gets created through the mentorship program is really invaluable, and then can really tip some of the producers towards transition. And we'll show some of the testimonies from producers a bit later, and then we can see.

All right, so there are also a lot of resources that have been created -- that are being created still nationally. Fiscal Year '25, there were over 1,000 resources created, which is also a 50 percent increase since the previous year, which is quite a lot. There were several fact sheets and presentations, which is really the bulk of the production of resources. You can see on the screen an example of a fact sheet that explains the whole Farm Revenue Protection Program. So it's, you know, documents are produced in a way that are easy for producers to consume and understand.

Website to social media is 20 percent. Webinar is also a big element. And depending on the regions, it can be more. We know that here, for example, because there's such a big distance, the web content is really helpful because it avoids -- you know, it's complicated to travel across the region, so this is really helpful. Podcast 60 percent. Curricula 2 percent. And others include videos and maps and some templates, among others.

So here, there are some of the testimonies. We have -- there are many more. We're just putting two because otherwise we could be here all day. But I'm just going to read them to you because I think they really speak of the importance of the mentorship program and just TOPP in general. "I've been waiting to find an opportunity to reduce my input spill and farm without chemicals so that I can feel good about my kids farming with me. TOPP seems like the program that's going to give me that opportunity. From technical assistance to help navigating other program opportunities, TOPP is the chance to really improve the prospects for our business." And the other, "I've been telling my husband for three years that we need to make the switch to organic in order to avoid the expensive and toxic inputs. I was so excited and grateful to learn about the incredible opportunity to find established organic mentors. I want to learn from

other farmers in my dreamland area."

All right, and so what is this telling us? We showed you different numbers -- Amanda also showed you different numbers. So I want to introduce to what's on the left and what we affectionately call the onion. For those of you who have read the TOPP Impact Report from last year, it's already in it, but I want to walk you through and explain how that relates to the numbers on the right. So at the really core of the onion, we have people who are TOPP mentees or mentors. So these are the people who are really part of that mentorship program, which is a small number compared to all the people who are impacted. But it's a core number.

And then we have the second layer, which is the people who are receiving a one-on-one TA. So it's the, you know, the whole ecosystem of TOPP or organic technical assistance. So there's the TA providers. They grow on farms that we were seeing before. They're providing one-on-one TA.

And there's a third layer, which is the TOPP educational events trying -- and providing training for workforce development. Here, we don't know who is who. You know, we try -- we say, roughly, how many attendees do you have at that event? And so we add them up. So, you know, you saw, Amanda, I told you there's just a number of

attendees at our TOPP event and at other TOPP attended events. But here, we don't track individually who goes to which event. I mean, that would be a lot. And so we don't know exactly. But then these are people who are still being recipient of TOPP and still benefiting from TOPP and the funding that goes through it, right? And then they also pass it on. So, and then all of the resources that are outside -- out there, sorry, the fact sheets, the presentation, they live online, and we don't know who exactly is going to be accessing this. But this is also part of the impact the program is having.

And then there's the overall organic ecosystem that is built, also, in large part by all of these partners on the ground that are participating in TOPP and more. And so these partners, if they're receiving TOPP funding, it's going to complement other parts of their funding. It's going to increase their capacity. And so increase their capacity to deliver support to farmers and just to do their other regular activities. And so all of this is really helping, you know, new operations get certified every year.

And so in 2025, we counted, through the OID, 3,519 operations that changed their certification status to become certified. So that was -- and among -- that represents 340,202 acres. I want to say that this is, in

terms of operations, it's a 10 percent drop compared to the previous year. However, remember that 2024 is when the SOE started, so that created a boost in certification. However, for acreage, it increased by 31 percent since the previous year. So that's something to be celebrated.

All right, so as a reminder, we've been hearing yesterday for those who were at the event, and then we're hearing on and on about how the imports are happening. And so TOPP is supporting closing this gap to make sure that we support the domestic production of organic agriculture. So this is, you know, something we wanted to remember and to thank everyone, again, who is participating in this and helping to close that gap and support American farmers.

MS. BEVACQUA: So next up, so as you know, TOPP is coming to a close this year, so we've been putting together an exit survey really focused on understanding community building. So this survey will focus on what types of relationships emerge between partners and producers throughout the TOPP program, and what were some of the outcomes of that. So we're building that, and stay tuned for it. And really, it's just important for us to understand the community building key program area of TOPP and see how those networks are shaping organic as a whole into the future.

So I don't know if Esteve wants to add to that?

MS. GIRAUD: Yeah, I just, again, the community building, I want to insist on that, because it's one of the pillars. We talked about it through the events. Amanda talked about it also, how important that is. It is very hard to measure community building, you know. I don't know if you've been thinking about that, but how do we measure what makes a community? And so we spent quite some time thinking about it and reading about it, and we've been thinking, okay, event is a good way, but there are different types of relationship that gets created through events and at events, and also through TOPP, maybe different kinds also that take place. And so that's why we are doing this exit survey. We're really counting on the partners and the producers to take it, so that gives us a really good picture of the relationships that were created, so that we can really show the partnership, really, what it looks like. So.

Yeah, thank you so much. Thank you so much. We're going to be taking questions. We appreciate your time.

(Applause.)

CHAIR JOHNSON: Thank you all so much for your presentations, and to everyone who's been involved in TOPP. It's been a phenomenal undertaking. I can't

believe five years have already gone by, but if you think back to 2021, I guess, the Organic Transition Initiative was the single biggest federal investment into organic to date. And the returns on that investment have been far beyond my expectations, and I think many others, and you have the numbers to show it. So thank you for coming and sharing this with us.

Questions from the Board? Nate, and then Javier.

BD. MEM. LEWIS: My question's for Amanda. I see you're like, I can also wait, too, if you.

CHAIR JOHNSON: No, let's get Amanda back up here. Maybe you all can, like, share a mic?

BD. MEM. LEWIS: Thanks so much for your presentation. Really intriguing stuff. I am -- just coming from my background in farmland preservation, I'm curious if cash rent, the economic dynamics of cash rent came up in your conversations with producers as like a barrier, and just sort of accessing land in general, or transitioning land, would that come up?

MS. BREWSTER: I don't remember any sort of things like that. Like, I attended a lot of on-farm hosts -- hosted that we had, and I don't remember that coming up as a presentation. Nate Powell-Palm did a lot of -- worked with us a lot in coming to different

presentations and doing on-farm presentations, as well. I don't remember that coming up as a barrier --

BD. MEM. LEWIS: Okay. .

MS. BREWSTER: -- for people.

BD. MEM. LEWIS: Okay. Great, thanks.

CHAIR JOHNSON: Thank you. Javier, go ahead.

BD. MEM. ZAMORA: Thanks for all the work that you've done. And I was trying to analyze a little bit of the numbers that you mentioned, and I'm not going to get critical about here. But I remember, I believe part of the program was launched out of my farm when they selected the six members of the community, CCOF and everyone that we saw. I'll be really curious to get the final numbers once all this program is done and finished. You know, I'm not only -- I mean, there's -- if you're going to transition to organic, it's three years. If you -- there's just so much coming out of those three years and the impact that some of these events have, I think it all boils down to, is this money really helping? I can tell you, yes, it is, because you only did a presentation about your area, and you impacted, or you got 10,000 people together, 240 events, but you got 179 partners involved in this, your presentation. And then we have only one year that these ladies presented on, so it's really hard to get the right numbers.

What I do know, again, is that -- I mean, there were certain events that have a lot of meaning. That onion that you show, I think it needs to have a little less layers. And we need to figure out how to put the money into what layers really mean, or get more out of it. I mean, like, I -- a farm from Utah, invited me to talk, because they got the money. CCOF has had so many events in California, with EcoFarm, all this money, even at my farm. I mentor, I don't know how many farmers, and I'm not asking for TOPP money, but what I do know is that all these numbers, they need to be a little more -- they need to be presented at the end of this program, so the federal government keeps putting some more money into this because it does have a huge impact. Huge.

So thank you for all the work that you've done.

CHAIR JOHNSON: Yeah, couldn't agree more, Javier. This is an investment that we'd like to see continue one way or another. Just to put in a plug for the Farm Bill is being still considered. The Opportunities in Organic Act was reintroduced in January, and the idea behind that bill is to continue the funding and build on the successes of TOPP to date. But it's going to take action of our elected leaders to continue that energy. So if you all aren't in touch with your representatives yet, it's a good time to make some phone

calls.

Any more questions? Dilip, and then Franklin.

BD. MEM. NANDWANI: Thank you, Amanda, and your team for presenting a lot of good information. And really, it's impressive to see all these numbers from Plains region that you have presented.

I was part of the Midwest TOPP, and if I remember correctly, that the goal of TOPP program when it started was to increase the acreage that converting to organic. I mean, that was the overall goal. And I see that you have mentioned a lot of numbers, and just in your region is over 21,000 acres have been converted to organic, so that's a good number. And overall, numbers are still yet to come, as they mentioned, that it's going to be in 2026 exit survey. So I'm sure those numbers are going to be increased in all the areas.

I have a question, kind of, this is the comment, and the question is in two parts. TOPP is ending this year, as you mentioned and we all know. There were goals of this program, like mentorship, community building, technical assistance, and data collection and sharing, which they have done a fabulous job. What do you see in the -- if the TOPP program is to continue in next cycle, what do you like to see that-- which one you like to see on the TOPP that the goal probably needs more work or to

be continued, and then maybe second and third? But maybe you can say based on your experience and the insights you have presented, you know, and any challenges so far you have experienced in this program.

So again, thank you.

MS. BREWSTER: There we go. You know, thank you for the questions and the comments. I think that as an organization, we at OCIA, we have had -- we've started in the conversations the last year, knowing that TOPP is coming to an end this year, and how we can continue to offer these things for farmers that are wanting transition. How we can continue to offer onsite events or virtual events for farmers who want this education and this mentorship. And so we've been exploring over the last year how we can continue that under our research and education focus within OCIA in offering some of these same services that we've been providing that have had great outreach to farmers looking to transition. So that's our goal as OCIA in continuing to move on and move forward.

I'm sorry, I forgot your second question.

BD. MEM. NANDWANI: The second part I was asking that in case the TOPP program continues, which goal you like to focus more, whether, you know -- or you may have some other goals like community building, technical assistance, mentorship program. You may say that, oh,

this has given a good accomplishment, but we would like to see on the TOPP this goal probably needs more attention in the next cycle.

MS. BREWSTER: You know, I think overall, we would be grateful for the opportunity to move forward with some other version of TOPP or anything like that; we would take on the opportunity at all.

You know, I think the overall goal is just education. The TOPP program was -- the way it was designed, really had a well-rounded aspect of technical assistance, peer mentorship, on and on. So I think that, you know, from that aspect, there is just continuing to grow on that and keeping to build those relationships.

You know, the -- like you said -- you mentioned, the three years it takes to transition, it's beyond that and beyond that and where people have. We've seen one of our operations, and he's actually a board member of ours, he has taken on several mentors, and they -- he's mentoring things on his own that's not even in the Plains region via, you know, text messages and YouTube channels and things like that because of the knowledge and just created this group to be a mentor because he loves it. You know, so it's communication and acting with communicating within each other. So, I think TOPP's overall aspect would continue as an overall goal.

BD. MEM. LEWIS: Yeah, I saw this report also you have put together. I think this is the impact report. And on the back, there are lots of universities and other educational institutions, they are part of this program. And as I said, TSU and my colleague here also, Tuskegee, and a lot of educational institutions, they have partnered with TOPP programs in all the six regions. One way, this is just my personal feeling, is that one way that this program will definitely continue no matter what funding is to be continued for TOPP is that these universities, especially the extension network we have in the nationwide, they will keep continue to deliver this program. And this is I'm saying for myself to working for Cooperative Extension, no matter what TOPP funding is there or not, this is our -- because this is our goal, and so we'll definitely like to continue.

But thank you again for impressive presentation and all the data you have collected. Really appreciate that. And look forward to the 2026 exit survey data. Thank you.

DR. TUCKER: I just wanted to very quickly reflect back on the very beginning of this program. This was actually envisioned to be really focused on mentorship. It was really all about mentoring. And as we were standing up the program, we got a lot of feedback

that said, okay, that's great in some places and in many circumstances, but sometimes people just need the technical assistance. They just need really focused support. And I think that's one way where this program was really, really collaboratively developed and really reflects the diversity across regions in terms of what actually works. And so the extension, I think, element is part of that, as well. I think a lot of TOPP was helping to build extension expertise where there wasn't some. And that in itself had tremendous amount of value in workforce development.

So I just want to say, community, you did this. This is you. You did this as a sector in helping to shape what was going to be most successful here. So thank you.

BD. MEM. NANDWANI: Thank you, Dr. Tucker.

Very quick comment, Allison. I echo what you just mentioned. And been working for a -- institution, like minority institution, I would say that it has a great impact, not only for the minority or limited resource farmers, but we do have, not only in Tennessee and Midwest, but nationwide, we have these Amish and, you know, like, other communities too, those who were kind of hiding before, but now, because of this program, they are coming forward with different, you know, forums. So thank you again.

CHAIR JOHNSON: Thank you, Dilip. That's a really important point.

And I'm just looking at the TOPP web page on USDA's website to add a few more numbers here. The program overall, as of end of 2025, reached 135,000 people. Close to 6,000 people received TA. Over 3,000 mentoring pairs were established. The farms involved are close to 140,000 acres that are available to transition. And nearly 80,000 acres are now certified. So those numbers are really impactful. And as we think about consumers wanting more organic, the quotes that you shared, Esteve, really get at the same types of stories I've heard from farmers, "I wanted to have kids, and I didn't want these chemicals on my farm." "I live in a farming community, and I didn't want my water to be polluted." Really personally motivated decisions. And now there are so many more people out there who can talk about how organic connects all those dots.

Franklin, over to you.

BD. MEM. QUARCOO: Thank you. Great job, Amanda, and your team. One of the questions I want to ask is about barriers to transition. Were you surprised? Was your team surprised by some of the barriers that came to your attention? And were there some peculiar barriers that some different demographic groups expressed? Were

there some differences in what various demographic groups were telling you were barriers? And were you surprised by any of the barriers that came to your attention?

MS. BREWSTER: You know, I don't think we were surprised by them, because they were new. I think the biggest challenge is the three-year transition and people not getting that premium crop price for their crop, you know, and making that work for them.

I think that the TOPP has allowed the mentorship and the one-on-one connections, which helps eliminate some of those barriers for operations who are a little bit more skeptical in working side by side with somebody who's been through transitions and has maybe experienced some difficulties or barriers that they can help express and help people get through the process of transition.

CHAIR JOHNSON: Thank you.

More questions from the Board?

(No response.)

CHAIR JOHNSON: All right, well we're so grateful for the time you took to be with us. Ten thousand operations interested in transition in the Plains region is amazing. And so we're excited to see how this work continues in various capacities moving forward. And yeah, really grateful to you all for being here.

(Applause.)

CHAIR JOHNSON: I lost our clicker, but we're going to transition into lunch. We're running a little ahead of schedule. So oh, that makes sense, clicker was over there. We're planning to return at 2 p.m., and we'll hear public comments this afternoon. So enjoy a luxurious lunchtime, and we'll see you soon. Thank you all.

(Whereupon, at 2:00 p.m., a luncheon recess was taken.)

A F T E R N O O N S E S S I O N

CHAIR JOHNSON: All right, welcome back.

The remainder of the day is set aside for our in-person public comments. We've got some instructions up here on the screen. I'll call your name and give a heads up to the next few speakers. You'll come on up to the podium and keep an eye on the timer. There's a slide advancer on the podium. And you'll need to state your name and affiliation for the record. And then we'll have an opportunity for questions from the Board.

Just as a reminder, there's a policy in the Policy and Procedures Manual about public comments. All speakers who will be recognized signed up during the registration period. People will give their name and affiliations for the record at the beginning of their comment. And proxy speakers are not permitted.

Individuals providing public comment, and really everyone, shall refrain from making any personal attacks or remarks that may malign the character of any individual.

Members of the public are asked to clearly define and succinct -- clearly and succinctly define, this is not your example of how to do that, define the issues that you wish to present before the Board. This will give NOSB members a comprehensible understanding of the

speaker's concern.

With that, our first speaker up is Karlin Warner, followed by Phil LaRocca and Lauren Breynaert.

MS. WARNER: It's live? Okay.

Good afternoon, Board. My name is Karlin Warner, and I am the CEO and co-owner of OneCert, Inc., based here in Lincoln, Nebraska.

Since I'm the first comment this afternoon, I thought I would take it upon myself to offer a brief invocation with a quote that was shared with me last year by Sam Welsh; OneCert's founder, my mentor, a fierce advocate for organic integrity, and as many of you know at times, a good-natured agitator. And Sam passed away last July, as many of you know. About a week before his passing, maybe about 10 days, he shared this quote from Wendell Berry with our team that has been living in my brain this week, and I wanted to share it with you. "We don't have a right to ask whether we're going to succeed or not. The only question we have a right to ask is, what is the right thing to do? What does this earth require of us if we want to continue to live on it?"

I believe this sets the right tone, and I hope it's a question that we keep returning to as a community. So in the spirit and in honor of Sam's legacy, I'm giving my first public comment today. I'll keep the remainder

brief.

First, I wanted to echo the general concerns raised about the Board vacancies. I think it's troubling that a volunteer board of 10 is being asked to do the work of 15 people. And ultimately, inevitably, this affects the quality, diversity, and balance of the recommendations that you're able to make, despite your very hard work. So thank you for your hard work, but I would love to see the board fully staffed.

And then regarding the CACS topics, OneCert supports efforts to improve public access to residue testing results. The idea of a searchable public database is an excellent one, and we think that it would strengthen the enforcement tools available to the NOP, as well.

We also agree that NOP 2613, that guidance document, should be updated to provide clear guidance to certifiers when dealing with contamination events of unknown origin. We would especially like that guidance to indicate when downstream notifications are appropriate and what party is responsible for making those notifications.

Similarly, we appreciate the complexity of the concerns around marketing organic products in e-commerce and policing those marketplaces. While voluntary guidance is well-intentioned, we feel that it's unlikely to change the behavior of bad actors who are not a part of the

certified system and who might take advantage of the limited oversight in the online marketplace. So as a result of that, we would like to see an actual rulemaking process for that.

And that's all I had today. I'll just end where I began with the question that Sam left with us, what is the right thing to do? And I'm grateful to all of you who keep asking it and for those of you that show up and try to answer it.

CHAIR JOHNSON: Thank you.

Questions from the Board?

(No response.)

CHAIR JOHNSON: We appreciate the quote, and thank you for remembering Sam today. Thanks for your comment.

All right, next up we have Phil LaRocca, followed by Lauren Breynaert and then Liz Bell. Go ahead, Phil.

MR. LaROCCA: Good afternoon. My name is Phil LaRocca, longtime organic farmer. And I have a new title; I am Board Emeritus and Tactical Advisor for CCOF. I had to remember that. Thank you.

I'm here to address a few issues I was asked. One, which kind of shocked me a little bit to address tartaric acid. So tartaric acid is used in wine basically

to adjust the pH. And that is, we use that for stability. Being involved in writing the rule for organic wine many years ago, there never was an objection to it. And tartaric acid is derived from the actual wine grapes. So it's a great product. It's been a tool that we've used for years, and we're still using it.

The next thing I was asked to address was the term "regenerative." So personally, sometimes a lot of labels are confusing. Certified organic should be top foremost. However, a lot of CCOF growers have said the term regenerative on their label has increased their sales. And any time you can increase sales for organic farming, you can't go wrong. The one thing that we have to remember is that the baseline of any program regenerative has to be certified organic.

So the third point I wanted, we need marketing and promotion. We talk a lot about endangered species. We've got endangered flowers, animals. Well, let me tell you, the medium to small certified organic farmer can become an endangered species if we don't do something about it. We need to increase organic sales. We need to increase it on a way where the people feel they're buying something, paying extra money for something that is valuable. This is grapes; wine grapes, raisin grapes, table grapes. So from 2022 to present, and I would say

present two months ago, the price of inputs for grape production has gone up 38 percent. The price of the grape has gone up 11 percent. Do the math. This is not working out. And I talked to two almond and walnut growers before I came here, and they're facing the same situation. Our inputs are rising faster than we can sell the product for.

So my good friend Bob Quinn, past board member, organic -- certified organic grain grower, and I like to come up with the phrase, it is better to pay the farmer than it is to pay the doctor. We have to tell everybody that what we are doing is the best, and at worse to pay a little extra money for something that is high quality.

We do not want to become an endangered species. Thank you.

CHAIR JOHNSON: Thank you.

Questions from the Board? Javier.

CHAIR JOHNSON: Good to see you, Señor.

MR. LaROCCA: Gracias.

BD. MEM. ZAMORA: You are third generation. I'm the second generation, and I'm working on the third generation, and that's what we ought to do. We are actually in a very difficult place as small organic farmers.

Does CCOF have any numbers of what California is -- what is happening with the small family farm that

they're disappearing? I mean, we keep talking about this, but I'm sure CCOF does have the tools to tell us the numbers.

MR. LaROCCA: Personally, I get calls all the time, especially when I was running the Board, all the time, you know, from almond growers all the way to, I remember we have the largest stone fruit grower certified in California, and he was having to sell his fruit for conventional prices. And if you know anything about organic farming, our inputs cost more than conventional crops. So when we say we make a premium, it's not -- the premium is just to cover our cost of production. It's not -- that's what our premium is. We're working harder to produce a, I like to think, just a chemical-free crop that's healthy, you know.

So I know April's going to come up here, and she may see if we have what our retention of certified growers is or not. But I get calls all the time that "I'm struggling."

BD. MEM. ZAMORA: Thank you.

CHAIR JOHNSON: Any other questions from the Board?

(No response.)

MR. LaROCCA: Thank you.

CHAIR JOHNSON: All right, thank you.

Next up, we have Lauren Breynaert, followed by Liz Bell, and then Marni Karlin. Do I click it? OK. Good afternoon.

MS. BREYNAERT: Good afternoon. I'm Lauren Breynaert. I'm the Government Affairs Director with Tidal Vision. Thank you for the opportunity to speak in support of adding chitosan to the National List as a substance permitted for use in organic crop production as a pesticide. We understand that this petition is now in the Crop Subcommittee, will be voted on this fall, and is different from the other chitosan winemaking petition today.

So chitosan is a biopolymer that is extracted from chitin derived from the shells of crustacean shells, insect exoskeletons, and fungal cell walls. Chitosan can be commercially produced and is also found naturally in the environment.

Tidal Vision is the only US large-scale producer of chitosan, and we produce it using a zero-waste closed-loop process. And we upcycle our crustacean shells from regional shellfish buyers in the area. And that aligns with our mission to make positive systemic environmental impact.

Chitosan is an effective tool for managing a spectrum of pests and plant diseases across a wide range

of crops, including root-knot nematodes, downy mildew, and citrus canker. By enhancing the plant's natural defenses and overall plant vigor, chitosan reduces plant stress and disease susceptibility. Chitosan enables growers to use fewer total pesticides, reducing worker exposure, off-site drift, and impacts on non-target organisms. Combining chitosan, a low-risk elicitor, with the targeted use of compliant pesticides reflects the systems-based pest management approach that NOSB has long encouraged.

I think one of the most significant benefits chitosan brings to organic agriculture right now is reducing copper discharges -- or reducing copper use by up to 50 percent while maintaining crop performance. The Board has clearly identified the need to reduce reliance on copper inputs due to its cumulative soil impacts and toxicity on non-target organisms. Organic growers are simultaneously facing regulatory pressure to reduce copper discharges with few alternatives.

New scientific and research trials have demonstrated that chitosan can consistently enable reductions in copper application rates while maintaining efficacy. The EPA and California State added chitosan to the 25B Minimum Risk Pesticide List, scientifically validating chitosan as a low-risk input that biodegrades into safe, naturally occurring compounds. The EU has also

approved chitosan for use in organic production, demonstrating its strong regulatory acceptance.

Chitosan is widely recognized by scientific and regulatory bodies as low-risk, creates upstream and downstream benefits such as upcycling seafood waste streams and reducing total pesticide use in crop production. These attributes firmly aligned chitosan with the core principles of organic crop production.

Thank you for your time.

CHAIR JOHNSON: Thank you.

Questions from the Board? Franklin, then Nate.

BD. MEM. QUARCOO: Okay, yeah, I'm particularly interested in knowing more about chitosan. And is there -- are there people who source their raw material from not waste material, but just go get organisms just to make chitosan?

MS. BREYNAERT: So it would be completely uneconomical for growers or for chitosan manufacturers to, you know, grow shellfish and then use those shells. It would just be completely non-economical. So I think all chitosan manufacturers use waste crustacean shell. However, there is fungus-based chitosan that I believe is maybe they grow for a purpose, but I'm not aware of that part of the sector in particular.

BD. MEM. QUARCOO: Thank you.

MS. BREYNAERT: Yeah. And just to add onto that fact, all of our shell is derived from waste streams that are from the Pacific Northwest. And then we'll be building a facility in Texas and that will be shrimp derived. And it's all, yeah, sustainably sourced seafood waste streams.

CHAIR JOHNSON: Nate, go ahead.

BD. MEM. LEWIS: Yeah, thanks for your testimony. I think the Crop Subcommittee, just to characterize our initial discussions, is really excited about the potential to reduce copper and remains somewhat concerned about manufacturing processes and the materials used in the manufacturing process.

Can you give us any lenses through which to evaluate that?

MS. BREYNAERT: Yeah. So, you know, I can't speak for all of the global manufacturers, but I will speak particularly on Tidal Vision. And we are, to date, the only US commercial scale chitosan manufacturers. We hold the majority of that market. We are the leading supplier for agricultural sales. And our process, I would invite you all to come and nerd out but it is zero waste. We use -- all the chemistry that is used to create the chitosan, never leaves the system. So once it is in there, we are able to create batches and batches and

batches of chitosan. Our only waste streams happen to be water and even the proteins that we create from -- or that are disposed of turn into fish hydrolysate fertilizer which is organically certified. So, and the reason we're able to do this at scale is because it is very economical to do it our way. And that's the reason we're even able to be in the US.

So I know in other areas and parts of Asia, you know, there are stricter regulations, the industry is greening but what I can speak to is what we are doing, and we are the leading technology and the leading -- in the marketplace. Yeah.

CHAIR JOHNSON: Any other questions? Dilip.

BD. MEM. NANDWANI: Thank you for the information. And very quick, do you have idea or can you tell about efficacy of this product? Or have been -- have you used this? And how many years or months or it's not yet being tried? Thank you.

MS. BREYNAERT: Oh yeah, yeah. And I would love to supply some additional trial data. In our original petition, there's trial data, both in-house trial data, as well as academic research trials. We have done a broad spectrum of crops across the US and a broad spectrum of pathogens and pests. So it has been, I guess Tidal Grow has been around for the past five years, so we have five

years of in-house trials, and chitosan has been heavily researched in this space for longer than that. But I would love -- if you have any specifics, I would need to find that data and bring our tech -- or our more advanced Tidal Grow team into that conversation. But yeah.

But the most fascinating one is definitely citrus canker and an orange reducing copper of up to 50 percent, I think.

BD. MEM. NANDWANI: Thank you.

MS. BREYNAERT: Thank you.

CHAIR JOHNSON: Any other questions?

(No response.)

CHAIR JOHNSON: All right, thank you.

MS. BREYNAERT: Thank you.

CHAIR JOHNSON: Next up, we have Liz Bell, followed by Marni Karlin and then Kyla Smith.

MS. BELL: Good afternoon. My name is Liz Bell and I'm here representing Crop Cooperative Organic Valley.

In my role, I support our over 1500 members to get certified and stay in compliance. I'm proud to report that the current organic dairy industry is strong. We are seeing significant growth in our brand and helping over half of our new dairy farms make the transition to organic.

Meloxicam. Organic Valley supports the

inclusion of meloxicam on the National List. Meloxicam is a necessary tool for organic livestock producers. We agree that the proposed annotation is clear and appropriately balances oversight, flexibility, and animal care without imposing undue regulatory burden. We will be submitting comments on that in the coming weeks.

Methionine. Organic Valley supports the removal of the restriction on synthetic methionine for organic poultry, as noted in the recent proposed rule. Methionine is an essential amino acid for laying hens that affects feathering, immune function, and consistent egg production. Removing the limitation on methionine will reduce the paperwork burden on producers, protect hen health, support responsible farm management, and maintain a stable organic egg supply.

Chlorine materials in livestock drinking water. Organic Valley overall supports the proposal to clarify the usage of chlorine to allow in livestock drinking water. We are cautious in this stance as we do not want the new annotation to prevent dairy farmers from shocking their wells as required on occasion by the PMO, or to add additional water testing burdens to their workload. Typically, our producers shock their wells to treat dangerous pathogens that would otherwise harm milk quality and animal health. Producers follow label instructions

and rates when doing this. Chlorine is a safe, effective and cost efficient method to treat water. If organic livestock producers were not allowed to chlorinate their water sources, it would negatively impact them and cause even bigger issues of poor milk quality, food safety, and reduced animal health. If this proposal allows farmers to continue to shock their water sources with chlorine without additional burden, Organic Valley supports the petition.

Calcium borogluconate and calcium propionate. Regarding the redundancy of listings, if all certifiers are able to unanimously determine these materials are in compliance with 205.603(a)(11) and 205.603(a)(21), Organic Valley supports the removal of the individual listings of calcium borogluconate and calcium propionate on the National List. Otherwise, Organic Valley supports the continued individual listings as they read now.

Lastly, NOSB members. Organic Valley recently supported several farmer members in their nomination applications for board member positions. We encourage the USDA to promptly move forward with finalizing these five appointments to bolster the NOSB process and support these 10 board members.

Thank you to the Board and NOP staff for your commitment and efforts to keep things afloat and for this

opportunity to present public comment here today in Omaha.

CHAIR JOHNSON: Thank you.

Questions? Nate.

BD. MEM. LEWIS: Yeah, and I think just make sure I'm getting it right. The calcium borogluconate and propionate, the -- your all's willingness to, like, remove them is only if the injectable vitamins and minerals include those things? So, like --

MS. BELL: And electrolytes.

BD. MEM. LEWIS: And electrolytes, right. So, like, the redundancy on the list is not a problem necessarily, but if we were to eliminate that, we would want to make sure --

MS. BELL: There was unanimous approval.

BD. MEM. LEWIS: Yeah, okay. Great, yeah. And thanks all for bearing with us on that one.

CHAIR JOHNSON: Any other questions?

(No response.)

CHAIR JOHNSON: All right, thank you.

Next up, Marni Karlin, followed by Kyla Smith and then Steve Ela.

MS. KARLIN: Hi, I'm Marni Karlin from Karlin Strategic Consulting.

I've spent the last 15 years working with organic businesses, farmers, certifiers and inspectors.

Before that, I worked in all three branches of federal government and I've called Washington, DC home since Bill Clinton was president. I share all this to say, I've seen some things. I've seen function and I've seen dysfunction. I've seen unity and division. And what I see today is that things are hard. It's unlike anything I've seen in DC before in terms of divisiveness and toxicity and intentional demoralizing of civil servants. It feels like as a country, we're living in two different realities so far apart that it's hard to imagine how to bridge the gap.

And yet, I'd like to use my time today to pull a thread we heard this morning, how these days in organic, I see more unity, more common ground, and more working together than ever. And our community reminds me how it can be when things in my city and our larger society feel unbearable.

I see collaboration when I look at streamlining certification. Certifiers and inspectors are identifying areas where how we've been doing things no longer makes sense and are building new tools, like a common OSP and inspection form and standardized training curricula for certification professionals.

Farmers are suggesting that having not fewer inspections but more sensible inspections would ease their

burden and let them focus on the hard work of land stewardship while still verifying compliance and ensuring integrity. And the trade sees that as the sector near $77 billion with increasingly complex supply chains, a one-size-fits-all approach to certification disproportionately burdens small American farmers who are the backbone of organic.

And the public-private partnership. How fortunate we are to partner with Jenny and her team in right-sizing certification. NOP leadership is empowering certifiers to use critical thinking to determine which of the tools in their toolbox are the best fit to verify compliance for a given operation at a given time, just like the regulations empower farmers to determine which of the tools in their toolbox are right for their site-specific needs.

And it's not just streamlining certification. We've come together as a community around residue testing. I've seen the conversation shift from an us versus them mentality to a nuanced approach, empowering certifiers to consider risk as they make residue testing decisions. And yesterday, I heard farmers unprompted suggest an organic-specific checkoff. Who'd have thunk it?

These conversations could not have happened 10 to 15 years ago. Or if they were happening, they weren't

happening as productively. We were siloed, we were distrustful, and we sometimes spent more energy attacking each other over our differences than working together. Just like how it feels in Washington, D.C. right now. So I take heart these days that organic is an example of how we can bridge our differences.

How did we get from there to here? We matured as a sector. The TOPP program was incredibly successful, as Amanda noted earlier, in building regional networks of partners. We've invested in relationships, trust, and community. And those relationships have brought us to a place where we can have hard conversations and work together.

So I want to thank you, Board Members, organic stakeholders, and the amazing NOP team for reminding me and those of us who live in Washington that we can do this. That when things feel unbearable, we can look to this amazing community and remind ourselves that we can bridge differences to build trusting and collaborative relationships and make change.

Esteve noted earlier, that it is hard to quantify the impact of building community. I'd argue that we see it in this room, the way we are working together and how it feels to be together in this space. That's the magic we've built.

Thank you.

(Applause.)

CHAIR JOHNSON: Thank you.

Questions from the Board?

(No response.)

CHAIR JOHNSON: Thanks for some inspiration and positivity. We need it.

Kyla Smith is up next, followed by Steve Ela and then Nicole Dehne. Kyla.

MS. SMITH: It's a hard act to follow.

Okay, hi friends. My name is Kyla Smith. I am the Certification Policy Advisor at PCO, a USDA accredited certifier, currently certifying more than 1500 operations across the US. I am also a former NOSB member. This is my first meeting back on this side of the podium. It is wonderful to see you all. And I'm grateful for the ability to continue engaging with the Board, albeit in a different capacity.

Today, I will focus on CACS's residue testing proposal. PCO supports the Board's ongoing efforts to improve and strengthen implementation of an effective residue testing program. Having worked directly with the current regulations and guidance for over a decade, we recognize both what is functioning well and where improvements are still needed. While we look forward to

reaching pencils down, this is an -- on this entire body of work, we do not believe that the proposal is quite ready yet. Not there yet. PCO recommends sending the proposal back to subcommittee to further refine and simplify the downstream notification component. Additional clarity will help ensure the proposal is actionable by the Program, without needing to go through the ANPR process.

What still needs work is clear intent and delineation of stakeholder responsibilities when positive residue detections are identified that are either a willful use of a prohibited substance or exceeds the 5 percent of EPA tolerance. The proposal was never intended to create a recall or stop sale requirement, as that authority does not exist in OFPA, but that distinction has not come through clearly enough.

The best practice scenario outlined in the proposal is already occurring by some operations. That was based on real world examples. These operations are taking accountability and making responsible decisions to address contamination concerns. Others are not. Maybe it's because they're bad actors or maybe it's because the regulations lack specificity so they don't know what to do. They don't know what's expected of them.

Current parts of the regulations, sort of, touch

on this topic indirectly, but they're not specific to residue testing. The downstream notification was intended to strengthen supply chain integrity while helping prevent contaminated product from continuing through the supply chain when possible. By the time the notification occurs in many cases, some affected product will already be in the stream of commerce and no one will be able to do anything about that. Again, we don't have recall authority.

However, notification would still allow operations to divert impacted inventory when possible, if it's, like, still in their possession, and then reassess the now potentially higher risk supply chain through additional verification measures such as testing or documentation requirements. Outlining this process in the regulations assures this accountability of verifying integrity of an operation supply chain is required by all operations, not just those who want to and are doing the right thing.

Finally, I would be remiss if I didn't jump on the bandwagon to urge the Secretary of Agriculture to swiftly appoint members to the five vacant seats on this board. It's required by law, we all know this. The Board's workload is significant even at full capacity. This I know, because I was just there mere months ago.

The ability to fully carry out its mandate is greatly diminished when not operating at full capacity. Despite that, you all continue to do tremendous work. For the love of all things holy, get these folks some help.

Thanks for the opportunity. I miss you guys.

CHAIR JOHNSON: Thanks, Kyla, we miss you, too. And we should acknowledge that Kyla and Amy Brooke were working on these proposals down to the final minutes of their five-year term on the Board. So you did a ton to drive it forward and we appreciate you staying engaged with the process.

Questions from the Board? Nate.

BD. MEM. LEWIS: I'd love to ask you about the agroforestry not yet discussion document that we're talking about. One of the threads that we're trying to consider is whether or not grazing livestock could be, sort of, excluded from the manure application requirement as it's not a manure application, it's a management practice.

What kind of guidance, advice, input, what have you would give you as a certifier the confidence to allow such a practice without implementing that 90/120 day withholding time?

MS. SMITH: Um-hmm, in an ideal world, some type of signal that what constitutes application versus not

application and knowing that we were making a compliance decision, like, in concert with what the Program would see as allowed would be best. You know, certifiers like to do the right thing. We like to provide technical assistance to our operators that wouldn't then -- we wouldn't have to walk that back. So, you know, we certainly sometimes make wrong decisions and then have to backpedal. We would prefer not to do that. So having some type of signal or indication of -- from the Program on what would indicate application versus not would be the best case scenario.

CHAIR JOHNSON: Other questions?

(No response.)

CHAIR JOHNSON: All right, thank you.

MS. SMITH: Thanks.

CHAIR JOHNSON: Next up, we have Steve Eddy Lacomp, followed by Nicole Dehne and then Kate Mendenhall. Steve.

MR. ELA: Good afternoon. I'd like to point out it's an honor to follow Kyla. And I realized that the out to pasture NOSB members are going in order of our time off the board. John. So I am Steve Ela. I'm an organic fruit grower in Western Colorado and also a part-time staffer for the National Organic Coalition.

I first want to recognize the Board for carrying on the NOSB work even though you are shorthanded. We've

all -- we're all saying this, but you have continuously had truncated time to read comments, quick turnaround times and disrupted meetings. We can't say it enough; thank you, thank you, thank you for what you're doing.

For livestock, NOC supports an annotation change so that all certifiers are on the same page and allowing chlorine to be used for the treatment of livestock drinking water. However, we disagree with the wording of the annotation and the testing that could be required to ensure compliance with the annotation.

As currently stated, the amended annotation would require any water treated with chlorine to meet the Safe Drinking Water Act. Livestock might drink from wells, troughs fed by multiple sources, creeks, springs and ponds. If chlorine is added to address contamination, testing may be the only way to determine if the residual chlorine level meets the Safe Drinking Water Act since it would be very difficult to write a standard operating procedure that covers seasonal changes and contaminant loads. That brings into question how often you have to test? Where do you sample for the tests? Whether you test directly after addition of chlorine or at multiple later dates? NOC wants to ensure that the explicit allowance for the use of chlorine in drinking water does not trigger overly burdensome testing requirements.

The other aspect of the discussion is that certifiers consider most drinking water treatments to be out of scope. Currently, the standard state that you have to provide clean water, but nothing else says what you have to test that water.

NOC suggests that the annotation separate disinfecting and sanitizing uses of chlorine from drinking water treatments. We are concerned that any specific chlorine level will trigger extensive testing. So we suggest using language similar to that used in crops, that chlorine levels must not result in contamination of air, soil, or water resources or that exceed applicable legal limits. Please send this proposal back to subcommittee. We have given suggested annotation changes in our written comments.

Pear esters. OFPA states that materials should be listed for their specific uses. Thus, for pear ester, we would prefer to see the annotation state that it may be used for trapping, monitoring, and in conjunction with pheromones. We do strongly support the prohibition of microencapsulated formulations.

Carrageenan, the 2026 TR continues to raise concerning questions about the negative health impacts of carrageenan consumption. Organic foods are utilized by many compromised or sensitive people, including my

partner, to decrease inflammation. We should delist this material.

And finally, since we are the National Organic Coalition, known as NOC, I must tell the knock-knock joke. So, Allison, if you will humor me, knock-knock.

CHAIR JOHNSON: Who's there?

MR. ELA: In.

CHAIR JOHNSON: In?

MR. ELA: "In who?" you would say.

CHAIR JOHNSON: In who?

MR. ELA: Thank you. In-erts. Inerts are out.

Since there are only a handful of List 3 inerts, they should be individually listed, just as we have suggested for List 4 inerts, and this reference should be removed.

Thank you.

CHAIR JOHNSON: Thank you, Steve. I'm sorry that I forgot that was gonna be part of my chairly duties here.

MR. ELA: We're going to have to do pre-training on this.

CHAIR JOHNSON: Questions from the Board?

(No response.)

CHAIR JOHNSON: All right, thanks for coming.

MR. ELA: Thank you.

CHAIR JOHNSON: Oh, Franklin, sorry, go ahead.

BD. MEM. QUARCOO: This question came up in the public comments that we had online. I want to get a better understanding of how that annotation is going to result in more testing? Is the safe water standards, do they not stand regardless of that annotation? That when you use this material, the final product has to meet -- stay within safe drinking water limits?

MR. ELA: Not necessarily because different uses of chlorine, it may fall under the Clean Water Act, especially for livestock water, and the various restrictions on livestock, they may tolerate higher chlorine levels. So the Safe Drinking Water Act would be the very most restrictive, and the testing would have to show that you were always below those levels.

So if you're gonna go out and shock a well, as previous commentators said, do you shock it and then test right away? Do you wait five days? Do you wait till after the livestock drink the water? So it's like when you test, how much you test, how often. Let's say you put chlorine on your OSP; you have to test every water source after that because of the possibility that you have used it. So I think we need to understand that Safe Drinking Water Act applies to drinking water for humans, but there are many other standards that are less restrictive that

could apply to livestock water.

BD. MEM. QUARCOO: Okay. The reason I ask is when we talk about the disinfection by-products that we've been talking about, where some of the materials are carcinogenic, cause all kinds of health problems, I think one of the concerns is that human beings, we have this Safe Drinking Water Act, and then if we don't apply the same thing to animals, and then normally some folks say, we don't go to all that trouble to remove the organic materials that are in livestock. If we combine these two things, and then we expect their chlorine levels to go higher than what is acceptable for human beings, and then we don't take out the organic material as much as we do ours, I think a combination of these two may lead in the wrong direction.

MR. ELA: But this testing under the Safe Drinking Water Act doesn't actually deal with that. I mean, we have in our own -- where we live, our domestic water system is treated, and we've had problems with those by-products. It still meets chlorine levels, but those by-products may be in the water. So I think those are two separate issues, and I don't know that the Board can really deal with all those issues of the uses of chlorine.

We know there are those by-products. That's gonna depend on the source of water, whether there's

organic matter or not. It's gonna depend on how it's treated, how long it's treated, whether it's filtered, whether those things are flocculated. So I guess I'm just gonna say, keep it simple. Back up the listing a little bit. Separate the sanitizing and disinfecting, because you can have a standard operating procedure in a handling facility. That's much more straightforward. But when you've got wide sources of water, make it a little less restrictive, and let's make sure we don't have to test everything.

And that's, the NOC members were really concerned that they would have to go to extensive testing, and that would be overly burdensome.

CHAIR JOHNSON: Any other questions from the Board?

(No response.)

CHAIR JOHNSON: Thanks you.

MR. ELA: Thanks. Good luck.

CHAIR JOHNSON: All right, next up, Nicole Dehne followed by Kate Mendenhall, and then Emily Musgrave.

MS. DEHNE: Great, thanks. Hi, my name is Nicole Dehne. I'm the Director for Vermont Organic Farmers. We are a certification agency owned by a nonprofit, NOFA Vermont. We represent close to 730 organic producers just in the state of Vermont. And I'd

like to thank the NOSB and NOP for all of your hard work, just as other folks before me have been doing.

Today, I wanted to comment on residue testing. Overall, VOF supports the NOSB's efforts to improve the clarity of residue testing guidance. I think we need this as certifiers. We support adding risk-based criteria to the residue -- to the required testing. This aligns with our current approach. We're doing this already, so we wouldn't anticipate any burden from that.

We also support allowing certifiers to charge for residue testing. It won't significantly change overall costs, but it would create a more equitable system if we assign financial responsibility to operations who are found to be responsible.

We support clarifying public access to residue testing information, and we strongly encourage improved communication among certifiers.

Last year, we detected o-phenylphenol in three hay samples that we sampled. And in each case, there was no evidence of intentional application, and the contamination was attributed to the environmental sources. But sharing this information with other certifiers provided really important context for us, and it helped us with our decision-making. So it really highlighted for us the need for effective data sharing among certifiers.

We generally support notifying downstream buyers, but only when residues exceed established action thresholds and result from willful applications. We wouldn't support notification when no action level exists for a pesticide-crop combination, as this, in our feeling, would create too much ambiguity. So more broadly, we feel this concept requires careful consideration. It could create market uncertainty and reduce buyers' confidence if products that they verified as organic are later questioned.

And finally, we support additional guidance for cases where residues are detected without established tolerance to action levels. This is an area that's very -- that we would love to see more guidance.

And we also think that the NOP could address contamination pathways beyond pesticide drift. So just environmental residues can also contribute to detectable levels in organic crops. That's what we're finding. Compounds such as the o-phenylphenol, for example, we have identified in organic crops at levels above the .01 parts per million, and that was in the absence of any intentional application. So just, you know, noting that we are operating and farming in an environment where there is low-level contamination, and this can occur despite best management practices and best practices for

prevention. And we just want to make sure there's no -- if there's no evidence of intentional application and the prevention measures have been implemented, that organic producers are not gonna be found in violation of the standards.

So I think that's it. Thank you for the opportunity to comment.

CHAIR JOHNSON: Thank you.

Questions?

(No response.)

CHAIR JOHNSON: All right, thanks.

MS. DEHNE: Great, thanks.

CHAIR JOHNSON: Next up, Kate Mendenhall, followed by Emily Musgrave, and then Scott Rice.

MS. MENDENHALL: Thank you, NOSB members, for the opportunity to speak with you today. My name is Kate Mendenhall, and I serve as the Executive Director of the Organic Farmers Association, a national organization created by and for organic farmers.

First, I want to express appreciation for the Board's work, especially given that it was done without the full 15 members. We see you. We hope that the Secretary promptly appoints the five new members, and that the NOP will then announce a request for applications for the next cohort.

My comments today focus on various aspects of animal welfare. Continually improving organic practices and reducing the burden on farmers are important to the evolution of organic standards. Animal welfare embodies the global organic principle of care in the US standards. The OTA 2025 report, Consumer Perception of USDA Organic and Competing Label Claims, found that humanely raised was more important to consumers than organic.

So we ask that the NOSB do two things. First, we ask that you submit a letter to the Secretary affirming the importance of the OLPS rule, and that the long rulemaking process demonstrated sufficient support for the regulation. It's difficult for producers to plan when rules are implemented, and then threatened with modification or rescission after an already arduous rulemaking process.

Secondly, we ask that you host a hog producer panel at the next fall or spring meeting to begin a dialogue on stronger hog welfare standards, so that farmers do not need multiple labels and consumers can find these desired claims within organic.

The recent NOP one-year variance allowing the prohibited method of forced molting in poultry came as a surprise to OFA and seems at odds with consumer desire for high animal welfare standards. Transparency has always

been a hallmark of organic agriculture, and we ask that in the future, the NOP publish variance decisions with a full rationale in the Organic Insider, so that the organic community is made aware in a timely manner and understands the decisions for a variance that deviates from the standards.

My colleague Harriet Behar spoke last week of our work with producers around defining manure deposit and manure application in the standards to create guidelines for agroforestry practices that integrate livestock and fruit or nut production. The issue arose from farmers from the ground up, and we appreciate the Board's consideration of this production practice.

Finally, we encourage the Board to send the chlorine materials proposal back to the subcommittee for more clarity to better support practical implementation on farms and for different livestock breeds.

Thank you for the opportunity to testify before you today.

CHAIR JOHNSON: Thank you.

Questions from the Board?

(No response.)

CHAIR JOHNSON: All right, thanks.

Next up, we have Emily Musgrave, followed by Scott Rice, and then Tom Chapman.

MS. MUSGRAVE: Good afternoon. My name is Emily Musgrave, and I'm the Organic Regulatory Manager at Driscoll's and the Chair of the Organics Committee at the International Fresh Produce Association.

Driscoll's is a family-owned operation that partners with independent growers who have been producing berries for over 100 years, and Driscoll's has been certified organic as a handler since 1997. We look forward to continuing to work with NOSB on organic standards and sunset reviews.

I want to highlight the IFPA Organic Committee's stance around the NOSB's proposal on residue testing. We encourage NOSB to delay the vote on residue testing as the concept of risk is too vague and inconsistently defined for certifiers to apply fairly across the organic industry. Our members caution that leaving risk determination to certifiers without clear criteria could create inconsistency, liability concerns, and undue burden, especially if certifiers must also absorb testing costs.

When talking about risk-based and sound and sensible oversight this morning, Dr. Tucker mentioned the following: it is important that we make the right decisions at the right time to protect the integrity of the seal. We believe it is not the right time to make a

decision yet on this proposal.

One recommendation for NOSB is that USDA and federal partners leverage existing infrastructure and put resources into NOP to handle testing and monitoring, similar to national food safety inspections, instead of shifting responsibilities to certifiers and growers.

The committee is supportive of linking regulatory sections on certifier expertise and testing and is open to limited data sharing, although they emphasize that residue records alone do not reflect the full context of an operation.

We also support reasonable downstream buyer notification, but would like to stress the need for practical expectations for fresh produce growers, given the complexity of fresh produce supply chains.

IFPA and Driscoll supports the continued listing of the following sunset materials: chlorine materials, ozone gas, parasitic acid, EPA List 3 inerts of unknown toxicity. Please see our written comments for more details, as well as our strong support of the continued use of pear ester in organic production.

Thank you for the opportunity to comment today and thank you to the Board and the Program for your hard work in upholding the integrity of the organic seal.

CHAIR JOHNSON: Thank you.

Javier.

BD. MEM. ZAMORA: Hi, Emily, good to see you. Well, Driscoll's, it's -- I work with Driscoll's a lot, even though I'm an independent grower, we need the larger growers. My question to you is, why does your company think that it's not ready yet to do the residue testing? Is it the company implementing some sort of training for the growers? Or why is it -- why are we not ready to implement that?

MS. MUSGRAVE: Well, there's a few things. So, I mean, one of the things is we definitely support the idea of it, right? Combining, you know, don't want there to just be a random sampling only, so combining a risk-based with random sampling is the way to go. We just feel that risk is not fully defined yet the way it should be. That really is our main concern at both Driscoll's and the International Fresh Produce Association. Our members really felt that it's, sort of, a vague definition of risk, right? How do you define a, you know, high risk grower versus a low risk grower? What are the criteria you're looking at? So that really is our main concern, not with the idea of it. We feel the idea is there and actually should go forward with it. Just maybe looking at risk matrix, but having, sort of, a more clear cut definition of risk, so that also certifiers, it's not only

on them, right, to determine what is a risky operation versus an operation that's not as risky. Low risk.

BD. MEM. ZAMORA: So does your company feel like just random testing it's enough to capture that?

MS. MUSGRAVE: No. I think the combination of both, I think the NOSB is on the right track, right? I think that in order to catch the bad actors, you need the random, but I think focusing on risk for sure is the right way. I think that what the Board is doing and looking at combining those is the way to do it. I think we just want a little bit more thoughtfulness put into how do you define a high risk operation, for example? Or maybe a grower's going to be classified as high risk just because of the area they're in, right? If you're in the Salinas Valley, are you automatically classified as a high risk operation, right?

So getting maybe clarity on some of those things before moving forward. But I think we think that the general concept and the idea is there. Just maybe a little more work on that piece.

BD. MEM. ZAMORA: Thank you.

MS. MUSGRAVE: You're welcome.

CHAIR JOHNSON: Thank you.

Any other questions?

(No response.)

CHAIR JOHNSON: All right, thank you.

MS. MUSGRAVE: Thank you.

CHAIR JOHNSON: Next up, we have Scott Rice, followed by Tom Chapman and then Matthew Dillon.

MR. RICE: All right, you're getting that OTA trifecta here. Good afternoon, all.

My name is Scott Rice. I'm the Senior Director of Regulatory Affairs at the Organic Trade Association. We're the leading voice for organic trade in the US whose mission is to grow and protect organic with a unifying voice that serves and engages its diverse members from farm to marketplace. I also serve as the Organic Materials Review Institute Board of Directors, and I'm proud to be a past member of the board here.

OTA submitted written comments on a number of topics on behalf of our members, and I'll take a moment to address one of these here. The Board's work on residue testing and the need to ensure any response to results truly contributes to organic integrity. We support and appreciate the Board's comprehensive efforts to update the regulations, instruction, and training documents regarding residue testing. This latest proposal caps a tremendous amount of work that will go far in modernizing how we approach testing, evaluation, and follow-up. We continue to support taking a risk-based approach to best use the

time and resources of the organic community. OTA supports recommendations to link the two parts of the regulation relevant to availability of and access to residue testing results.

And while OTA respects the limited authority of NOP to maintain a database of residue test results, we do support ongoing efforts to establish a centralized resource of aggregated and anonymized data similar to USDA Pesticide Data Program. Transparency is a cornerstone of organic, and making these results accessible can help to further refine a risk-based approach to sampling.

A bit more on that last point that echoes what Nicole shared with us a moment ago, we increasingly hear from processors and handlers on the challenges that arise when positive results are found for substances and occurrences that don't quite fit the UREC definition. Examples include the detection of low levels of substances known to naturally occur on an organic operation such as phosphonic acid, or certain residues created as a result of compliant processing practices such as the smoking of tea and spices. Under the existing framework, findings that exceed set MRLs spur a non-compliance and an investigation that often goes all the way back to the farm level. But because these substances are a result of a processing step, or reflective of a naturally occurring or

low level presence, an investigation to the farm level rarely points to drift contamination or commingling. This presents an extremely inefficient use of time and resources for the handler, the producer, and certainly for the certifier, and with no gain to organic integrity.

As we note above, aggregation and access to residue results presents an opportunity to build a body of evidence to demonstrate common and unavoidable presence of these substances on an operation that is otherwise adhered to its organic system plan. With greater understanding of these substances, we can prevent the burden of investigation unduly falling on operators, producers, and handlers, and those certifiers who have implemented and followed sound fraud prevention plans, and who have demonstrated adherence to strong preventive practices in the organic system plans.

Let's take this opportunity to update our approaches to work smarter, to focus on the greatest risks, and use our resources most efficiently to uphold organic integrity.

Thanks for your considered work on this, and all the topics before you.

CHAIR JOHNSON: Thank you.

Questions?

(No response.)

CHAIR JOHNSON: All right, thanks.

MR. RICE: Thanks, all.

CHAIR JOHNSON: Next up, Tom Chapman, followed by Matthew Dillon, and then Oyebola Elemide.

MR. CHAPMAN: Good afternoon. Tom Chapman, co-CEO of the Organic Trade Association.

Last time I was here in person, I spoke after Scott, and before Steve Ela, the tasty meat, if you will, in an NOSB alumni sandwich. Eighteen months later, I'm here again, the tasty meat in an OTA sandwich between Scott and my fellow co-CEO, Matt. And Matt grew up right here in Omaha. He's from Nebraska, I'm from California. California, 1.8 million acres of organic agriculture, 8 percent of our farmland, 5 percent of our farms. Nebraska, 265,000 acres, 266 farms, about 1 percent on both counts.

I ask this genuinely, where's the beef? Matt, you're working on this, right? I don't know what that guy does. The reality is California is more the exception. Nebraska mirrors more what the rest of our nation looks like. And in our annual market survey that OTA conducts, number one limiting factor to growth was not consumer demand, it was supply. It was access to ingredients, access to land. What we haven't built in supply here domestically, foreign suppliers and producers have, taking

the market benefits for American producers and the environmental and social benefits for American farmland and the communities.

A blunt -- imports are often blamed for this issue and some do lack integrity and we should pursue those aggressively. But a blunt import barrier does not build the infrastructure, the supply chain, the data or the confidence of farmer in Nebraska needs to take that organic step.

Right now, organic is too hard and too risky. Farmers lack the data to make sound decisions. Supply chain infrastructure is not present. Farm policy doesn't account for organic economic realities. And research often isn't solving real world agronomic challenges. A certification system also applying uniform inspection requirements regardless of risk adds costs without adding integrity, and we are burning the very farmers we need out of the very market we need them in.

The consumer who reaches for that USDA organic seal, they want clean food, healthy land, animals raised right. What they don't want is bureaucracy. They want what the bureaucracy is supposed to guarantee. Risk-based oversight doesn't weaken the seal, it sharpens it. Consumers trust that organic seal and their trust in that seal is higher than any other claim on the marketplace.

That trust is why the premium exists and that premium is the on-ramp for these growers. Protecting their integrity and growing the supply are not competing priorities, they're part of the same strategy.

So I'm wrapping it up to this Board, 10 members carrying the work of 15, and to the National Organic Program, 50 folks down from 70, in the shadow of a potential reorganization working to protect the market growing to 100 billion, we see you. Thank you for what you're doing, the hard work and the often thankless job. Grow the trust, reduce the barriers.

Thank you for your time.

CHAIR JOHNSON: Thank you.

Questions?

(No response.)

CHAIR JOHNSON: All right, thanks.

Next up we have Matthew Dillon, followed by Oyebola Elemide and then John Foster.

MR. DILLON: Go easy on that bell, Michelle, I'm really rusty.

I'm Matthew Dillon, I am the co-CEO of the Organic Trade Association, and indeed a proud Nebraskan. Raised in Wahoo, Nebraska, not Omaha.

Tom asked a number of questions, but one is especially near and dear to me given that my family raised

cattle not far from here and that is where's the beef? Unfortunately, the answer for organic is increasingly not here in Nebraska and not in the United States. But organic beef is not all that is absent. Across much of Nebraska, and the rest of the country, we've lost small and mid-sized farms and watched regional economies erode in parallel.

In Nebraska, we've also lost -- and we've had degraded ecosystems. We've lost crawdads from our creeks in my lifetime, an animal that was very near and dear to the childhood fisherman's heart. These are losses that organic can help address. But in organic, we're continuing to lose opportunity to overseas production because we've failed to build appropriate domestic infrastructure and incentives needed to support organic here at home. And that matters because the market opportunity is real.

OTA's 2026 market report shows the US organic sector grew to $76.6 billion with organic food growing nearly three times the rate of conventional. Some of the strongest growth is occurring in animal protein categories. Organic dairy and eggs grew at 12.8 percent, organic beef grew at 44 percent, making it the fastest growing category. But much of that growth still depends heavily on imports, especially organic animal feed, and we

currently import more than $1 billion in organic beef. Those imports are not just statistics. They represent farm income, processing jobs, and rural economic activity that could be happening here in the United States. The question is whether we are willing to make the investments necessary to capture that opportunity?

That is why OTA has helped lead the Bipartisan Bicameral Domestic Organic Investment Act, focused on expanding organic infrastructure and processing capacity. It is why we have convened an Organic Beef Task Force, bringing together producers, processors, brands, and retailers to identify practical solutions to production, processing, market, and regulatory barriers, limiting US organic beef growth. Organic has consumer trust and demand. Now we need domestic investment in infrastructure and policy alignment capable of meeting that demand with American production.

We look forward to keeping the Board and USDA informed of the task force, and hopefully the next time Tom asks, "Where's the beef?" the answer will be "Right here."

Thanks for coming to Omaha, and thank you to the Board and the USDA for your continued work. And organic seed matters.

CHAIR JOHNSON: Thank you.

Questions from the Board? Cat.

BD. MEM. McCLUSKEY: Thanks for your comments, Matthew, particularly around organic seed. That's exactly what I'd like to hear more about from you.

You've been -- you've worked in organic seed, and with organic seed producers for at least 25 years that I know of in a few different sectors in organic, and with consistency organic seed usage on our work agenda I would be really interested to hear from you, your take on the landscape? Your take on how much time we have to get to pencils down?

MR. DILLON: Yeah.

BD. MEM. McCLUSKEY: I think I'll leave it there. I'd like to hear your thoughts.

MR. DILLON: Yeah. So OTA also has an organic seed task force, and I believe Scott's, you know, continued to keep you all informed of that work. It's frustrating. Jim Myers is gonna be here tomorrow speaking on a panel on organic seed, and I was with Jim on a panel in La Jolla, California in 2015 speaking on organic seed, and not much has changed. And like with organic feed, part of the challenge is actually a cultural challenge. So if we want more domestic production of organic feed, Jenny's brought this up before, we have a cultural challenge of how we talk about the importance of organic

animal feed being bought domestically.

Similarly, when it comes to organic seed usage, we have a cultural problem. Yes, there are economic challenges, just like there are economic challenges to domestic organic feed, but we can't let that get in the way. We don't let it get in the way of fertilizer, we don't let it get in the way of animal feed, and yet we continue to allow folks to look the other way on organic seed. We haven't really changed much in the 10 years since I've been here. And the only way forward on that is really a combination of cultural willingness to push back on farmers who say it doesn't matter, because it does matter.

Conventional seed production uses methyl bromide and other chemicals banned in conventional food production. It's toxic to our soils. It's toxic to our farmers and farm workers. And we can't continue to allow organic to not be a holistic system from seed all the way through the farm gate and through manufacturing.

So research, better regulatory guidance for processors -- I mean for certifiers and for farmers, simpler guidance, and more data, more data, more data in the marketplace, and public-private partnership needs to generate that data.

CHAIR JOHNSON: Thank you.

Javier.

BD. MEM. ZAMORA: Don't go away, Señor Mateo.

MR. DILLON: Good to see you.

BD. MEM. ZAMORA: You're not rusty at all. You look good.

MR. DILLON: Thank you.

BD. MEM. ZAMORA: Except you're missing the third jacket.

MR. DILLON: And I'm the only one who hasn't done NOSB, that's why I look better than them. It's tough on you guys.

BD. MEM. ZAMORA: You guys have a lot of data and you do beautiful things, and you have a presence with politicians and people that can make the change can happen. I believe OTA does have the data, does know the problems when it comes to why the small, mid-sized family farms are disappearing. And I challenge you to do something that could perhaps tell those buyers to part of their purchases come from small, mid-sized family farms that actually adhere to all the rules and comply with food safety and all these things, it's just at a smaller scale.

MR. DILLON: Yeah.

BD. MEM. ZAMORA: If -- I believe that if they're not in a way, if somebody like you that have the presence doesn't advocate a little heavier, it's just

gonna get worse and worse for that third generation coming after me.

MR. DILLON: Yeah.

BD. MEM. ZAMORA: So I think let's reach out, let's put our heads together, even though I have no hair, but I think I got pretty good ideas on what to do or what could make a little bit of a change in the near future.

MR. DILLON: Yeah.

BD. MEM. ZAMORA: And so we gotta to do something. Not just present --

MR. DILLON: Yeah.

BD. MEM. ZAMORA: -- the data and talk about it.

MR. DILLON: I agree.

BD. MEM. ZAMORA: Doers make difference in the world.

MR. DILLON: We're concerned about the diminishing middle. It used to be farms that were 200 -- produce farms that were two or 300 acres, when I first started in organic, they were seen as the big guys. Everyone was afraid of a 200-acre produce farm because they were the big guys. Today, those 200-acre farms are dropping acreage because they don't have a place in the marketplace. The big retailers don't want to buy from them and they're too big for CSAs or farmer's markets. And that diminishing middle is of great concern to me

personally, but I think to all of the OTA members.

We've been talking more and more with OFA and NOC about these issues. In fact, we had a breakfast with them. I think the only way we move forward is by focusing on those key things that we agree need to be changed and need to be changed with urgency.

I do think procurement, school procurement and institutional procurement, hospital procurement is one way that some of those regional produce farmers could start to find the right place. But more than anything, it's gonna take us all, as Marni said, focusing on our commonality and less infighting and less getting into the weeds on the bitter details.

Thank you, Javier.

CHAIR JOHNSON: Any other questions for Matt? You really want to get out of here.

MR. DILLON: I just -- you know, I used to like the microphone. I don't like it as much as I used to.

CHAIR JOHNSON: All right, it looks like you're off the hook. Thank you.

Next up, we have Oyebola Elemide, and then John Foster and Jaydee Hanson. Oyebola may be missing. Okay, we'll check back at the end. John Foster, then Jaydee Hanson and April Vasquez.

MR. FOSTER: Hello, nice to see you all. My

name is John Foster. I have three attributions that are relevant here; so first is as president of Wolf & Associates, second is founder of Box 7 Imports, and third is on the board of directors of Organic Seed Alliance. So all of those may be relevant. I want to be upfront about all that. So off we go.

I'm gonna do things a little differently here. Three minutes is never long enough, so I'm not even gonna try, but these are the things that are always on my mind. I'm not gonna go through the bullet points because you can all read them. But there's a lot of things you've heard me say many, many, many times. I won't bore you again.

Starting at the top, newest at the bottom. This is just my running list that is common in our conversations at Wolf & Associates. Happy to talk about any of them if you'd like.

Next, so that was my Willie Nelson slide. And now it's top of mind. And these are the things that are a little bit closer in general to the things on the list. I'm not gonna focus on any of these, either.

Jenny, thank you for your very kind words on the common OSP. That was a really heavy lift. I think that's gonna be really helpful for the industry and show dividends for many, many years. Slow at first, bigger later.

You've -- many of you have heard me talk about commercial demand instead of supply. Won't go through that again, but we've talked about that and there's written comments on that.

The one I really wanna spend time on is just one of the things amongst the written comments. We submitted quite a few written comments as we do normally, but most interesting to me is the e-commerce. It's not really sexy at all. But it's really interesting and impactful for consumers, and that's why I wanna focus on that.

I found myself oddly supportive of the petition that went in, but I don't -- my interest is more about what it doesn't talk about, that petition, which is who is -- who will be the exempt retailer in this scenario, on this e-commerce? Is it the platform or is it the individual seller? And it really matters because exempt operations, retailers or otherwise, have a record-keeping requirement. And that's really the least sexy part of this whole topic. But it's really relevant because that's where a lot of the devil's in the details, but the devil really lies in those records. And right now, my observation from the tens of thousands of organic sales on e-commerce platforms is that there's really no one that I can -- that I know of looking at the records of the exempt retailers. I'm still not sure who the retailer there is.

Is it the individual seller of organic goods or is it the platform itself?

When you get your credit card bill at the end, it says name of the platform, typically, unless it's a website. But who is gonna keep those records to show that all of the things that are sold online in e-commerce is actually verifiably organic?

I think that the petition goes far enough for what it does, but my deeper question, I think more meaningful, is who's going after the tens of thousands of retailers that will be considered exempt?

Thanks.

CHAIR JOHNSON: Thank you.

Questions? Dilip? Or are you pointing me to to someone? Amanda.

VICE CHAIR FELDER: Different topic. I saw on your lovely list a transition of organic seed of three years.

MR. FOSTER: Oh.

VICE CHAIR FELDER: Could you expand on that?

MR. FOSTER: Yeah, the -- I don't know. There's -- I think -- well, in the OTA task force that Scott's kind enough to facilitate and that Matthew mentioned, one of the discussion items was, is it just time to establish a period of time, at least for some crops or some types of

crops, for -- establish a period of time by which organic seed has to be used? Seems to be an okay lever for other things, but I -- it just occurred to me that where it's like 10 or 20 years ago, a three-year limit might not have been enough for some commodities, but it feels to me like maybe that's a decent number to start talking about and just get into the public discourse. And obviously it resonates with three-year transition for land. So it's a little bit easier to remember for most folks. But that just popped up as a possibility.

The task force has been doing really nice work on identifying some kind of pilot seed types or groups of seed that are closer to having commercially useful supply to meet demand. And so in many of those cases, that might be a step forward, just to say on these crops where there's demonstrated ability to supply a substantial -- at least substantially meets demand, maybe it's time just to start using those figures. Because I'm with Matthew; really, it's -- not much has changed in a while. It would be much better for the industry to push on themselves to get there instead of public losing confidence over time and then have to react out of desperation. It'd be way better to do it proactively.

CHAIR JOHNSON: Thank you. Nate.

BD. MEM. LEWIS: Yeah, so I was compelled by

Bill's public comment earlier, or last week, just for the Board to be mindful on who shoulders the burden of the annotation, right? And so when it's an annotation that affects how a grower uses material, it's the grower that has to shoulder that. When it's based on the manufacturing process, it's the manufacturer. So that was, I think, then compounded by the testimony from Bryce Lundberg, who said, you know, like I think I said in the '90s, like I use it every other year. And then from there, we get this annotation for copper sulfate. And I was like, that's not a great way to come up with an annotation.

So anyway, if you could -- I saw that you had copper sulfate, if you have some thoughts on copper sulfate, I'd love to hear them as we're evaluating that this semester.

MR. FOSTER: Indeed, there's -- well, I would refer you to a fairly extensive written comment in there, but yeah, let me go back to who bears the burden there. It certainly is on the grower side. My -- I think Bill and I are, kind of, aligned, but my emphasis is different, where I wanna make sure there's value in the annotation. And the value -- and great example, I'm glad Bryce mentioned this, where he just kind of offhandedly said, ah, every other year, but that was 30 years ago. And

maybe 30 years ago, that was good enough then. And it has provided a little bit of value, at least a baseline to work from. But it's -- it would be silly to think that those -- all of those baselines are gonna stay the same forever.

So back to the other end, I think the annotation is -- I'm not sure it misses the point exactly, but it de-emphasizes the fact that copper is an essential nutrient, for one. The data I have seen on very stable growing operations across many different crops in many different places is that there's very little correlation between copper accumulation in soils and copper applications -- copper sulfate applications. The exception is when it's used in livestock. That's a little bit different and that's very localized. But on crops, it -- I don't see any correlation as a matter of course.

In fact, data that I've seen on very -- consistently taken data, it has less, much less to do with whether or not copper sulfate is used as an input and more to do with washes that come down through flood events, for example. But a lot of data, including those of some clients of ours, would show that fields that have received no copper sulfate in the last three or four years have a higher copper rate figures now than they did four or five years ago. And in some cases, fields that have received

it every other year have a lower copper.

So that could be sampling error, right? But if the sampling error is so vast that it misses the amount that we're really concerned about, then it's not -- it's probably not a good figure to be using anymore. So that's -- to me, that doesn't really provide a lot of value.

So if those annotations can really do the job, great. But if they're not doing the job, we really should get rid of them because it's a burden primarily on smaller operators who don't have a team of people to monitor that stuff. Yeah.

CHAIR JOHNSON: Thank you.

Any other questions from the Board?

(No response.)

CHAIR JOHNSON: All right, thanks.

BD. MEM. NANDWANI: Yeah, thanks.

CHAIR JOHNSON: Oh, sorry, John, come on back. Sorry.

Cat, go ahead.

BD. MEM. McCLUSKEY: You're not off the hook, John. Thanks for your comments, both written and oral.

You mentioned, you know, you haven't seen much change in 15 years on the discussions around organic seed usage and shared on more with your thoughts on the three-

year transition.

I'm wondering if you can expand on any more conversations or strategies, either within the seed task force that you've been participating in or just from your own experience of ways that we can, sort of, break the cyclical conversation or sort of innovate how do we get out of not being in the same position in 15 years on this topic of organic seed usage?

MR. FOSTER: How do we do that? Well, I'm always gonna default to we need to figure out how to aggregate demand, not just supply. I don't think anything is gonna happen really substantively unless we can accrue that data and give confidence to the people writing the checks to do seed production. So that would be first.

But beyond that, it's -- I think the work of the task force is quite relevant in identifying groups of seeds or types of seeds that are more likely to be able to commercially --- have commercially viable volumes right now. And there are many examples of that. But giving the data to be confident in that and putting that data forward such that certifiers, ACA, NOP can all have confidence that it's real data, that would be really helpful. And start -- I think it's just chipping away at the rumor that there's insufficient quantity, quality, and form in specified seed types or seed groups, because there are

many examples of plenty of organic seed.

There are lots of hazards in that though, so the other piece to the -- the answer -- the other part of the answer to this is transmission -- whoever -- let's see, identify whoever is putting the demands on a grower, like a processor or a buyer or a marketer who is insisting that a particular variety be used, if that's a contractual obligation put on a grower, the obligation to go do the commercially available searches and demonstration of lack of sufficient quality, quantity, and form should carry to over whoever is putting a demand on the grower. I don't think the grower should be solely responsible when they're being told they can't use an X, Y, or Z or variety that isn't available.

I also think we should stop using varieties as the deciding factor. It should be performance characteristics, not just a variety name, because those are subject to patents that are inaccessible to a wide -- huge number of growers, and that's not -- that's never gonna work. It should be about performance characteristics first, I think.

BD. MEM. McCLUSKEY: Appreciate it. Thanks, John.

MR. FOSTER: Yeah. Yeah. Sure.

CHAIR JOHNSON: Thank you.

MR. FOSTER: Thank you.

CHAIR JOHNSON: All right. We are at 3:25. We're planning to take a break at 3:30. I think I'll have Jaydee Hason come up and then April, will save you until after the 15-minute break.

We did have a few cancellations, so if there is anyone who would like to fill those few open slots -- I'm looking at Michelle, I think we have about three to four open slots and there is still a signup sheet just on the table outside. So if you'd like to add your name to that sheet during the break, we do -- we're happy to hear from a few more people.

With that, go ahead, Jaydee.

MR. HANSON: All right. First, as many other people have said, thank you all for serving, both the staff when you're understaffed, and the board members when you're understaffed. And so we really appreciate it.

The Center for Food Safety is an active partner in the National Organic Coalition review of everything that the NOSB is doing. So I'm not quoting -- I'm not giving you a lot of stuff on that.

The -- oh boy. I knew I should have printed this out. Ah, forget that. You're gonna have to go with what I remember. The -- 10 years ago, I came to the NOSB

and asked you to start working on orthophthalates and BPA and several other chemicals. And 10 years later, the future is BPA, orthophthalates and several other chemicals. We -- the only major action that's taken place in those 10 years in the organic community is reaction to the fiasco in Maine where the farmers imported contaminated sludge that had PFAS in it. Not their fault, but it messed up their production.

In the meantime, we have been trying to get FDA -- we at the Center for Food Safety, and with the coalition, we're trying to get FDA to ban a number of orthophthalates. Most of them -- well, about 27 of them. And we've tried to get them to ban a number of other chemicals. And we had some minor hope when the MAHA folks came to town and were working with us on pesticides and that worked pretty well. But what didn't work was the combined effort that we were making to exclude the chemicals used to make foods highly incompatible with human life.

And so as we move forward, it shouldn't take another 10 years for the National Organic Standards Program to ban a number of these things because FDA is not gonna do it. The EPA is not gonna do it. And the USDA is not gonna do it. But these chemicals should not be in organic food or it's gonna be an increasing challenge

because people like me are gonna say they still allow that in organic and we don't want that.

So I will stop there.

CHAIR JOHNSON: Thanks, Jaydee.

MR. HANSON: Thirteen seconds short.

CHAIR JOHNSON: Questions from the Board?

(No response.)

CHAIR JOHNSON: All right, thank you.

MR. HANSON: All right, thank you very much. And we'll be working with you all. We appreciate you.

CHAIR JOHNSON: Thank you.

All right, we're gonna take a 15-minute break. So we'll come back at 3:45, and we'll have April Vasquez, Mike Crotser and Janet Thoman.

(Whereupon, a brief recess was taken.)

CHAIR JOHNSON: All right, thank you all.

We just had one addition to the list at the end, Beth Rota, so we have just a few comments left. We'll have April -- I've never said your last name since you got married, Vaskez (ph)? Vas-quez (ph)?

MS. VASQUEZ: Vasquez.

CHAIR JOHNSON: Vasquez, okay. April Vasquez, followed by Mike Crotser, and then Janet Thomann. Go ahead, April.

MS. VASQUEZ: Good afternoon, and thank you. My

name is April Vasquez, and I'm here on behalf of CCOF.

We represent over 4500 certified organic operations across North America. Our mission is to advance organic agriculture through certification, education, advocacy, and promotion. I'd like to focus my remarks on a few priorities related to the CACS proposals.

First, from a process standpoint, should NOSB move forward with any of these recommendations, we strongly urge the Board to recommend that the NOP conduct a public comment period prior to adoption. The scope and complexity of these proposals, combined with a short comment window, limit the ability of stakeholders to fully assess impacts.

Turning to mandatory testing, CCOF supports testing approaches that are both random and risk-based, which is how we currently operate. Risk-based testing is a critical integrity tool and is often used when there is reason for concern, such as a third-party allegation, a pattern that suggests potential risk, or other indicators that something may be amiss.

I also want to address an implication in the residue discussion, suggesting that certifiers may not be seeing many positive results because we're not sampling based on risk. That has not been our experience. At CCOF, we have a dedicated team that works specifically on

positive residue findings, complaints, and investigations.

In 2025, we exceeded our 5 percent sampling goal and conducted more than 200 pesticide residue analysis. About 20 percent of those analysis resulted in positive findings, a rate that is consistent with our historical experience and year-over-year trends. These positives came from both periodic and risk-based sampling. Most importantly, positive detections do not stop at identification. They require investigation, and when investigations determine non-compliance, they result in enforcement.

We also routinely receive third-party results, including self-reports from certified operations and testing conducted by downstream buyers. From our perspective, both random and risk-based testing are active functioning systems.

With respect to downstream notification of buyers, we appreciate the goal of strengthening accountability, but we do not believe this proposal is ready to move forward. Outstanding issues with UREC must be resolved first. As written, downstream notification could unintentionally operate as an organic recall system. Additional concerns include reliance on third-party sampling protocols that certifiers can't verify, retailer response, and the use of action thresholds that could

trigger recalls where no tolerance exists.

On UREC, we support updating NOP Instruction 2613 and strongly recommend a public comment period before revisions are finalized.

Finally, as many have already said, I want to elevate our concerns regarding the open NOSB seats. I'll just leave it there.

Thank you all for your hard work.

CHAIR JOHNSON: Thank you.

Questions from the Board?

(No response.)

MS. VASQUEZ: Thank you.

CHAIR JOHNSON: All right, thank you.

Next up, we have Mike Crotser, followed by Janet Thoman, and then Gwendolyn Wyard.

MR. CROTSER: Good afternoon. I'm Mike Crotser. I'm the Certification Director at Crop Cooperative. We appreciate the work of the NOSB and the NOP to support organic agriculture.

I first want to encourage the USDA to finalize the appointments for the five vacant NOSB positions. I also want to thank you for the opportunity to speak today.

My first comments will be about e-commerce labeling proposal. As a business, we have approximately 35 online vendors who use our organic product content

online. Although the business strives to control content, we cannot guarantee that a vendor will use current and accurate organic product descriptions. We invest a significant amount of time and resources to correctly reflect our organic claims in the marketplace. Our motivation is to protect our brand through upholding the integrity of the USDA organic seal.

The Board's proposal for guidance properly identifies the difficulty in regulating entities that are exempt from certification. Clarity and consistency are needed for organic claims made by online retailers. We believe that the NOP guidance, rather than rulemaking, is a better solution.

Using guidance rather than rulemaking may be perceived as being less effective at informing consumers of organic status, but this isn't a major concern for us. To avoid financial and reputational harm, no business wants misleading claims about their products online. The USDA seal is the most important and effective way to identify organic products in the marketplace and we are willing to work with certifiers when misleading claims are found online.

My second comment will be about chlorine materials for crop production, livestock, and processing. We support the continued listing of chlorine materials on

the National List. For crops, chlorine material is primarily used by our farmers for equipment and irrigation cleaning and sanitization. For handlers, having chlorine material available is essential for our organic processing facilities. Using both chlorine materials and peroxyacetic acid/hydrogen peroxide allows facilities to manage against microbial resistance to sanitizers. And for livestock, sodium hypochlorite is the primary chlorine material our farmers use for dairy equipment sanitization. It's accessible and it's fail safe for food safety. Our farmers prefer chlorine material for cleaning and sanitizing food contact surfaces and its use aligns with the pasteurized milk ordinance.

There are a few cleaning alternatives that can remove milk residues such as milk proteins. Disallowing sodium hypochlorite and other chlorine materials would have a profound effect on milk quality and safety.

And we support the continued listing of all chlorine materials on the National List.

With that, I'm happy to answer any questions.

CHAIR JOHNSON: Thank you.

Any questions?

(No response.)

CHAIR JOHNSON: All right, thanks for your time.

MR. CROTSER: Thank you.

CHAIR JOHNSON: Next up we have Janet Thoman, followed by Gwendolyn Wyard and then Steve Boyda.

MS. THOMAN: Good afternoon. My name is Janet Thoman. I'm the Managing Director of the Compost Manufacturing Alliance. I'm here on behalf of a group of compost manufacturers, product manufacturers, and compost industry stakeholders working at the intersection of compostable food scrap collection and composting systems across the US.

I'm here today simply to advise the Board that I'm facilitating a group that intends to submit a petition for consideration of compostable food scrap collection bags to be added to the National List for organic composting inputs.

At the outset, I want to say the forthcoming petition is not affiliated with nor a continuation of the prior petition submitted by the Biodegradable Products Institute. We have no affiliation with that petition. We're familiar with the petition and the Board's prior deliberations and ultimate decision, and we are committed to complying with the requirements of the petition process, providing discrete and narrowly defined materials for evaluation, and providing the Board with sound data and science.

Our petition is grounded in the operational

experience of compost manufacturers who process large volumes of source-separated food and yard debris materials every day. These facilities understand the value of compostable bin liners and their role in supporting food scrap collection. These facilities are on the front lines of protecting compost quality, minimizing contamination, and ensuring the finished compost meets the expectations of farmers, soil scientists, and regulators.

We fully respect the NOP petition process and the Board's role in safeguarding soil health, compost integrity, and the long-term sustainability of organic agriculture. We're committed to working within that framework, not around it. Our goal is to provide the board with clear evidence-based data that reflects how these materials behave under real-world conditions, confirm that they are safe in all aspects, and show the importance of the category to food scrap collection and diversion from landfills.

We also recognize this is not simply a technical question. It is a matter of trust. Trust in the materials, trust in the systems that process them, and trust in the outcomes delivered to the soil and to agriculture.

To that end, we want to extend an invitation to members of the Board. We welcome dialogue. We would

value any opportunity to engage with you directly, to understand your questions, your concerns, and your priorities, and to ensure that our petition is responsive to the issues that matter most to this body. Our aim is not to revisit past debates, but to contribute constructively to an informed and transparent evaluation process that reflects both scientific rigor and operational realities.

Thank you again for your time and consideration, and we look forward to engaging with you. Thank you.

CHAIR JOHNSON: Thank you. I had a feeling there was a question over here. Did I hear a sound? Nate, go ahead.

BD. MEM. LEWIS: Thanks so much. I'm really heartened to hear from you that the industry heard us in our conclusions to the compostable materials conversation this past -- the fall meeting that happened in the winter.

MS. THOMAN: Yes.

BD. MEM. LEWIS: And look forward to reviewing this petition. It's really exciting. I feel like you -- it sounds like you, kind of, heard our messaging around single substances, data, science, use patterns, all those things.

MS. THOMAN: Yes.

BD. MEM. LEWIS: Awesome.

MS. THOMAN: We have thoroughly reviewed all of your excellent gatekeeping and rationale, and frankly, agree with the conclusion that you came to.

BD. MEM. LEWIS: That's really great.

And I think I'll maybe take a little liberty and use this opportunity to ask the Program a question, which is, we heard on your update that the compost work item is -- we are in pencils down mode, and you all are considering all that, and I just want to make sure I understand if we get a petition for a material that is relevant and part of that whole group of work, does that change that timeline? Or can you give a comment on how that would intersect?

DR. TUCKER: I would consider a petition process separate from the work that is happening in the Program right now. So I think it would certainly be just an interesting kind of test case.

I'm just going to say, that was incredibly impressive. And I don't say that lightly. Just the way that you presented that was just really, really well done.

MS. THOMAN: Thank you.

DR. TUCKER: So, yeah, we would -- I would say that would be an independent action.

I think the same thing happened on inerts. There was an inert that was petitioned, and I think that's

moving forwards, so it's sort of the same kind of model.

BD. MEM. LEWIS: Great. Thanks a lot.

Well, I personally look forward to this petition and considering it. It looks -- it sounds like a really intriguing topic. Thanks.

MS. THOMAN: Thank you.

CHAIR JOHNSON: Anything else? Any other questions?

(No response.)

CHAIR JOHNSON: All right, thank you.

MS. THOMAN: Thank you.

CHAIR JOHNSON: Next up, we have Gwendolyn Wyard, followed by Steve Boyda, and then Noah Wendt.

MS. WYARD: All right, good afternoon. My name is Gwendolyn Wyard, and I am founding partner of Strengthening Organic Systems. We are an advising firm dedicated to doing just as our name says, strengthening organic systems.

You have our written comments on residue testing and on e-commerce labeling. We urge you to pass both of those proposals at this meeting.

Today, I'm going to be speaking on behalf of the Organic Wine Growers Network. We are an amazing group of organic vineyards, vineyard managers, viticulturalists, researchers, and advocates from some of the best wineries

and learning institutions in Oregon and increasingly around the world. We firmly believe that wine made from organically grown grapes results in better wine and that the best wine is grown by caring for the environment, the health of the soil, and the well-being of our co-workers.

So we have one topic, two parts to address today, all under the umbrella of organic wine.

First, I want to make the Board aware that we just submitted a petition to the Program requesting an additional source of sulfur dioxide be added to the National List for use only in made-with organic grapes, so for handling made-with organic grapes only. For many wineries, particularly smaller and regionally distributed operations, the use of sulfur dioxide gas systems and sulfurous acid presents challenges related to sourcing, handling, infrastructure, and worker safety. As a result, we have about 3,000 certified organic wine grape acres in Oregon. Only about 3 percent of those operations certify the winery and carry that proud accomplishment through to the label on the wine bottle. Why? Because we're missing a critical tool in the toolkit.

Our petition seeks to address this issue by providing wineries with a powdered form of sulfur dioxide, known as potassium metabisulfite, that can deliver the same results within the existing regulatory framework,

again, for wine labeled made-with organic grapes. This change would help support continued growth and viability of organic wine production by making certification more workable, label claims more visible, and by strengthening the connection between the organic vineyard practices and shoppers that are seeking organically grown wine.

Second, I'd like to highlight the importance of grazing sheep as part of organic vineyard management systems and encourage regulatory alignment between NOP's pre-harvest interval requirements for raw manure and the FDA Food Safety Modernization Act Produce Safety rule. Wine grapes are exempt from comparable FDA restrictions because they're fermented and further processed prior to consumption. There's a kill step that significantly reduces food safety risk, and that is key. Aligning the NOP approach with existing FDA exemption would better support integrated organic systems while remaining consistent with risk-based food safety principles.

So thank you for your time, your service, everyone, your continued work supporting organic agriculture. I appreciate all of you so much and all of you out here that show up to do this great thing we do. Thank you.

CHAIR JOHNSON: Thank you. Yeah, similar to the compost issue, it's great to see the dots connected

between previous work. I know we got a lot of comments on this issue at the last Sulphur Dioxide Sunset Review, so we'll look forward to reviewing the petition.

Any questions from the Board? Nate.

BD. MEM. LEWIS: Yeah, can you help me, like, puzzle through what guidance to a certifier might look like to align with FSMA regulations? And, sort of, I want to make sure we're, like, getting it right and certifiers can implement it, who may not be experts in FSMA themselves, but wine grapes, are they on a specific list that's exempt? Is there a way we could direct certifiers to look at resources that are already there? Is there an easy evaluation tool that certifiers can take to determine whether something would be eligible or not? Or, you know, exempt or not exempt? Just trying to distill it down to, like, some tools that we could put in the certifier toolbox.

MS. WYARD: Okay, that's a great question. So wine grapes, I'm going to stay in the lane of what I'm talking about here, but I think we can draw some analogous situations. Wine grapes, they are not -- they're not considered covered produce under the produce safety rule. So they are not considered covered produce, as I mentioned, because of the processing step, that kill step. And there's actually very specific information that has to

be submitted to FDA to justify, to support that status. Because if you're thinking about wine grapes versus other grapes or really any crop that falls under this exception, so hops, wine grapes, pulses, almonds, you have to demonstrate that they are going through this commercial processing step. So produce operations that are under the produce safety rule already have to put together documentation to have that exemption.

So I think that same, and I'm talking in real time here, so bear with me, so I think that same documentation that producers have to put together for FDA could be submitted to the certifier, and bam, there you go.

And I mean, the nice thing about this is that the produce safety rule, when that was put together, in terms of making sure that, you know, that kill is happening for the pathogenic microorganisms E.coli and Salmonella, those two regulations work together. The produce safety rule defers to the NOP regulations, that 9120, FDA defers to NOP. So from a risk perspective, in terms of what would make USDA nervous about doing any sort of change to the 9120 and food safety, FDA and USDA are already in sync there.

So I think that for the products that would fall under this not covered, there's just a seamless path right

there between produce safety rule and certification. So you could just, if you're taking little baby steps, carve all that out. Anything that is not covered under the FDA produce, kind of, has this natural setup to be exempt also from those 9120 requirements.

Because for sheep in the vineyard, you really want them to be able to graze year-round if you really are moving to a regenerative integrated system. And there's a gazillion reason -- I know those folks will be showing up, my group, the Organic Wine Growers Network, they're doing amazing things with integrating sheep into the vineyard systems. But having to remove them 90 or even 120 days, or especially 120 days, completely defies everything they're trying to do. And FDA is already exempted and said this doesn't apply to wine grapes.

So I think there's a lot there to work with to answer your question. Yes.

CHAIR JOHNSON: Any other questions?

(No response.)

CHAIR JOHNSON: Thank you.

MS. WYARD: Great, thanks.

CHAIR JOHNSON: Next up, Steve Boyda, and then Noah Wendt, and we'll wrap up with Beth Rota.

MR. BOYDA: Good afternoon, members of the National Organic Standards Board, USDA staff, and members

of the organic community. My name is Steven Boyda. I'm a certified organic grain producer from northeast Kansas, forming the same ground my grandfather purchased -- great-grandfather purchased in 1903 after immigrating to the United States. I'm also speaking on behalf of the Organic Farmers Agency for Relationship Marketing, or OFARM.

Thank you for the opportunity to speak today, and thank you for the members of this board for the work that you do to protect the integrity of organic agriculture.

I want to focus my comments on one basic point. The USDA organic seal has to remain clear, consistent, and trustworthy. Consumers already face a lot of confusion in the marketplace. They see natural, regenerative, non-GMO, pesticide-free, climate-smart, local, and many other claims. Some of those labels may have value, but the USDA organic seal is different. It's supposed to be backed by a national standard, certification, inspections, enforcement, and accountability. That only works if the National Organic Program is fully funded and fully staffed.

As an organic grain producer, I can tell you that organic farmers make real commitments. We follow detailed rules. We maintain records. We go through inspections. We accept limitations, added cost, and added

risk. We do that because the organic market depends on trust.

When fraud enters the system, whether it's from domestic production or imported products, it does real damage. It's not just a paperwork violation. It can put downward pressure on prices, displace honestly produced organic grain, distort supply and demand, and take income away from family farm operations that follow the rules. Legitimate imports have a place in the marketplace, but questionable imports, weak verification, or fraudulent organic production create an uneven playing field. Domestic organic producers should not be expected to compete against products that do not meet the same standards, carry the same cost, or face the same level of scrutiny. We appreciate the progress made through strengthening organic enforcement, but a rule is only as strong as the ability to enforce it.

Import, oversight, domestic fraud prevention, certifier oversight, investigations, and follow through all require people, resources, and continued vigilance. I would also encourage the NOSB to keep the importance of the USDA organic silo at the center of its work. Decisions that weaken the integrity of the seal, even unintentionally, can harm honest organic producers and further confuse consumers. Every recommendation should

strengthen the confidence in organic and not create more uncertainty around what the label means.

I also encourage USDA to continue making timely appointments as the board terms expire so all NOSB seats remain filled. This board was designed to include a range of voices from across the organic community. A board -- a full board gives stronger recommendations and stronger public confidence in the process. OFARM supports a strong NOP, a strong enforcement of organic standards, and a fully functioning NOSB.

Protecting the organic seal protects consumers, honest organic producers, and the future of organic agriculture. Thank you again for your time and commitment.

CHAIR JOHNSON: Thank you.

Questions? All right, Javier.

BD. MEM. ZAMORA: I'm glad somebody's growing grains organically. And I wonder, as a farmer, how big of an impact? Do you have some numbers? I mean, like, what's your personal impact that you have from some grains being imported from other countries that perhaps might not be -- they're questionable about their integrity? And how -- I mean, I feel it. I feel it. I mean, I feel it when I -- as a grower, when something huge floods the market and then we're doing everything we can to survive and it's

just a struggle. You feel it on the skin. So that's kind of like the way I feel.

MR. BOYDA: I can give you briefly two incidents. About two years ago, there was some grain that came in from Ukraine. We saw milling wheat go from 17, 18 dollars a bushel and has continued to drop since then down to around $12 a bushel, because it flooded the market with imported grain that was not expected.

Recently, I asked Dr. Tucker, when she commented yesterday about the number of vessels being stopped on organic questionable vessels, that was right before the first of the year, after the first of the year where organic corn feed grade was being sold in the Midwest for in the $8 range. Currently, that has shot up to $11 to $12 because some vessels were stopped and I believe importers were assuming that was going to be available to them and it wasn't. So for us, 3, 4 dollars a bushel on a small family farm is probably the difference between making a reasonable income and breaking even if we're lucky.

BD. MEM. ZAMORA: (Microphone off.)

MR. BOYDA: I hope so. Thank you.

CHAIR JOHNSON: Thank you.

All right, Noah Wendt, followed by Beth Rota.

MR. WENDT: Thank you NOSB and NOP for

everything that you do. Thanks for having me here.

Noah Wendt. I am a farmer in central Iowa. I'm also on the Iowa Organic Association Board of Directors, and a member of Organic Farmers Association and in the crop insurance working group there. I have a crop insurance agency also.

So I'm going to speak a little bit more from the heart today. Past times, I've been a little bit more scripted. Something that's really bugging me in the last year is all the peaks and the valleys in our corn prices. And it's been corn prices as of the last year, but it's been other commodities in previous years. And it really, really makes it hard as a farmer to have a nice, consistent, dependable price and net income and continue to make the farm work. And so I get concerned about that. And I feel like we need more consistent, just more consistent prices.

You know, this could come through either having lower, more consistent input prices or more consistent commodity prices. The input price side of things is going to be kind of tough because it's dictated by -- our input prices are kind of dictated by what non-organic input prices are. So if we have high non-organic input prices, it's going to be tough to have low input prices on the organic. But I feel like the commodity prices is

something that we could do about -- do something about.

One of the other ways to mitigate this is to get a more diverse crop rotation. That's something that I've chosen to do. It's more dependable as far as contract goes -- contracts go. And you can cover it under a whole farm revenue protection policy, which is very helpful for guaranteeing income.

So some of the things that I'm thinking about, how do we accomplish this? Just, kind of, level out these peaks and valleys? Maybe there could be some more incentives for crop rotations from the USDA, where that helps level supplies out. It helps with lower input costs. Maybe there could be more cost sharing on cover crops, which helps lower input costs by producing our own nutrients with those cover crops.

On the price side of things, commodity price side of things, maybe there's some way that we could mandate less imports, regardless of whether they're fraudulent or not, whether they pass the residue test or not. Maybe there's certain ways that we could do that. That's going to be a tough ask, I guess. But at the bottom of that is more domestic supply. We've seen this just recently, that the domestic supply has really goofed up prices. They went from $7 a bushel on corn to about 12.25 right now, just in the last year, so I think you

have a more consistent domestic supply. This is going to come through a better safety net with crop insurance, more accurate projected and harvest prices. This year the projected price on corn was $7.30 a bushel, when the cash price was really 9.50. It's pretty hard to do with crop insurance.

Continue to enhance and refine whole revenue protection.

And lastly, a couple Call To Action things would be to ask the NOSB and NOP for interaction with the Risk Management Agency for a better system for determining projected and harvest prices. And that's something that I'm willing to help work on, too. I know that I'm not on the NOSB, but I have a deep spot in my heart for that. And then help with the imports so we can, kind of, get these domestic supplies consistent.

Thanks for your time.

CHAIR JOHNSON: Thank you. Javier.

BD. MEM. ZAMORA: Mann, you guys are touching. Farmers, always, we touch the real deal. That's what I like.

That insurance thing, I think it needs to go through, not NOSB, I think it's more like Congress. That -- seriously, NOSB, I doubt what we can do regarding insurance policies and RMA deals. I think it's mostly

like you're Congress people, you've got to get together with them. Because they're the ones that -- believe me, if -- if they visit your farm or you go to their office or something, they do pay attention when they're signing on something because they're required to sign. As far as I know, because we, a small, midsize, you know, diversified specialty crop, we're always at the end of the tail. We're not growing corn, soy, or any of those commodity things. It's always a specialty crop. And RMA, maybe the last two years, they're paying a little attention. But I doubt what the NOSB can do when it comes to policies and insurance policies. But it's -- it's make or break.

MR. WENDT: Sure. Well, and I'm certainly willing to try that because I think these are very important things. And I think we have had direct contact with RMA in the past. Like with county T-yields, they are starting to go up. County T-yields, like in Story County, Iowa, three years ago on corn were 133, and now they're 154 this year. So I agree with you. I think the voice is being heard. If that's the proper channel to go through, then I'm certainly willing to do that. But when you have this huge discrepancy of $7.30 for your guaranteed price on organic corn, and the market is really at 9.25 or 9.50, that doesn't encourage a farmer to go do that.

BD. MEM. ZAMORA: Yeah. We don't have a lot of

time, but I can give you stories. Strawberries, you know, they get insured for $0.75, and the real price is $4 a pound.

MR. WENDT: Sure.

CHAIR JOHNSON: Why is that? Yeah, so.

MR. WENDT: Sure.

BD. MEM. ZAMORA: A little -- a big elephant in the room, amigo.

CHAIR JOHNSON: Thank you.

Any other questions from the Board?

(No response.)

MR. WENDT: All right, thanks.

CHAIR JOHNSON: Thank you.

All right, last but certainly not least, Beth Rota. Take us home.

MS. ROTA: Thank you. My name is Beth Rota. I'm the Director of Quality and Accreditation at Quality Certification Services. We're a mid-sized certifier. We operate all over the US and in seven foreign countries.

I just signed up this afternoon to give comments, so if you would like to see my polished comments, I would refer you to my written comments in response to the CACS residue testing proposal.

But today I want to echo some of the sentiments that I've been hearing, that you've all been hearing about

how we're coming together as a community. I think Marni did that really well. And because it gives us a lot of opportunities to make improvements when we work together, when we invite a lot of different people to the table.

I've been working in organic certification for almost 20 years now, and I have seen so many changes over these years from narrative OSPs to narrative inspection checklists to certifiers not wanting to work together because of fear of sharing trade secrets to a more, you know, disgruntled relationship between certifiers and the NOP. And it's a whole different ballgame now.

Jenny, thanks to your leadership, there is a great relationship, I feel, between certifiers and the NOP that we are on the same page. That certifiers are on the same page, that we're on the same page with the NOP, that we're on the same page with the farmers that we're working with, that we're all committed to the same mission, even if we disagree about the details.

And I want to talk about streamlining certification because one of the biggest changes we've seen over the years has been this continuous increasing the complexity of certification and then with this major jump in SOE. And we've recognized that we have some challenges in front of us because certification has gotten so complicated in some cases that we are making it too

complicated for the farmers, the small, medium-sized family farmers who are the people that are at the heart and soul of this, right? It has evolved to something different than it was 25 years ago and that's okay. But we need to work together to streamline certification and to find the right solutions to that is going to require trust.

But I also want to talk about this principle called good enough for now, safer enough to try. It's a decision-making principle that aims to reduce the barriers of perfectionism. And I want to say let's all consider that when we're making decisions, whether it's you as the NOSB or the NOP or us as certifiers, when we're looking at ways we can streamline certification and make this program better. So we're going to have to try things and we might not get it right the first time. We might have to come back to the table and try something different and that's okay. And we'll get there, do a much better job of it if we all work together to get there.

CHAIR JOHNSON: Thank you. Appreciate you jumping in and sharing your comments with us.

Any questions from the Board? Nate.

BD. MEM. LEWIS: So do you think eliminating the 90/120 day rule for grazing animals would be good enough for now and safe enough to try?

MS. ROTA: Oh, that's a really, really good one. And brings up something I didn't have the time to talk about, which is data. I think that we should base our decisions -- that we're going to get to the best decisions possible if we base them not on anecdote, but on data. And I would need to look at the data on that to know what is going to preserve food safety so organics doesn't get a bad name. Yeah, let's look at the data.

CHAIR JOHNSON: Any other questions?

(No response.)

CHAIR JOHNSON: All right, thank you.

With that, we are in recess until tomorrow. We'll reconvene at 9 Central on Wednesday, May 13th. Thanks for everyone who's been hanging on on Zoom and in the room. You'll use the same links to join tomorrow.

(Whereupon, at 4:24 p.m., CST, the Business Meeting in the above-entitled matter was adjourned until Wednesday, May 13, 2026 at 9:00 a.m., CST.)

CERTIFICATION

This is to certify that the attached proceeding before the:

NATIONAL ORGANIC STANDARDS BOARD

IN THE MATTER OF: SPRING 2026 NOSB BUSINESS MEETING
DAY 1
PLACE: Embassy Suites by Hilton, Omaha, NE
DATE: May 12, 2026

was held according to the record, and that this is the original, complete, true and accurate transcript which has been compared to the recording accomplished at the hearing.

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Elaine M. LaRosee, CDLR
Official Reporter

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In The Matter Of:

NATIONAL ORGANIC STANDARDS BOARD (NOSB)
SPRING 2026 BUSINESS MEETING DAY 2

Vol. 2
May 13, 2026

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UNITED STATES DEPARTMENT OF AGRICULTURE

NATIONAL ORGANIC PROGRAM (NOP)

NATIONAL ORGANIC STANDARDS BOARD (NOSB)

SPRING 2026 BUSINESS MEETING

DAY 2

Wednesday,

May 13, 2026

Embassy Suites by Hilton

Omaha Downtown/Old Market

555 S. 10th St.

Omaha, Nebraska 681020

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Amanda Felder, NOSB Vice Chair
Andrea Hatziyannis, NOSB Secretary
Kathryn Deschenes
Nate Lewis
Cat McCluskey
Dilip Nandwani
Corie Pierce
Franklin Quarcoo
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P R O C E E D I N G S

(Time: 9:00 a.m. CST)

CHAIR JOHNSON: Good to see you all. Welcome back here in the room and on Zoom. This is Day 2 of our meeting. And I'm going to put the agenda up here for today. There's our Board again. Hello.

We're going to start the morning with Livestock, and then we'll have a break and move on to an expert panel on organic seed. We'll have a lunch break in the middle of the day, and then in the afternoon we'll have the Compliance, Accreditation, and Certification Subcommittee followed by the Crops Subcommittee. And then, NOSB members, stick around so we can take a picture of your beautiful faces before the end of the day.

With that, I will hand it over to Nate Lewis for Livestock.

(Pause.)

Yep, looks like it. Back over to Andrea, I believe, for conflicts of interest. Everyone on the Board has received a conflict of interest verification, and we have checked --

SECRETARY HATZIYANNIS: Confirming that we have no conflict of interest.

CHAIR JOHNSON: All right. Thank you.

Carry on, Nate.

(Pause.)

CHAIR JOHNSON: Nate, sorry, my notes didn't have our voting review, but we should go back to that slide real quick. Sorry.

So, just to review, we're going to start voting today. I think we'll have eight items that we're voting on. So this slide shows the number of votes that we need for a decisive outcome. We have ten members here, so we'll be working with seven as a two-thirds majority.

All right. Now, actually carry on. Sorry.

BD. MEM. LEWIS: All right. So the Livestock Subcommittee, a perennially small but mighty committee.

Livestock production is integral to the organic industry. Often some of the biggest parts of the growth of our sector is in the livestock sector, in proteins, eggs, dairy, and those sorts of things, and those producers need materials to succeed.

And our role as a subcommittee at this meeting is doing the first step of the Sunset process for a number of materials. We have a petition to review, and we will be spending a little time discussing what has been a popular issue for public comment related to integration of livestock in agroforestry systems.

So, first up is a petition to amend the listing for chlorine materials at 205.603 as it relates to

clarifying its use for livestock drinking water. Franklin was the lead on this, so I'll turn it over him to present the petition materials, and then we'll host the discussion.

BD. MEM. QUARCOO: Thank you, Nate.

So, in September 2024, the National Organic Program received a petition from the Organic Materials Review Institute, and the main point of the petition is to clarify whether it is allowed to use chlorine materials for direct treatment of water for livestock drinking purposes.

This is because there were two different groups in the industry who were interpreting this listing differently. And let me read out what the listing is. Chlorine is listed at 205.603, and it allows for direct livestock drinking water, but then the residual chlorine levels must stay within the safe drinking water limits.

And this was being interpreted -- when it says safe drinking water limits, okay -- so one group said it means you can directly use it for treating water. The other group said, no, you can use it to disinfect equipment, treat facilities, but that reference is just telling you that the residual levels of water that has been used to do these things, if it's having contact with soil and being released, it has to stay within the safe drinking water limits.

There were other guidance documents that I don't know whether that complicated how folks were interpreting

this. So the Organic Materials Review Institute brought in the petition and said this needs to be clarified, and the Board, the Subcommittee, reviewed the petition and then we looked at some technical reports and stuff. And eventually, the long and short of the issue is that this is what we proposed.

I'll talk about what the comments have been shortly.

We had an annotation that said that chlorine material disinfecting, sanitizing facilities equipment, and livestock drinking water -- just to clarify, we had we had an annotation previously that was creating a little bit of a confusion so this one makes it clearer.

And a number of the comments that we received in response to this proposed annotation was that it will cause livestock producers to have to test their drinking water for chlorine. A number of the comments that came in were pointing to that. And so this is what we have, and so this is the petition as we have it going. Thank you.

BD. MEM. LEWIS: Great. Thanks, Franklin. I think I'll add something. I want to open it up for discussion, but I think in order to set the stage for that I do want to orient folks to guidance documents on chlorine use in organic production.

So NOP has a wonderful handbook that provides

guidance to certifiers in the industry on their current thinking of how to interpret the regulations. This details how chlorine can and cannot be used in organic production including livestock production, and so I'll just read this so that we're all kind of on the same page.

It says -- it's section 4.2 -- that residual chlorine levels in water in direct food or animal contact, for example drinking water, should not exceed the maximum residual disinfectant limit under the Safe Drinking Water Act, and chlorine products may be used up to maximal labeled rates for sanitizing equipment or tools including dairy pipelines and tanks. Label instructions should be followed regarding requirements for rinsing or not rinsing prior to the equipment's next use.

So I think this sort of identifies how chlorine is being used currently, some various methods for verifying compliance with the Safe Drinking Water Act, and it was certainly not the intention of the Subcommittee for this change in annotation to result in a whole slew of new testing requirements for livestock producers. It was simply to clarify that chlorine can be in water treated for safety and then fed to livestock.

We acknowledge that some folks who are getting water from municipal sources already have chlorine in it, and this was to clarify that there's just a level playing

field. So testing may be one way an operation can demonstrate compliance with a Safe Drinking Water Act, but as I just read in the guidance documents, following label rates can be another way to demonstrate compliance with the Safe Drinking Water Act.

So I just want to acknowledge the comments we received, state the intention of the Subcommittee, and I think I'll just leave it there for comments and questions from the rest of Board.

And remind me, should I facilitate that, or do you want to?

(Pause.)

BD. MEM. LEWIS: Okay. We'll all take questions or comments.

Go ahead, Allison.

CHAIR JOHNSON: Yeah. Thank you for the overview and your work on this. I was stuck and kind of surprised by how many comments we got on it. So I did the same thing you just reviewed and went back to the guidance and the underlying petition, and it looks like really just a question of some certifiers are currently allowing chlorine up to the Safe Drinking Water Act level. Some are not allowing it at all.

So the purpose is to clarify, yes, you can do it, and there's not really a question around any level above the

Safe Drinking Water Act limits that are already there in the guidance. And that's consistent with the handling rules, as well, which I worked with quite a bit in the past.

So it seems like if there are lingering questions around wanting higher levels to be allowed to be fed to livestock, that would be a new petition process or come up somewhere else. But in the scope of this petition, the point is really to make sure that there aren't certifiers who are not allowing chlorine at safe drinking water levels for livestock. So I think it looks good to me to move forward.

BD. MEM. LEWIS: Okay. Any other any other biters on this one?

Go ahead, Franklin.

BD. MEM. QUARCOO: I am wondering whether the Program can make a statement whether, from the Program's perspective, what we have could result in an expectation that testing requirements will change.

MR. CLARK: I don't expect testing requirements to change, but that's something we could explore in a proposed rule and get feedback on and then clarify if needed in a final rule.

BD. MEM. QUARCOO: Thank you.

BD. MEM. LEWIS: Yeah, thanks Jared. And just to potentially kind of make that more user friendly for the

gallery, any change to the National List requires a proposed rule which has notes and comment rulemaking.

So I imagine, if I'm interpreting what you're saying, Jared, right, if we do get a change in the National List there will be another comment opportunity for the public to weigh in related to the changes and what sort of implementation requirements that would include.

MR. CLARK: Yeah, that's correct. Throwback to Erin's presentation yesterday. It's important to be involved at every step.

BD. MEM. LEWIS: Yeah, great. Thanks, Jared.

Go ahead, Allison.

CHAIR JOHNSON: And just to add, we did hear from a number of certifiers who currently allow chlorine in livestock water who didn't expect to see any changes in how they would enforce that rule. So it's already being done.

BD. MEM. LEWIS: Great.

CHAIR JOHNSON: So the practice exists.

BD. MEM. LEWIS: Okay, great. Thanks.

All right. I think we can proceed to the vote, which I will turn back over to you to lead.

CHAIR JOHNSON: All right. So I may be a little rusty at this. We're going to start the voting with Dilip.

We have a acknowledgement that chlorine is already classified as synthetic, so we don't need a new motion on

classification. And so the motion is to amend chlorine at 7 C.F.R 205.603(a)(10) as follows. (10) Chlorine materials disinfecting and sanitizing facilities and equipment and livestock drinking water. Residual chlorine levels in the water shall not exceed the maximum residual disinfectant limit under the Safe Drinking Water Act.

So a yes vote approves this amendment.

Dilip, we'll start the voting with you, and we'll proceed clockwise.

BD. MEM. NANDWANI: Yes.

CHAIR JOHNSON: Franklin.

BD. MEM. QUARCOO: Yes.

CHAIR JOHNSON: Corie.

BD. MEM. PIERCE: Yes.

CHAIR JOHNSON: Kathryn.

BD. MEM. DESCHENES: Yes.

CHAIR JOHNSON: Cat.

BD. MEM. MCCLUSKEY: Yes.

CHAIR JOHNSON: Javier.

BD. MEM. ZAMORA: Yes.

CHAIR JOHNSON: Nate.

BD. MEM. LEWIS: Yes.

CHAIR JOHNSON: Andrea.

SECRETARY HATZIYANNIS: Yes.

CHAIR JOHNSON: Amanda.

VICE CHAIR FELDER: Yes.

CHAIR JOHNSON: And the Chair votes yes.

SECRETARY HATZIYANNIS: We have a unanimous yes.

CHAIR JOHNSON: Excellent. All right.

SECRETARY HATZIYANNIS: Do we have to count?

BD. MEM. LEWIS: Yeah. Just as a Secretary mentor here, if you could say the number of yes, number of no, number of abstentions, just so the record is extremely clear.

SECRETARY HATZIYANNIS: The record? Understood.

We had 10 yes, 0 no, 0 abstentions, 0 recusals.

BD. MEM. LEWIS: And to clarify, do we have absences, or do we have vacancies, or do we not need to --

DR. TUCKER: Just work with the 10 members present.

BD. MEM. LEWIS: 10 members. Okay. So no absences.

DR. TUCKER: Yeah. We don't need to mention a list of vacancies. Good question, though.

And for our team, what you just did was really helpful because sometimes we do write in a rule how many people voted for something and not. And to not have to go all the way back is lovely. So, thank you.

CHAIR JOHNSON: All right. Well done, team.

BD. MEM. LEWIS: All right. Let's see. Next up

I'm going to turn it over to Corie to walk us through a pretty engaging topic around integrating livestock and agroforestry crops.

Take it away, Corie.

BD. MEM. PIERCE: Thank you. Yeah, I'm excited to have this discussion. This is a topic that's definitely near and dear to my heart, and it was exciting to see the amount of comments that we got, both oral comments and written comments.

So the purpose of today is to basically give a verbal update about this topic, and then have a discussion as a Board here, and then decide kind of how we're going forward with this in the Livestock Subcommittee.

So my understanding is that this was brought to us last year kind of as I was getting on to the Board, and there were a few discussions in the Livestock Committee and the executive committees. And the draft work agenda that was approved by the Program -- paraphrase here -- was for us to examine the possible rule changes that could allow the practical, safe, and beneficial integration of livestock into agroforestry plantings, to examine the scientific information and expert testimony on the pathogen and human health implications of these practices, examine if there's justification for any changes via rulemaking, and the need for organic regulations for this practice to align with

FSMA.

So this was approved. And last year, like I said, we had a few discussions but were not able to get too far with this just given everything that happened last year. So I'm excited to take that back up again for this year.

So I'm just going to go through where this lies in the current rule and what the situation is here. So under 205.203 which defines soil fertility and crop nutrient management practice standards, if we go down to the raw manure usage, basically where the issue lies is with raw and composted manure must be applied with these restrictions, so must be incorporated at least 120 days prior to harvest if the crop contacts the soil, or it must be incorporated at least 90 days prior to harvest if the crop does not contact soil.

So what this rule has caused for producers is a little bit of confusion about how to fully interpret what is allowed or not allowed, and is basically where we're going to go with this with this discussion. And I'm actually going to skip to this slide, and I'll come back to that one in a second.

So we start with what is the definition of agroforestry. So agroforestry, first of all, is a newish term. It basically came on the scene in the 70s from a Canadian forester. Basically it's the intentional

integration of trees and shrubs and crops into animal farming systems to create environmental, economic, and social benefits.

So the term is relatively new but the practice is not. It's been happening in the United States and around the world for centuries. It makes logical sense to just have diversified, multi-tiered ecosystems of grasslands, pasturelands, small shrubs, and trees all integrated like a natural living system would.

So how I see it in terms of how farmers and producers are going to do these kinds of systems on their farms is there's kind of two ways you can come at it. One is you already have your existing orchards, and so you have your rows of trees, and you are then wanting to bring in animals like sheep to graze underneath your trees.

Or you are having your wide open pastures and that you're already grazing your animals, and then you're intentionally planting rows of trees within that. That's kind of how I've seen, in my experience, farms wanting to start in these systems.

So one of the, I think, important things to think about here, and the nuance of this conversation that we'll have, is that we're talking about many different kinds of crops, many different kinds of trees or shrubs or even annual crops and alley cropping systems.

We're also talking about many different kinds of animals, many different types of ruminants or poultry or pigs or whatever. So there's a lot of different possible combinations of crops and animals that could be integrated in this.

So, if I back up here, some of the challenges that brought this topic to us are the lack of clarity for when grazing animals' presence in a crop field constitutes a manure application which prompts that 90 or 120 day harvest interval that is in the rule, how FSMA rules can provide more specific flexibility within the context of an operation's food safety plan, but then the confusion of how to apply that in the NOP rules.

So farms doing this can find themselves in compliance with FSMA, but uncertain of whether or not they are with organic regulations. So what we've heard -- and I'll get into this -- is that a lot of producers are just opting to not certify.

We got a lot of comments, like I said, both verbal and written, and there were some very consistent themes that came out of this. So, first, like I said, this 90, 120 day rule is very challenging for producers to work with given that a lot of farmers in this country are in a cold climate or four-season climate, and so their grazing season is not much more than this. There are questions around the need

for this 90, 120 post-application time frame.

We've also been trying to understand is there a difference in the definition of what a mechanical application of manure looks like or is defined as versus manure deposits of a herd or a flock of animals coming through a field for a few hours or half a day or whatever the rotation looks like, and depositing manure.

So some clarity on that. There was a lot of comments on the benefits of agroforestry in these systems and noting how they are aligned with organic principles. So a lot of people talked about increased biodiversity, increased nutrient cycling, natural pest and disease management, less inputs needed, economic diversity for farms being able to have multiple different crops or products on the same piece of land.

So then a lot of people noted lack of consistency on food safety rules across the different entities. A lot of people noted the research that is happening literally as we speak, and so do we need to look at rules that, by using this data, will work for both farmers and certifiers.

And then we also did hear from a lot of farmers that have said they either have already foregone organic certification or as they're having crops that are coming into maturity. So a lot of people have trees that they're grazing under, but they're not producing fruit or nuts or

whatever yet, but once they do then they might have to not be certified. So those are kind of the themes of the comments that we heard.

So again, how do we align the NOP rules and the practical application of this system for farmers? So, clearly, food safety concerns with grazing animals in close proximity of crops is real, and something we need to figure out. And also, like I mentioned earlier, the diversity of the systems makes it just complicated and nuanced.

So like I said, there's so many different types of animals that we're talking about, many different types of crops, how those crops are harvested, how those animals are managed, and so like any number of combinations of all that. So how do we make rules that apply to all those different combinations, and so the differences in the management of all those species.

So, taking all of that information, we'd like to have a discussion right now about, you know, basically we're trying to get to what is the next step for the Board for this? First, do we have any questions, more questions for the Board on how this practice actually works and looks, practically speaking for farmers? And then what can we do to align the rules with the actual management practices? Do we see this as a key priority for us? And so what are the next steps here?

BD. MEM. LEWIS: Great. Thanks so much, Corie, for leading us through that before we jump into the discussion. You did a really great job highlighting all the agricultural and agronomic benefits.

And I did want to acknowledge this one comment that came to me recently. that it's not just agronomic, but it apparently can also potentially disrupt the neo-feudalism that we currently -- the paradigm of neo-feudalism that we have in the wine grape production world. So I just like that there are maybe some broader impacts that could be brought from such a practice.

So, anyway, let's open it up for discussion. Questions, input from the Board?

Go ahead, Javier.

BD. MEM. ZAMORA: I believe, as a farmer, there needs to be a little bit of a change to make sure that we, as the Board, are helping the farmers out there survive. I think we need to figure out and clarify what you explained really nicely, that there are some farmers that have orchards that their timing is essential. And they need diversity.

Animals bring diversity to the soil. The biomass and microbes and all those things increase really nicely. But on the other hand, we also have the food safety. I think, in my case, I mean I love to have some chickens, but

I can't have chickens with -- there's strawberries. So no pollos for me, no chickens, unfortunately.

But I believe there is a big need for us to really look into it and define and give guidance to the certifiers on how to handle this specific industry or growers because it's really sad to hear that they are going away and they're not getting certified because of the rules.

And poop is poop. And if your food safety audit does not allow you -- so they're going to have to adhere to that because they do decide to have a third-party food safety audit. Certification is something else. I think we can work with that and try to figure something out so we don't continue losing those great farmers. I mean, I did hear some of the comments when they called in, and it's just this doesn't apply to me, I mean, I grow walnuts, or that sort of thing.

Again, I think there's a lot of work that needs to be done, and we can definitely figure something out that the certifiers can follow the rules for that specific industry or those specific industries.

BD. MEM. LEWIS: Andrea?

SECRETARY HATZIYANNIS: Thank you. Yeah, we're here to have a discussion to make sure we're crafting these regulations for the interest of the farmers and the interest of the consumers in the food safety and management of the

crops.

So the question that you brought up, Corie, was about mechanical application versus application of the animals, and I think that that is a crucial difference in the discussion here and maybe something we can explore because there is certainly going to be a different level of manure that's being applied based on the different types of application, and maybe a clarifying point that we can bring to the certifiers and the producers to help them navigate the differences. Didn't know if we could explore that topic more? If you had more thoughts on that?

BD. MEM. PIERCE: I mean, that seems to be the lever point that we can work with, from what I understand, and Nate can probably speak to that, too, more. But, yeah, and we had that great oral comment of that farmer who described in detail the difference between, you know, he went around and collected the sheep poop and weighed it, counted it.

And my own experience of when our cattle run through a paddock, like a six-hour paddock, what is left behind. It's not a lot. When you're doing good grazing practices, it's not this mass. You don't want to overgraze. You're leaving behind two thirds of the pasture that was there before the animals got in, intentionally.

And therefore they're just not in there for very

long, and so therefore the amount of manure is minimal compared to like that mechanical spray that's more like a coating. So I do think that's what I understand to be a lever point, but yeah, I'd love to keep learning about that.

BD. MEM. LEWIS: I'll sort of jump in here. Also, I agree with you, that comment about the collection of sheep poop was definitely in like the top ten comments of all time I think. That was quite the dedication to try to illustrate the order of magnitude difference in just volume of material that's applied when you're using it for fertilizer versus when animals are grazing and manure is just sort of a byproduct of that activity.

So I think to maybe add a little context or detail around this concept, one way that the subcommittee can approach this would be to look to perhaps propose an update to NOP guidance related to contamination and commingling.

So, back to the handbook, we do have guidance related to contamination and commingling. Human pathogens or pathogenic organisms are listed in the crop production soil standard as a potential contaminant. That would clearly be the one we would be targeting in the case of grazing animals, and giving the certifier some tools in that guidance document to evaluate a site-specific grazing system for minimizing those contaminants could be an approach that threads the needle.

I'll also acknowledge that we did get a lot of great comments proposing some changes to the wait times. Science has evolved since the late 80s when the 90, 120 day rule came out.

So the history of that was from what they call the EPA 503 rule, and that is related to biosolids. And at the time of the promulgation of the organic standards in the early 2000s, that was the best information we had was 90 days for crops in contact with the soil and 120 days for crops not in touch with the soil.

We now have -- the landscape, as Corie has mentioned, has shifted -- we have the Food Safety Modernization Act, a science-based food safety standard. They have essentially deferred to organic standards within organic systems, so they have their own wait times as it relates to biological soil amendments of animal origin but don't take exception to the organic standards applying those ones.

So those are in the rule, and those apply to manure applications. And I'll also note that the Organic Foods Production Act, our sort of governing legislation, has a provision in it which stipulates that after a manure application there must be a wait time, and that wait time shall not be any less than 60 days. So we do have a floor written in the law, and that would take an act of Congress

to change that.

But I think that's what has incentivized the subcommittee to kind of maybe shift focus away from looking at the days on manure applications and shift more towards are there site-specific, system-plan specific contamination prevention plans that certifiers can be given, some tools to evaluate and approve that would allow grazing animals potentially up to the day of harvest.

So I think we would just want to take the 90, 120 day rule kind of out of the conversation and evaluate grazing systems and contamination prevention as the topic, and that could look like a number of different factors. We heard from public comments, there's a lot of different ways to do that.

There are, you can pull animals off and wait some time, you can maintain ground cover to keep dust down. You can, to Corie's point, flash graze or minimize time in the field. So anyway, there's a number of different ways, facets to that contamination prevention plan that I'm excited to work on as a subcommittee.

Allison?

CHAIR JOHNSON: Thank you for bringing this forward and the opportunity to talk about it in advance of more work.

The comments on this topic were so compelling.

It's hard to get organic producers to show up and comment, but to have aspiring organic producers who aren't certified show up and participate in the process I think is really telling about the importance of this issue and a place where we should be extremely responsive.

And the one that stood out to me the most in addition to sheep poop was a woman who was attracted by the TOPP program, went through the process to start, and then was turned away because of rules around this issue. So to me that's a point where, as a consumer, that's the type of operation that I want to be supporting when I buy organic. And so if the rules are preventing that, the rules are wrong and we need to find a path to fix them. So this seems like a key priority and something that I'm really excited to see move forward.

The one question that I'd love to have the subcommittee speak to in the future is around conventional and organic mixing poop. I think as a closed operation that's all organic animals grazing, no issue. But in addition to the food safety issues, the time requirements around manure, to me ,bring up half-lives for synthetic residues that might be coming through from feed, things like that.

So I think we want to make sure that we have an answer to preventing contamination from synthetic inputs

that may come in through manure. So I don't have an answer to that, and I hope you all will, but that's the one lingering question that stood out to me from comments.

BD. MEM. LEWIS: Yeah, that's a really great point, and I think it dovetails really nicely with this proposed approach of evaluating as a contamination risk, as opposed to a manure application with a specific wait time. And you're absolutely right, there are conventional livestock materials that can persist and have impacts on the organic crop. So, yeah, point well taken.

I just also want to acknowledge, I got handed a note that our former Board member and still-colleague, Brian Caldwell is online, so I want to give him a shout out.

I can't see you but, you know, here's thumbs ups and hearts.

But Brian really was the one who pushed to get this topic on the work agenda and elevated it, and I just want to acknowledge him and all the work he did to get us to where we are, and hopefully we can shepherd this in the future on his behalf.

Any other comments or questions from the Board?

Go ahead, Cat.

BD. MEM. MCCLUSKEY: Yeah, I really appreciate the discussion. I'm really intrigued by this topic, and I think that, to me, I see this as a key priority in promoting

agroforestry in organic. I think it is emblematic of organic evolving in relevance, as well, and I really appreciate this approach that we're discussing here in terms of deposit versus application.

BD. MEM. LEWIS: Great, thanks.

All right. So, Corie, I don't know if we have really put together a timeline, but I expect this isn't the last community seeing this. And it'll probably evolve, as many of our documents do, through discussion document and then ultimately a proposal. But it seems like we've engaged the community, and it sounds like there's a workable path forward on it.

BD. MEM. PIERCE: Yeah, thank you. I think it's exciting. And, yeah, thanks for mentioning Brian. And, yeah, I'm excited to keep working on it.

BD. MEM. LEWIS: Great. All right. I think I'll grab the clicker back from you, Corie, and we can proceed on to the Sunset portion of the Livestock Subcommittee.

So as mentioned, we'll be moving into the first round of the Sunset. So, since this is the first subcommittee evaluating Sunsets, again I'll just give a quick overview for folks listening or watching online and here today that we review all National List materials every five years.

We have divvied them up so we don't have to do

them all at the same time, and we stagger out this work. And the annual cycle for the review of these is that the spring meeting -- which we are in right now -- is the time that we present the materials, discuss them, we solicit stakeholder feedback. And the fall meeting is when we hold our vote for whether to renew the listing or not.

So, no voting on Sunset materials. These are just going to be presentations about the material, comments received, items of interest.

And with that I'll turn it over to Cat who, I believe, has our first one on activated charcoal.

BD. MEM. MCCLUSKEY: Thanks, Nate. So activated charcoal 205.603(a)6. The questions to the stakeholders I'll get to in a moment.

Its use as stated in the 2021 Technical Report for Livestock is that NOP has clarified the allowed use of activated charcoal as a therapeutic treatment on an as-needed basis with mammalian livestock in the cases of suspected ingestion of toxic plants and control of diarrhea caused by moldy silage. Activated charcoal does have an annotation that it must be derived from vegetative sources. It is used as a toxic binder, as I said.

The original proposal, which was back in 2002, is that it is safe, effective, nearly impossible to overdose, and preferred by many vets. That has continued to be the

analysis throughout its time on the list including, altogether, three different Technical Reports. It is benign, and it continues to be considered an important substance.

The summary of public comments, of which we received 15 on this, were all in favor of its continued listing as an approved synthetic substance for use in livestock care. And it, again, is used pretty infrequently.

Commenters in response to the questions that we asked of stakeholders stated largely no known ancillary products being used in veterinary activated charcoal, and that it does not appear that any synthetically derived activated charcoal is being used in organic feed mixes either.

And I think I'll leave it right there. There's clear consensus among commenters to continue to list this, and I didn't see any concerns raised.

Any questions from the Board, or discussion?

(No response.)

BD. MEM. LEWIS: All right. Thanks Cat. I appreciate it.

Next up we've got calcium boroglucanate and calcium propionate, which are Corie's materials. And you can take them one at a time or -- that'd be great, and I'll advance the slide.

BD. MEM. PIERCE: Yeah. I was going to talk about them together just quickly and then break them apart.

So, calcium boroglucanate and calcium propionate are both used for the treatment of milk fever in ruminants. Milk fever is the result of metabolic stress in high-milk-producing animals that occurs either near or right after they've freshened or given birth where their bodies are mobilizing a lot of calcium from their bones and it got to their blood. And when this condition happens, their body is basically unable to meet their calcium needs that they have for their body, as well as they're producing so much milk for their baby and, obviously, to be milked.

So there are several stages of symptoms of milk fever. So first, where they're still able to stand but they're excitable, hypersensitive, like a little aloof. The second stage is when they actually are unable to stand but they're still conscious. And stage three is where they can lose consciousness and eventually enter a coma. So it can be, obviously, a very severe situation, and also very treatable.

So there are various treatments for these stages and means for the farmers to deal with this, and both of these are used for that, and some are administered orally while others are injectable.

So if I get now into the details, calcium

borogluconate is the one that is typically used for more severe cases, and injectable as an IV, usually administered by a vet, and absorbed directly into the bloodstream. So again, there's no withdrawal times needed for this.

And as far as human health and environmental concerns go, there aren't major issues to note. And this is clearly a really important tool for animal welfare to, obviously, to be able to keep animals safe and healthy. And all the stakeholders that we heard from are in favor of relisting calcium borogluconate for both of these.

It is noted that we asked the question if there's redundancy, potentially, with these because these are essentially electrolytes, and they are split out from the electrolyte listing, and so is that a redundancy? And I'd say that, yeah, we can have a discussion on that.

But the key note here, especially for calcium borogluconate, is that this one is used as an injectable. So the reason why it was split out or a reason why it was split out was to basically make sure that the ability to have it be an injectable IV is not taken away.

I think that's where I'm going to leave it for calcium borogluconate.

BD. MEM. LEWIS: Do you want to -- I think go for it with propionate as well? Or should we hold off and do a discussion on that?

BD. MEM. PIERCE: Yeah. Calcium propionate is very similar but is typically used in the earlier stages and is typically given orally. That's the major difference.

BD. MEM. LEWIS: Okay.

And so for the Board, here's the listing for calcium propionate.

Questions from the Board/ Comments?

(No response.)

BD. MEM. LEWIS: I think I'll just add that a material that I'm going to present are nutritive vitamins and supplements which is one of the areas where these questions around redundancy come up. And I can address those comments when we get to that section, but I just want to acknowledge that that's one of the comments that we heard around these various products.

Okay. I'm not seeing any other comments, so we'll proceed.

And, Franklin, you're back.

So we're going to move on to the chlorine materials, and I just want to acknowledge Franklin's work. I think he might be exceeding the Safe Drinking Water Act standards because he had chlorine in both Livestock and Crops. So anyway, it's a complicated topic, and I just want to acknowledge all the hard work that you've done on the chlorine materials.

So I'll turn it over to you to address calcium hypochlorite, chlorine dioxide, hypochlorous acid, and sodium hypochlorite. And then, as an encore, we'll come back to acidified chloride later on in the program.

So, take it away.

BD. MEM. QUARCOO: All right. Thank you, Nate.

So chlorine materials, listed at 205.603. They are used for disinfecting and sanitizing facilities and equipment. The annotation says that residual chlorine levels must not exceed the maximum residual disinfectant limits under the Safe Drinking Water Act.

So I'm going to be talking about calcium hypochlorite, chlorine dioxide, hypochlorous acid, sodium hypochlorite, all together. Very convenient that way.

All right. So what is it used for? The EPA approved the registration of sodium hypochlorite, calcium hypochlorite, to be safe for use on crops, soil, and livestock to control bacteria, fungi, slime-forming algae, that can cause diseases in people and animals.

They are chlorinated inorganic material. I'll not go over some of the details. But because I'm dealing with all of them together, I'll be mentioning important points of each of the materials together as one document.

Chlorine dioxide is used as a bleaching agent in paper and textile manufacturing. It's used as a food

disinfectant in all sorts of stuff. One point I would like to say, there have been a couple of publications that state that hypochlorous acid, which is one of the chlorine materials, is the most effective form of chlorine for killing microbial pathogens and parasites.

And I also want to say that we got a very detailed TR on these chlorine materials that is like a treasure trove of information, a lot of the things we want to know, and some of the things that maybe we don't want to know but we know now. So that's very important.

I'll not go into the manufacturing process for these materials, like I said.

Now, when you look at international acceptance, there are some that are accepted, are permitted, some that are permitted but then there has to be a mandatory removal event, so a whole lot of differences. Some there is a clause or a condition associated with their use. I'll leave all of that for now.

So now where I want to focus on is the human health and environmental issues. When it comes to chlorine, the integrity of organic produce, these disinfectants help us do that because they prevent people from getting sick from contaminants. But the other side of it is some of the environmental and health issues that can come when people are exposed to it, like those who work with these materials

as part of their job. So there are all kinds of things.

And then one of the things the TR brought to light was this whole issue of disinfection byproducts, and that's when chlorine materials are added to water and the water has organic material in that. And these disinfection byproducts, like trihalomethanes, they are said to be carcinogenic and cause some human health problems. Some of them are endocrine system disruptors, and a whole -- we got a lot of information on that.

So when you look at some of their benefits, we need this material in order to make sure our things don't make people sick. On the other side, like for livestock drinking water that we just talked about, how is our water being treated, do we have a lot of organic materials in there, and then we add chlorine what are the things that cause this formation of the disinfection byproducts. So there's a whole lot of discussions on this.

But all of these materials that were put together, they are not the same. There are slight differences, but we are talking about all of them at the same time because this -- what I'm talking about right now -- applies to all of them. It's good for disinfection and all of these things, but then we also have to watch out for some of these health and environmental issues. Like chlorate is said to enter the food supply system almost exclusively as a disinfection

byproduct through the use of chlorine-based sanitizers in food production. So all of these things.

And because of quality and food safety concerns, the Republic of Ireland prohibited the use of chlorine disinfectants in some of their systems. So I just want to give a broad picture of what we are dealing with when we talk about chlorine materials.

Now let me talk about previous discussions at subcommittee level. We acknowledge this whole importance of using these materials to protect us from human pathogens and safeguard organic integrity, but then there's an acknowledgement of some of the significant risks to human health and the environment. And the committees -- previous committees and the current one -- encourage ongoing discussion about the listing of sanitizers and research priorities that look into alternatives and all of that.

So we understand that chlorine is something we have to be careful about, but we have to find alternatives that are effective and get the job done. So these are some of the common discussions that have happened, and there are alternatives, and they all have their advantages and some drawbacks.

One of the questions that we asked to stakeholders is whether there are additional information and perspectives that we're looking for on some of the stated health and

environmental impact of chlorine materials. And people are responding and, like I said, the TR itself is very detailed.

Are there specific procedural or processing steps that reduce the health and environmental risk associated with the use of chlorine materials in livestock production? When we talk about treating the water filtration and other steps that remove organic materials, and then we have a lot of organic materials and chlorine, that's when we come up with the disinfection byproducts. So these are some of the discussions we've been having at the subcommittee level on these chlorine materials. Thank you.

BD. MEM. LEWIS: Great. Thanks so much, Franklin. A comprehensive review indeed.

Questions from the Board on chlorine materials? We'll get to do it again in Crops.

So, go ahead, Allison.

CHAIR JOHNSON: Just one comment. I appreciate you bringing up the issue of byproducts as we're thinking about these materials. I keep bringing up neonics because that's what I do as my day job right now, but chlorine in drinking water reacts with neonics that aren't filtered out and actually creates more toxic products.

So the concern is real, and I think it's something we need to hold that in mind as we're balancing and looking for ways to preserve this tool but minimize use wherever we

can. So I appreciate you raising that issue.

BD. MEM. LEWIS: Any other comments?

(No response.)

BD. MEM. LEWIS: Okay. We'll proceed on to kaolin pectin which, I believe, is Kathryn's material.

Go ahead, Kathryn.

BD. MEM. DESCHENES: Yes, it is. So, kaolin pectin 205-603, synthetic substance allowed for use in organic livestock production. So kaolin pectin is used as an adsorbent, anti-diarrheal, and gut protectant.

Overall, commenters emphasized the animal health and welfare use for this material, and it also had overwhelming support for relisting. It seemed fairly non-controversial, and I would support relisting. No questions for stakeholders either.

BD. MEM. LEWIS: Great.

Questions on kaolin pectin?

(No response.)

BD. MEM. LEWIS: Seeing none, let's proceed on.

And I believe you're up on mineral oil.

BD. MEM. DESCHENES: I am. Mineral oil for treatment of intestinal compaction, prohibited for use as a dust suppressant. So this, also, fairly non-controversial. But commenters noted limited use. So this isn't used very commonly, but when it is needed it's essential, and it's

used mostly in cases of gastrointestinal compaction. So, essential to livestock producers, but infrequently used. And commenters overwhelmingly supported relisting.

BD. MEM. LEWIS: Great. Thanks a lot.

Questions on mineral oil? Discussion?

(No response.)

BD. MEM. LEWIS: All right. Proceeding on to nutritive supplements. This is a Sunset that I took on this year.

So this is nutritive supplements listed at 205.603(a)(21). Nutritive supplements, injectable, supplements of trace minerals, per paragraph (d)(2) of this section; vitamins, per paragraph (d)(3), and electrolytes, per paragraph (a)(11), with excipients, per paragraph (f) in accordance with FDA, and restricted to use by or on the order of a licensed veterinarian.

So these are a broad class of injectable vitamins and minerals and supplements that are used and necessary in livestock production. I don't think I'll dive too much into manufacturing at this juncture.

I will acknowledge that we ordered a limited-scope TR this year to evaluate whether or not the injectable forms of these supplements were formulated differently or had any specific concerns that we should address perhaps through an annotation -- or just at least in that consideration -- than

the other substances that this listing is somewhat redundant to.

As you can see, there's references to a number of other listings on 603 within this particular category. And I like the term Franklin used, a treasure trove. It was also a very interesting TR for those that are interested in this type of information.

But I think the general conclusion from the TR was that as an injectable they are actually more regulated -- this group of supplements are more regulated because FDA provides oversight.

So they are formulated -- some of them are formulated with excipients, but in general they're more regulated and have more oversight simply because they are considered a medicine that -- a veterinary medicine that requires FDA oversight. So, fascinating TR. Really helpful in our Sunset review.

We got overwhelming support from stakeholders that these continue to be needed. I'll acknowledge some comments around redundancy and sort of a careful approval for considering tightening up the list in eliminating redundancies.

I think my personal opinion on that is, it is causing no harm to have a somewhat redundant National List. And when we're dealing with livestock emergencies and vets

who may or may not be as familiar with what exactly a nutritive supplement in our definition means, having specific medicines specifically listed can ease the concern at treatment time for these livestock emergencies.

So I don't think there's any harm in there being some potential redundancies in the list. I'm not particularly excited about trying to have the conversation about reducing those redundancies simply to have a more elegant list. I don't really see a need -- again, personal opinion here -- so I'm not particularly excited about pursuing that.

I will say there was one comment we received from a certifier who suggested that we consider removing the requirement that nutritive supplements be administered only by the order of a licensed veterinarian. And they were citing that veterinarians are in short supply, and livestock producers generally know and can do a lot of their own vet work, and so this is a cumbersome addition.

So I'd like to explore that potential annotation update for the fall. That was compelling to me, and so I just want to flag that for the Board and for folks listening in that I would like to explore that a little bit more in subcommittee.

And I think with that I'll take questions on nutritive supplements. If there are any.

Go ahead, Corie.

BD. MEM. PIERCE: Just really quick. I appreciate your parsing out the redundancy issue because I think I personally have just been tripped up on that for all of these. So I appreciate that and, yeah, just take that in.

BD. MEM. LEWIS: Okay. Thanks.

All right. We will move on to propylene glycol, also a material that I took on for this Sunset round.

Propylene glycol is listed at 205.603(a)(27) only for treatment of ketosis in ruminants. So ketosis is an ailment that ruminant animals can encounter when they freshen or right after calving and as they enter into milking that's a really high-energy-demand time for particularly milk cows. And they can go into ketosis which is where the body has such a high energy demand that it starts to metabolize the body of the animal, has such a high energy demand that it starts to metabolize its fat.

For folks who are not familiar with livestock agriculture, you may have heard of the keto diet, and so that is from ketosis that's happening in your body burning fat for energy that is generally, and can be a harmful thing in the case of livestock, particularly milk cows, because their energy demand at that freshening is so high that they can go into kind of a metabolic crisis through this ketosis. So it is an emergency type of situation. Propylene glycol

is a quick source of energy to remedy that.

We did ask about excluded methods in the manufacture of propylene glycol, and whether or not we should do some additional clarification around that issue. And generally -- well, first of all, the comments we received were overwhelmingly in support of continued listing. And from the certifiers, we did not hear that verifying compliance with organic standards related to excluded methods was an issue on this particular material. So I don't think we'll pursue that as a parallel work item.

But I'm happy to answer any questions that folks may have on propylene glycol.

(No response.)

BD. MEM. LEWIS: Not seeing any, I think we'll proceed on back to Franklin for the chlorine encore of acidified sodium chlorite.

Franklin, take it away.

BD. MEM. QUARCOO: Thank you, Nate.

Sodium chlorite, acidified. It is listed at 205.603, allowed for use on organic livestock as a teat dip treatment only. There are two listings. There's 205.603(a), and then there's 205.603(b). It's for pre-milking treatment and post-milking treatment. So it looks like it's listing the same thing but, no, one is for pre-milking, one is for post-milking treatment.

It is used as a disinfecting teat dip for organic livestock producers, like I just said, both as a pre and post-milking application treatment. One of the things about it is that when it breaks down in the environment it breaks down to water and salt which are more benign than most of the other teat dip materials currently listed on the National List. They are made by mixing an aqueous solution of sodium chloride with a food grade acid such as citric acid.

When it comes to international acceptance, a number of the places, they are not explicitly mentioned in the regulations for a number of our international partners.

Let's talk about human health and environmental issues. While the manufacture and use of acidified sodium chloride solutions have resulted in releases to the environment, the risk of environmental contamination from the released product is minimal.

I'm going to be talking about a few things like pesticides and a number of these materials. When we actually follow the label instructions on how we are supposed to use these materials, we will be fine. So sometimes they will give you a material and tell you it has all these risks, but a number of times when you look into it, if people follow the label instructions and do what they are supposed to do, that's not going to be there. Not even

with this. It is said to be minimal.

Chlorine materials, the way they function, because they are strong oxidizing agents, they can cause ecotoxicity and stuff. So if folks, like I just said, just read the label, follow the instructions, nothing is perfect but at least it reduces the danger that people face.

So part of the discussion in previous years and even now is that preventive healthcare is an essential part of organic farming, and prevention through clean milking and clean animals is always of paramount importance so if this is used before milking and after. So these are regular practices that are recommended, and this product, even when it breaks down into these benign materials, is one of those products that is useful.

Part of the discussion, acidified sodium chloride satisfies the criteria related to the impact on humans and the environment, and the TR gave us a lot of information. The committee has been interested in information regarding the availability of natural, non-synthetic versions. As always, folks are always looking.

So there are others. Like iodine is also one of the things that is used as a teat dip, and its efficacy as a post-milking disinfectant is comparable to acidified sodium chloride. And when we talk about acidified sodium chloride breaking down into things that are benign, that's

impressive. So those are some of the things.

There were studies conducted to compare acidified sodium chloride to other materials as a teat dip, and the results are in their Sunset document. I don't want to go over all of them.

We have a few questions that we put to stakeholders like is lactic acid in use as a teat dip by livestock producers. And so those are some of the questions we put out there. The comments on this are good, but like any chlorine material, there is the question are there alternatives and safety issues that folks ask about. But like I said, this one, when it breaks down, the products are benign.

So that's about all I have for now.

BD. MEM. LEWIS: Thanks, Franklin.

Questions or comments from the Board?

(No response.)

BD. MEM. LEWIS: I have one just kind of as a general rule of thumb on a lot of these medical treatments. I feel like it's important to acknowledge that livestock producers produce their products in a wide variety of ecosystems, climates, locations, sizes, scales, et cetera. And having multiple options for these really, really important treatments is critical, in my view.

So I strongly encourage folks to view these teat

dips not as a list that we should be aiming to get down to the one perfect thing, but more about a number of tools that each have their own advantages in various situations. So giving the producers the flexibility to realize we have this one, acidified sodium chloride, we have iodine, we have chlorhexidine for certain situations, and keeping all of them on the list is so important as we just don't know exactly what livestock producers are encountering.

It doesn't mean we don't ignore the National List criteria, but it just means that we acknowledge that livestock producers are facing a lot of challenges, and having multiple options is really important.

Any other comments?

(No response.)

BD. MEM. LEWIS: Okay. We are rounding out with zinc sulfate. This is another material that I am reviewing and is actually similar to my previous comment which I'll get into.

Zinc sulfate is listed at 205.603 for use in hoof and foot treatments only. So it is used as a foot bath to treat hoof rot in hooved animals. It is seen -- and it was originally petitioned -- as an alternative to copper sulfate which is the go-to material for treatment of hoof rot conditions, and copper sulfate does have some environmental disposal concerns. It's used in fairly high concentrations

when it's in a foot bath, and the animals walk through, and then its disposal can be of concern.

It was originally petitioned as an alternative, and I believe it was originally petitioned because there was some inconsistency among certifiers. Some certifiers were allowing it, some certifiers were not allowing it, and so it was petitioned. We added it to the National List to clarify it is an allowed hoof treatment.

So we asked stakeholders, of course, whether or not it remains necessary. It was a resounding yes from stakeholders that it's a necessary treatment. It isn't as popular or as frequently used as copper sulfate, but it is seemingly increasing in its use. That does not seem to have had much, if any, effect on producers stopping their use of copper sulfate.

So this, again, is in that vein of a lens that I really encourage folks to look at that having multiple options for treatments is really useful in livestock operations, and we also need to be considerate of the environmental impacts of these materials. Copper sulfate can have some very acute environmental toxic effects, particularly in the concentrations and specific locations that it's used in this particular situation, and so zinc sulfate does pose a somewhat better alternative.

That being said, I don't believe either are ready

to come off the list, and that's sort of not really on the table but an interesting dynamic to consider as we evaluate this particular material.

I will take any questions or comments on zinc sulfate.

(No response.)

BD. MEM. LEWIS: I'm not seeing any. I think that concludes the work of the Livestock Subcommittee for this round, and I'll turn it back over to the chair.

CHAIR JOHNSON: Thanks Nate, and thanks to everyone on the subcommittee. Great work and thanks for being the kickoff subcommittee. We'll get back in the swing of all these Sunsets and other work as we move through the rest of the agenda.

We are going to take a break until 10:45. It's a little bit of a longer break, but we have our seed panel scheduled to join us on Zoom at that time. So we'll start right on time. Come back a few minutes early if you can and get settled in, and we'll see you in about a half hour. Thank you.

(Off the record from 10:15 a.m. to 10:45 a.m.)

CHAIR JOHNSON: All right. Welcome back, everyone. I'm going to have the pleasure of introducing our seed panelists. They'll each give a short presentation, and then we'll have a Q&A with Board members.

Thank you all for joining us today.

We have Dr. James R. Myers, Professor Emeritus of Vegetable Breeding and Genetics in the Department of Horticulture at Oregon State University in Corvallis, Oregon. Dr. Myers is a professor emeritus after having served 29 years as the Baggett-Fraser-endowed Professor of Vegetable Breeding and Genetics.

His main interest has been to improve vegetable and field crop varieties for disease resistance, human nutrition, and organic production systems. Along with Edith Lammerts van Bueren, he co-ed edited the textbook Organic Crop Breeding.

He actually wrote the book on this stuff, guys. This is great.

He directed the Northern Organic Vegetable Improvement Collaborative, NOVIC, a 12-year federally funded multi-state project to breed and trial vegetable varieties adapted to organic production systems. He's been involved in several other breeding projects for organic, which currently includes the Tomato Organic Management and Improvement, or TOMI, project. Over his career, he has released 34 cultivars of dry beans, snap beans, snap peas, broccoli, table beets, peppers, and tomatoes.

We're excited to have you with us.

We have Dr. Thomas Lübberstedt who grew up on a

horticultural farm in Hamburg, Germany, and studied ag and horticulture at the Technical University of Munich and the University of Hanover. He received his Dr. rerum naturalarium degree -- that I'm not familiar with in the U.S. -- in biology, from the Ludwig Maximilians University in Munich, in 1993. During this time, he developed his interest in integrating plant breeding and biotechnologies, including molecular genetics.

He worked in three countries, Germany, Denmark, and the U.S. And since 2007, he's been at Iowa State University, where he is the K.J. Frey Chair, the Director of MS Distance Plant Breeding, Faculty Scholar in the Plant Sciences Institute, and the Founder and Professor in Charge of the Doubled Haploid Facility.

Over the past 12 years, Dr. Lübberstedt focused his research on doubled haploid technology and its application, which resulted in a USDA, NSF, and FFAR-funded projects, patents, and novel germplasm, including haploid inducers.

He has served as the Chair of the Plant Breeding Coordinating Committee, the President of the National Association for Plant Breeders, and the Director of the R.F. Baker Center for Plant Breeding at Iowa State University.

Also very excited to have you here, Doctor.

And then, finally, we have Dr. Julie Dawson who's a professor in the Department of Plant and Agroecosystem Sciences at the University of Wisconsin-Madison, training students in the plant breeding and plant genetics and agroecology graduate fields. Her research interests include the use of genetic resources in plant breeding for organic systems, and methods for participatory selection and variety development. She's also the State Extension Specialist for Regional Food Systems and does applied research for growers serving local food markets.

We're thrilled to have such a depth and breadth of expertise on the panel today. And our intention in inviting you here -- and we're so grateful that you joined us -- is to further ground the discussions we've been having around organic seed use in what is technically possible, what are technical barriers, and to really answer some of the more complex questions that have come up in subcommittee and full Board discussions on these topics.

We've gotten great stakeholder input on, as a practical matter, what's happening on the farm, and some of the loopholes or just challenges in ensuring that we're continuing to increase organic seed use -- which we think is the intent of the commercial availability limitation on non-organic seed use in organic -- but also recognizing that we want to leave room for innovation and that there are

constantly new varieties emerging, new challenges emerging that we want organic farmers to have tools to deal with.

So with that, we'll have presentations in the order that I read the bios, and then we'll open it up for questions.

So, Dr. Myers, I'll hand it over to you.

DR. MYERS: Well, thank you very much. Let me share my screen, and we will get going here.

So what I understood that I was going to be talking about, just kind of generally about breeding for organic systems and also wanted some comments about just mutations.

So just getting right down to it. I guess the first thing to say is why should we be breeding for organic systems? And really the way I think about it is organic is a different environment, and we need varieties for optimum performance. They need to be adapted to the environment that they're put in. So that's really the key, I think, for breeding for organic.

This is kind of a generalized plant breeding cycle. You generate genetic -- you find genetic variation, you make crosses, you recombine, you advance that material through generations, you select, and it's very much a cyclical process. A breeding program typically has all these activities going on at the same time.

So, screening germplasm for desired traits, crossing elite parents with the trait donor, and then some sort of a progeny evaluation. At some point you're releasing cultivars. And this is where induced mutation would be coming in, would be in this area of creating genetic variation.

CHAIR JOHNSON: Dr. Meyer, can I interrupt you real quick? I just realized I didn't set you up properly in talking about the scope of the panel.

This is serving a joint purpose of both the organic seed use that I mentioned, but also in our work to define the balance of excluded methods. So, induced mutagenesis is one of the remaining technologies on our to-be-determined-whether-it's-an-excluded-methods list, which is what Dr. Meyers is speaking to.

Sorry, I didn't set that up correctly. Please go ahead.

DR. MYERS: Okay. Thank you.

So anyway, induced mutation would be something where if you don't find the variation in existing germplasm, natural germplasm, then you might be able to do it through induced mutation. And this process just keeps going on and on in a breeding program. Generally, in terms of time requirements, I try to be kind of general here in how many generations it might take. Generations and years are not

always exactly the same because some breeding programs, some crops with some breeding programs can have more than one generation per year.

In beans, if I were to really push it, I could get four generations per year, but something like broccoli, it might only be two generations per year. And the type of cultivar makes a big difference. Are you breeding a pure line, something that's going to be self-pollinated like lettuce or beans or peas or tomatoes? And, well, the field crops would be soybean and wheat. Generally, it's going to take anywhere from five to ten generations to have something that's ready to release as a cultivar.

Open-pollinated, the cultivars are generally just kind of a continuous process. And then I've listed some of these. The brassicas, some of the beets and chard and things like that, the umbels, the carrots, and so forth, and then the alliums, are all examples of what might be open-pollinated crops.

Now, some of these fall into more than one category. For example, with F1 hybrids, we see that some of the self-pollinators and the outcrossers are handled as F1 hybrids. Generally, it's going to be a similar process in that you have to develop the inbreds, then you have to do the testing of F1 hybrids to determine what might be a release.

Clones, you get into quite a few different things. So they range all the way from potatoes to various tree fruits and tree nut crops. Potatoes, you can make a cross and you can have something that's pretty much -- through selection -- then have something that's pretty much ready to release after just a few years of testing. Some of your woody perennials -- we have, for example, a Douglas fir breeding program out here -- and they're looking at a 25-year cycle time with that particular crop.

Now, mutation breeding, just to get into some of the details with that, so mutations do occur naturally somewhere between a tenth to a 100 per genome per generation. These also occur in different tissues, so not all those will be in the germ line, so to speak.
The rate also varies by genome size, and then it can be influenced by things like abiotic stress.

When we get into induced mutation, there are basically physical or chemical approaches to this. So radiation would be a physical approach. X-rays, ion beam, gamma rays. UV falls into this category, although UV doesn't penetrate as deeply into tissues as these others do. And then chemical, things like ethyl methane sulfonate, sodium azide, these are compounds which will induce mutation.

These are sometimes combined with a technique

called TILLING, a targeted induced local lesions in genomes where you can target a particular gene of interest and look for mutations that occur in that gene. It's much more than kind of the random approach people have used in the past with chemical and radiation.

Somaclonal variation is another source. This is material that's been put through tissue culture. And the thing with tissue culture is that you're working with somatic tissues where there isn't a strong mismatch repair mechanism for maintaining the fidelity of the DNA. So things that go into tissue culture and then come back out may have -- they have a higher mutation rate, and you may see that in the material.

There are insertional processes that can kind of cause induced mutations. Transposons, or jumping genes, can insert or jump out of existing genes and affect the expression of those genes. Transformation can be used that way. And then there are the newer technologies predominantly CRISPR Cas9 is what I would call a site-directed mutation process.

Induced mutations will cause a loss of gene function generally, but occasionally will alter expression or you see a gain of function, but that's not so common. They generally are induced in what's called the M1 generation, and then you have to self that plant to take it

to the M2 generation where the homozygous mutation will be expressed and you'll be able to observe it.

Some of these methods cause multiple changes throughout the genome. Radiation is particularly notorious for this, but chemical induction will also cause issues as well. And the other thing I would say is many crops have induced mutations in their background but we don't always know which ones have this and which don't. There is a registry of cultivars with induced mutations, and in that registry over 3,000 cultivars have been registered in 210 plant species.

Some examples of particularly ones that have been widely used -- and I'm most familiar with beans -- so seed color going to, say, taking a black bean and making a white navy bean out of it. There's a variety called Ex Rico which has been used pretty widely in breeding navy beans, and it comes out of this sort of background.

Growth habit. Plant height, in particular the semi-dwarf habit in barley and wheat is very ubiquitous. Oil composition in sunflower, verticillium wilt resistance in mint are all examples, and there are many, many more.

This is very technical, I know, but just kind of an example of all the different ways that DNA can be affected that will cause a point mutation, a change in a single base, and if it's in the right codon position then

will lead to a mutation in that particular gene sequence. Double-stranded breaks, the DSB in there is probably one of the most significant in its effects on plants.

This picture here just is an example of mutation. This is actually a somatic cell mutation. This is not heritable. It's only in the seed code of the bean and not affecting the embryo. But these are examples of mutations that happened in bean seed when they were just a few cells, and then as they divided you see this line of, this file of cells that forms, that shows you essentially how a bean seed develops.

But you notice the ones around the outside, the lines are white, and this would be a loss of function type of mutation. Whereas the one in the center is a change in function mutation, it goes from a kind of dark red kidney to something that's even darker. So just examples of those types of mutations.

Another example is what transposable elements will do. This is the reason we don't have purple tomatoes, anthocyanin in tomatoes, and why we didn't until I did that by crossing in genes from wild solanum chilense. But somewhere back after these species split off from the cultivated tomato, there was a transposable element called the miniature inverted-repeat transposable element inserted into this gene AN2 that disrupted function. And what this

would imply is that if this gene ever jumped out, you might then see the purple pigment in the fruit of a tomato.

Another example, just showing what can happen, how many different ways mutations may affect a particular gene. This is a gene called Sugary1, which is one of the genes that gives us sweet corn, and it's basically a disruption of the function of this particular gene leads to higher sugar levels in the developing year.

This is work done by Bill Tracy at the University of Wisconsin a number of years ago, and he shows that they found five different mutations that affected this particular gene and caused different expression. The U.S. North Central is -- well, actually, the U.S. Northeast -- is the one that we know as sweet corn today, but there are these others as well. And one of these, the Chullpi accession, they weren't able to find a variant in the sequence, but there may be other things going on upstream or in the structure of the gene that this particular gene affects as well. So you can see there are many ways you can get an induced mutation that will cause the same phenotype.

One thing I would just mention to this committee, and in considering and trying to deal with these problems -- which are, in my opinion, very difficult -- is that organic agriculture is one of the few forms of agriculture where there is a set of values and ethics in science and in

farming. You have the IFOAM principles of health, ecology, fairness, and care. And then there's work that Edith Lammerts van Bueren did a number of years ago on the integrity of life, whole plant integrity, genotypic integrity, and phenotypic integrity, and used these as ways to determine what sorts of breeding techniques should be allowed or not in organic agriculture.

So just kind of summarizing what I've been talking about, can induced mutations be distinguished from natural mutations? I don't really see any way that this can be done because they both occur through the same mechanisms and in so many different ways. There are many cultivars that have traits based on induced mutations. Some are well described, some are not. Just through generations of breeding, we may lose knowledge of what originally was an induced mutation.

And then there are cases where pedigrees are maybe unknown or they're proprietary. And then there may be cases where there are companies that have done work with induced mutations and kept it as a trade secret so we don't know about those origins.

So one of the considerations, I think, in Europe is developing a registry of cultivars for organic production. And, you know, this could be done, but I think it would be somewhat difficult. Another thing to think about is if a mutation arises spontaneously and it's allowed

in organic agriculture, would the same induced mutation be allowed through, say, if a technique were used that this committee would eventually consider not allowed.

I think we need to consider product as well as process in the process of determining what should be allowed or not. Is the trait novel and not naturally occurring? Does the trait affect the integrity of the plant or the ability to reproduce, and so forth? There are some options like grandfathering in current induced mutations but not allowing future ones, regulating food-induced mutations and food differently from those that are allowed for. The other, false sustainability. And then I think one of the things is anything that's decided here on induced mutation will apply to things like CRISPR Cas9 in the future.

One thing I would just mention that I'm beginning to see in companies asking for research is control of epigenetic modification, being able to turn genes on and off through epigenetics-type procedures in a controlled manner. So just putting it on your radar for something that may come down in the future.

And I am done with my talk there.

CHAIR JOHNSON: Wow. Thank you. A lot to digest there. I have many questions. I'm sure others do. We'll hold them until after the other intro presentations. So, thank you so much.

We'll now hear from Dr. Lübberstedt.

DR. LÜBBERSTEDT: Are you able to see my presentation?

CHAIR JOHNSON: Looks great. Thank you.

DR. LÜBBERSTEDT: Okay. Thank you. And my understanding was that I should present my research as an example of breeder research, but I think it will touch upon some points that are relevant for this panel. I'm working on haploid technology in maize, and we thought we'd find ways to make it more acceptable for organic maize breeding. I understand it's also still on the list of TBD -- to be determined -- like induced mutations. It's a bit of a parallel case, if you want.

Okay. So I wanted to mention that this technology is already fairly old. It has been introduced and pioneered by Sherret Chase, who was a faculty member at Iowa State in the 40s and 50s. He discovered that plants with only a single genome, haploids, occur once in a while in maize populations, and he recognized that this could be an important tool for breeders because it could accelerate the development of inbred lines, which would speed up the breeding process.

And he was already, in 1953, developing doubled haploid lines, so those were the first ones around. He became more than 100 years old and was able to visit us at

our DH facility and received a special award for his performance and for his inventions, ultimately.

So we'll talk about the DH process in maize, inducer development, our efforts to develop a protocol that is not using chemicals to develop DH lines, and novel breeding schemes that are based on fertile and vigorous haploid plants.

The main reason why doubled haploids are of interest, and that has already been pointed out by Jim, is that conventional inbred line development can take five to ten generations. With the DH process, it can be done in only two generations. That increases the genetic gain per year, which is affecting the denominator of the breeders' equation ultimately.

Doubled haploid lines also have other advantages. They maximize the genetic variance in breeding populations and increase the heritability, so the ability to evaluate those lines for any phenotypes of interest.

The process involves so-called inducer genotypes. As mentioned, it has been found by Chase already that the male partner in crosses has an impact on the rate of haploids in subsequent breeding populations that are developed.

That led to the development of dedicated haploid inducers that over the years have had an increased

capability of inducing haploid plants with only a single genome. But it's only a small fraction in the offspring that are generated. And color marker based on an anthocyanin gene is used to spot those haploid kernels like on the ear.

CHAIR JOHNSON: Dr. Lübberstedt?

DR. LÜBBERSTEDT: Yes.

CHAIR JOHNSON: Your slides are not advancing. Are we supposed to be seeing something past your first slide?

DR. LÜBBERSTEDT: Oh, yes. You should. Let me see.

CHAIR JOHNSON: And it's a little bit hard to hear you. I don't know if you're able to get a little bit closer to your microphone.

DR. LÜBBERSTEDT: Okay. Let me see how I can -- we'll stop sharing again, and --

CHAIR JOHNSON: We can try to move the slides on our end, if that would be easier. Okay. Then let's perhaps do that.

CHAIR JOHNSON: Andrea has taken control.

DR. LÜBBERSTEDT: Okay. Please move to the next slide. And one more. So this is showing the process. On top you see we have dedicated inducer lines that have been developed over time that increase the rate of kernels with

an embryo that has only a haploid genome, which is shown on the ear. You see one that has only a white compared to the purplish embryos. And those about 10% kernels with a haploid embryo would be advanced to receive a treatment with colchicine to help doubling the genome.

Our research has been focusing not only on inducer development but trying to avoid the use of the chemical colchicine, rather look for genotypes that have the ability to double the genome spontaneously based on a genetic mechanism. And it was known already that this is mostly limited on the male side. Haploid plants with only a single genome typically are male sterile, whereas the female side typically is producing a few kernels.

So, going to the next slide. This is showing a scheme to illustrate how doubled haploid lines help in product development. It's from an ongoing project with public sweetcorn breeders like Bill Tracy or Marcio Resende. You can see that it takes only two years to already have doubled haploid lines that are test crossed, and only four years to already get to candidate varieties. At the same time, in year three, you can see that doubled haploid lines are funneled back to produce crosses for the next breeding cycles, so it's really speeding up the breeding process.

Next slide. What we were then figuring out or thinking about was that if we are able to find haploid

plants that have an increased level of fertility, then we could even speed up this breeding cycling further by doing two generations per year, which we are able in maize using winter nurseries.

We could complete a breeding cycle in a single year by crossing fertile haploid plants, which is shown on the right side, to get back to diploid plants with two different genomes that would be induced again to produce haploid plants that are fertile. And this cycle could be repeated over and over again, and combined with marker technology to predict which of these haploid plants are most promising to produce the next generation and advance genetic gain.

Limitations for this process, which was more hypothetical at that point, was what is the level of haploid male fertility in maize? Again, it's based on natural variation that we were looking for. What's the level of female fertility, and what is actually the seed set on haploid plants, and how is it affected by the vigor of haploid plants?

Next slide. So, going back to inducer genotypes, as mentioned, Sherret Chase already found that males impact the rate of haploids. That led in the 50s and early 60s to the development of dedicated inducer genotypes, which are used on the male side. Stock 6 was developed in Missouri by

Ed Coe.

And from that, various inducers have been developed across, so globally, in China, Eastern Europe, Western Europe. And today's induction rates are between 10 and 20%, which means there's that rate of haploids in offspring obtained with inducer genotypes. We started at the bottom to develop inducers that are adapted to the Midwest, starting from German inducers.

Next slide. And while doing that, and focusing on increasing induction rates further, we were also able to add further traits of interest. One of them is Ga-1 causing cross-incompatibility, which is widely used in popcorn to avoid pollinations with pollen from transgenic field corn that is planted next to popcorn fields.

When working with popcorn breeders, we realized that in order to be able to produce doubled haploid lines, we need to develop inducers that also carry this Ga-1 locus in order to be able to overcome the cross-incompatibility in popcorn.

The same cross-incompatibility has been discussed to be used in organic corn breeding as well, so it would offer a mechanism to avoid pollinations with transgenic pollen, and there's not only Ga- available, but there's two additional independent loci that could be used, and there have been discussions to have perhaps different classes,

like Ga-1 would be limited to be used in popcorn, Ga-2, let's say in sweet corn, and maybe the third locus in organic corn breeding, but that is still a discussion that has been initiated at ASTA.

Next slide. This is just to show that we are running our inducer development like a breeding program. Ultimately, we generate multiple inducer candidates each year, so one row in the pink square or rectangle is an inducer line. And it's very laborious to determine induction rates. We have to do multiple hand pollinations, and subsequently count kernels that carry a haploid embryo, so it's very demanding, and for that reason, we started to use genomic selection.

We are genotyping our inducers, and we try to make predictions which of those are most deserving to be advanced to the next generation, and on which we should put in focus our phenotyping effort.

Next slide. Shifting gears here, I'm now moving to the haploid male fertility, or the spontaneous haploid genome doubling. And as mentioned earlier, we were interested in the question whether we can avoid using colchicine by identifying genotypes in maize that have the ability to double their genome spontaneously without colchicine treatment, and we were surveying variation available in maize for this property.

We started by inducing a panel of inbred lines so that we had haploid lines that were derived from these inbred lines in the field, and we were then looking for haploid male fertility -- which we knew was the most limiting factor -- either by looking for pollen, or for anthers that were looking and shown to be shedding pollen that could be used to produce seed ultimately.

As expected, the majority of genotypes, which are haploid lines in this case, were male sterile or had a very limited fertility. However, we did find a few genotypes, and in particular a public inbred line A427, which had a haploid male fertility level of more than 70%.

Next slide. We were going on to map this gene, or the locus, or the loci ultimately responsible for this, and we did find that there's a major locus, explaining about 50% of the genetic variation, located on the maize chromosome 5. We have already done crosses of this line A427 with other germplasm.

We used a population that was developed by Arnold Hallauer at Iowa State to introduce this major locus affecting haploid male fertility, and we were able to show that it helps to develop doubled haploid lines in the absence of colchicine. So we could exploit this spontaneous haploid genome doubling, and they're able to produce doubled haploid lines at the same efficiency or similar efficiency

rate than using colchicine.

Next slide. We were then interested to learn more about the vigor of haploid plants. We used the same approach to look at this BS39-derived set of DH lines that we obtained in previous research to again induce them, introduce haploid lines. So we had ultimately a panel of diploid and perfectly isogenic haploid lines and could compare them side by side. We were interested if this difference in haploid vigor compared to inbred vigor is something for which we can observe genetic variation. And we expected that diploids -- so plants with two genomes -- are generally more vigorous than haploid plants.

If you go to the next slide, you can see that yes, indeed, that there are quite a few pairs where clearly diploid plants outperformed haploid plants with regard to plant height, for example. But the lower photos show that there were also pairs where the haploid was more or less indistinguishable from the isogenic diploid counterpart. It was a bit unexpected, but it shows significant genetic variation for the vigor of haploid plants.

Next slide. We used the same experiment to collect ears from these haploid plants, and the majority of them, as shown on this frequency distribution, had almost no or very limited seed set, like these two ears with only one or few kernels on them. But we did find a few haploid lines

that had decent seed set with about 100 kernels on average per haploid plant, and that was highly heritable and can be used in the breeding context.

Next slide. We did show, if you look at the upper row, that this haploid female fertility is uncorrelated to haploid male fertility, but it's negatively correlated with this difference between haploid and diploid performance, which means it's positively correlated with the performance of haploids for vigor in general for plant height and similar traits. So, in other words, the more vigorous haploid plants are, the higher the seed set that we can expect on these haploid plants.

Next slide. We were then interested if we can already use information that we obtain on haploid plants that are kind of the first generation in this product development cycle of DH lines and later hybrids. Can we use information that we are obtaining on these haploid plants very early in the breeding process to make predictions about diploid performance? And the answer is yes. So using these haploid lines, we were able to show we can already exploit them to make or gather some useful information down the road.

Next slide. Putting this together, we were using this material and it actually crosses between fertile haploid plants to monitor what our success rates were for

self-pollination and crosses between haploid plants. We found that more than 50% of attempted self-pollinations were successful, and close to two-thirds of haploid x haploid crosses were successful as well.

Next slide. This is something that we have been already testing in a project that was ending recently, which is the Co-op Project. We did in parallel work implement this rapid cycling approach, two-generation cycling approach, going from haploid crosses to inductions to haploid crosses in a single year with two generations on the male side using the BS39 materials that I mentioned at Iowa State.

We worked with two partners, Paul Scott at USDA and Martin Bohn in Illinois who were working on the female side to accomplish the same thing. We used a winter nursery that one of the collaborators was providing, Angela Linares, who has an organic winter nursery available. So we have been able to already derive inbred lines, DH lines in that way, and have been able to test crosses that are coming out of these DH lines, and are currently in the process of proposing as a follow-up project to take our findings that we got from our research-based and research-oriented project to actually producing seed under organic conditions, and we realized that this arrow that is indicated between the two boxes is a major bottleneck.

On the one hand, we are typically in four-year projects able to do research like testing new concepts, and we may be able to do research trials -- small plot research trials -- and find interesting inbreds and hybrids, but it's still a big step to take them from this four-year phase into actually producing seed at quantities that would become available to farmers.

We are hoping to now bridge this by continuing our rapid cycling approach and identifying promising combinations while also collaborating with Jeff Block from Gro Alliance, who is taking the most promising hybrids and is going -- on the right side here -- through advancing materials, producing seed of inbreds at scale, testing inbreds for seed production properties -- which is a different topic than just looking at grain yield for promising candidates in small plot trials -- and then hopefully ending up with a lot of seed of hybrids that seem to be viable under organic conditions.

Next slide. So conclusions from our research and past research in this area, haploid inducers have been developed exploiting genetic variation and advancing induction rates slowly to between 10 and 20% today. Haploid inducers with pollen exclusion mechanisms are available and could be of interest in the organic context. Genetic variation for haploid male fertility is available in maize.

I mentioned this one source coming from A427. We have found a few other sources as well, so it seems to be there and can be used.

We found that haploid performance, so the vigor of haploid plants, increases haploid female fertility. That should help down the road to even work or consider working with vigorous haploid plants under organic conditions to make those crosses and to use that for selection under these conditions. And we think that this two-generation cycle based on fertile haploids and combined with genomic prediction, genomic selection, is feasible.

Thank you.

CHAIR JOHNSON: Thank you. It's very complex, but it sounds very promising, and we're excited to see where it goes. I'm sure we'll have many questions for you as well.

But let's hear from Dr. Dawson, and then we'll move into Q&A.

DR. DAWSON: Great. Thank you. Can you see my slides okay?

CHAIR JOHNSON: Looks good.

DR. DAWSON: And you can hear me?

CHAIR JOHNSON: We can hear you. Go ahead.

DR. DAWSON: Great. Thanks for the invitation to be on this panel. And I was asked to talk a little bit about how intellectual property rights affect organic plant

breeders and their relationship to some of the TBD technologies. I'm going to do a little kind of an overview of some of the intellectual property context for plants and seeds, and then talk more specifically about organic systems.

I think starting -- as the other speakers have done -- with the principles of organic agriculture is important, and for the IP part of this, I think we're largely building on the principle of fairness when we're evaluating how intellectual property may help or hurt organic breeding. Obviously some of the other ones come in as well, and all of them are present when we're talking about the techniques that might be appropriate for organic systems.

Seeds go way back with both the Patent Office and the founding of the USDA. The Patent Office actually started distributing seeds to U.S. farmers in 1836 to encourage experimentation and innovation. They continued doing this, and it got so popular that it actually started the USDA, which was created in 1861 with a core part of its mission to procure, propagate, and distribute new and valuable seeds and plants. This program was discontinued due to industry pressure later on, but at its peak it was distributing millions of packets every year to farmers.

The first paragraph of the Act to Establish the

Department of Agriculture has this language about the USDA distributing new and valuable seeds and plants, so it's really a core part of what the USDA has done over time and continues to be engaged with.

In terms of IP, those things are split between the USDA and the Patent Office. The first intellectual property is kind of a biological form. It is a form of hybrid seed, so that if farmers save seed from a hybrid, they don't get what they planted, and this was first popular in corn. Hybrid corn adoption was very rapid among a lot of farmers because of performance improvements. But it did start farmers buying seed every year, and the expectation that you would go back and buy seed every year.

In 1930, the nursery industry wanted a similar kind of protection. They could not get this with hybrids because most nursery plants, like trees were propagated by grafting, and so somebody that had a tree could create copies of it and potentially sell it without having invested in that innovation. And so 1930 saw the Plant Patent Act passed for asexually propagated plants. This still is in effect today and is used by a number of asexually propagated species, mostly tree crops.

The concerns about IP started right at the get-go here. LaGuardia, actually during the debate over the Plant Patent Act, he was concerned that maybe farmers would not be

able to harvest their crop or plant a crop because of IP restrictions, and at that time the thought was, well, this will never apply to seeds because they're variable. And so this was specifically for asexually propagated plants, and they actually excluded food tubers because they were worried about the effects of IP on farmers.

Fast forward a bit. In 1970, there was a similar push for intellectual property rights for seed-propagated crops. This was a time when internationally this was happening as well. So the International Union for the Protection of New Varieties of Plants, UPOV, was created in the 1960s, and the U.S. was part of that discussion, and the idea was to provide a form of intellectual property protection for seeds that would reward innovation but would allow continued research and breeding as well. Congress actually considered putting this into the Patent Act and decided that utility patents were not appropriate for seeds, and so they created their own system of IP, and that is actually housed in the USDA.

We then had a number of court cases, and those are in blue here, where the use of utility patents for traits and for varieties was granted by the Supreme Court rather than by an act of Congress, and this is where we are today. We have IP that is housed at the USDA under the Plant Variety Protection Act, and then we have IP systems that are

in the Patent Office, utility patents and plant patents that are managed by the Patent Office.

There have been a couple of amendments to the Plant Variety Protection Act that has expanded that to include other crops and placed some additional restrictions on how much farmers can save seed and that they cannot save seed and sell that seed, they can only use it for their own farm.

Just briefly to compare the major differences between these IP forms, the key pieces, I think, when we're talking about organic breeding are the breeding exemption and the research exemption. So Plant Variety Protection allows continued breeding with a protected variety and research on that variety whereas utility patents do not. And that has been a major change in recent years as utility patents have been used more extensively both on genetically modified traits and on varieties themselves.

If anyone wants a deeper dive into this, the kind of tension between rewarding innovation and intellectual property rights becoming restrictive and actually preventing innovation, that tension led to a USDA initiative to look at fair competition and innovation in seeds specifically related to intellectual property rights, and that report -- Paulina Jimney and I worked on that with the USDA -- and that is, I think, available on the website still. I just

looked this morning and they've maybe rearranged the website a little bit. So if anyone has trouble finding it, just let me know and I'm happy to figure out where it is housed on the current USDA website.

I want to briefly present a few things that we found in developing that report that are useful maybe to understand as we talk about the use of IP in organic seeds. One is that if we're talking to public sector plant breeding programs at land grant universities or within ARS, the Agricultural Research Service, they still favor the use of Plant Variety Protection. There hasn't been an enormous shift towards utility patents.

And these are a few examples from Wisconsin, the Grains Program, the Potato Breeding Program -- both are at UW -- use PVP exclusively. CARET, we have both an ARS group, Phil Simon, and Irwin Goldman who's on the state side, favoring often public releases that anybody can use. Or the Open Source Seed Initiative, which is another new initiative that's not a formal system of IP but really tries to protect the commons that everybody can use but nobody can take something from that and then protect it.

Often the small OR mid-sized businesses use either no intellectual property, no formal intellectual property. hybrids are common, but not as much PVP or utility patents, but there are a number of small and mid-sized businesses

that do use PVP. Horticulture, particularly ornamentals, tends to use plant patents or hybrids to protect their varieties. And we're seeing a really big shift towards utility patents really only in the commodity seed business -- so corn, soybeans, canola -- and the larger companies that have more capacity to file these are more likely to use utility patents, and often they also apply for a PVP at the same time.

When we talked to stakeholders about what they were seeing as benefits and drawbacks to the current use of intellectual property in breeding, there was generally -- not everybody -- but, generally, support for some form of intellectual property protection because it does take a lot of time to develop varieties. They felt like this incentivized them to develop new varieties, knowing that they would be able to commercialize those.

And also the use of IP to ensure that once you develop and release a variety into commercial use, it stays true to type, and you can choose the companies that you work with to produce seed to make sure that it's high quality seed. That's another part of why people saw IP as favorable.

There was usually support for exemptions for research in breeding and for farmer seed saving. Again, not everybody, but the general -- we had to take kind of the

average -- we saw support for limited IP that allowed you to protect your variety, but exemptions that allow continued research in breeding with those varieties.

Concerns mainly centered around where the balance lies now. I think a lot of people saw the balance as having tipped a little too far towards IP holders having the right to exclude others from doing anything with their varieties, including it seemed like things that might have been allowed under the Plant Variety Protection Act were restricted by contracts.

There was a lot of confusion about how to even find information on where the IP was, what different patents and PVP applies to particular varieties. There was concern about how many research restrictions there are and whether those were all justified. And then, there's a concurrent decrease in public sector activity, which was a source of varieties for a lot of small businesses that were seed businesses, but not as active in breeding. So stakeholders were worried that this combination of things was leading to fewer choices for farmers and fewer companies that could get into plant breeding and innovate in that space.

A few of the roadblocks that are relevant to organic breeding as well as to conventional breeding is that often, even if there's a plant variety protected variety, it might be accompanied by a contract that really overrides all

the exemptions that researchers and breeders might have. The patent system can be very difficult to navigate, and so there was a sense that, if you didn't have legal counsel, you couldn't really figure out where your freedom to operate was. Seed companies that were larger might send a small breeder a letter saying we think you're in violation of our patents, and the smaller breeder would have no way of really assessing how much risk they were taking by continuing their line of research.

There's also, because of utility patents, more and more limited access to breeding material because there's not a research and breeding exemption in utility patented crops, and those tend to be the crops that first had utility patents on traits, and then those expanded to include a lot of the varieties.

There were also complaints about not being able to even access off-patent germplasm or having that not germinate. So the sense was that people got protection, and that protection lasted forever because the varieties never really made it into the public sector even after the utility patents expired, which is not the case for Plant Variety Protection because those go into the National Plant Germplasm System and are made immediately available after that expires.

The Organic Seed Alliance also does a survey --

which I'm sure most of you are aware of -- every five years, and so they actually asked about this in their 2022 survey. And Kiki Hubbard has been working with us on the project about intellectual property rights and fair competition. She used to work for Organic Seed Alliance, and was very involved in this survey.

I've put the black lines in this graph so you can kind of see where the mean is. The black line is in the middle of the neither harmful nor helpful category, and as you get lighter, the gray is uncertain, but lighter blue is more helpful and darker blue is harmful. So you can see that, for plant breeders, utility patents on plants are seen as problematic by at least half of the breeders, whereas Plant Variety Protection and other forms of contracts or the Open Source Seed Initiative are seen as a lot more helpful for breeders.

The Organic Seed Alliance also did a seed ethics workshop that brought in a lot of organic breeders and seed growers -- so Paulina Jimney and Kiki Hubbard were both involved in this -- and some of the things that came out of that workshop echoed what we heard from you breeders in the conventional space as well. Understanding where the variety comes from is really important. Having a pedigree, that's the breeding history and genealogy of that variety. Having a list or register of varieties with their associated

intellectual property rights, because that is so hard to find just on your own. And then having breeders and seed companies communicate that information to people so it's clear what they can do with seed that they're purchasing.

And then also recognizing the work of breeders and growers, particularly seed growers who are producing organic seed. Acknowledging that that does take a lot of time and effort, trying to give credit where that's due, and to have recognition of the creative part of creating new varieties, and making sure that that is recognized along the seed system so that seed catalogs and farmers know where the variety is coming from.

I think another key part of the State of Organic Seed Report from the Organic Seed Alliance found that the farmers that are not using organic seed, most of it is because they can't find a variety that they feel meets their needs as organic growers. And many of those are reporting that their processors, or the buyers of their produce or sometimes grains, are requiring varieties that are not available as organic seed.

So that is a significant issue in terms of needing to make it easier for growers to find varieties that were developed organically and that meet organic markets and expectations of farmers that are adapted to organic environments. It's hard for farmers to find those. It's

hard to demonstrate that they're equivalent. And sometimes the processors aren't willing to take that extra step of trying to find an organic available variety that fits into their processing facility. And obviously there are a lot of technical requirements, so organic varieties need to meet those as well.

So we need a better way of finding seed, searching for seed, testing, and supporting these breeders. The good news is there are a lot of small seed companies that are doing organic seed. There are still a number of public sector breeding programs that are working on organic. And so I think we have an opportunity to do that.

Many of these companies are not using formal IP, and are working in areas where there still is a lot of germplasm out there that is available for breeding. And so I think having community standards around the use of intellectual property, potentially having certain forms of intellectual property rights that are in alignment with organic principles, that would both support these smaller breeders. And many of the techniques that are potentially on the excluded list, they will probably have a utility patent on traits that are created that way. And so that would be one way of tracing them when biologically we can't really tell the difference between CRISPR mutations and natural mutations once we've gone through a couple of

generations.

I want to quickly give two examples. I know we're kind of running short on time, so this will be really fast. But we have had one project funded by the USDA Organic Research and Extension Initiative on grains. That was a participatory breeding project that led to the creation of an organic red wheat in partnership with a number of farmers that did tests on working organic farms and artisan bakers. And so we have a wheat variety that came out of that, and that we opted to use a Plant Variety Protection form of intellectual property, primarily so that we could ensure the seed quality, and so that the group of people working on it would be recognized.

The royalties that are generated from this go back into a pool that then can be used to support further grower participation in breeding. And importantly, Plant Variety Protection allows farmers to save their own seed if they choose to do that, and we're hoping that other breeders will use this to create more varieties that will be adapted to organic systems.

The second project, also funded by the Organic Agriculture Research and Extension Initiative, was on tomatoes, and was really working to help smaller-scale breeders access a broader testing network of farmers, so that we worked with two independent breeders at Nature &

Nurture Seeds and Casey's Tomato. We connected them with a group of growers that wanted to do some testing and selection using the seedling platform, and through that we have created a few varieties.

The first one to be released is called Jada, and that is actually all through the Open Source Seed Initiative, and the hope, again, is that more people can build on that and develop varieties that are adapted to organic systems, and that these populations will go out and hopefully help other breeders as well as farmers because they've been selected for organic systems in the Upper Midwest.

So with that, I will stop sharing, and I'll turn it back over to the panel managers.

CHAIR JOHNSON: Thank you so much. That's fascinating.

We have a lot to digest and discuss from all this. Thank you all so much for the presentations. These are some of the more technical aspects of both the excluded methods discussions and the organic seed use discussions that are hard for us to unpack coming not from breeding backgrounds for the most part, so I think this will give us a lot to work with as we move forward.

I have one sort of grounding and then follow-up point, and then I'll open it up to the rest of the Board.

So the excluded methods discussion has been ongoing. We've had a list of methods that need to be classified as excluded or not that the Board has been working through for many years. My understanding is where we left off, there are four technologies that are still to be determined whether they fit in or not. Induced mutagenesis is one of them. TILLING and transposons are two others, and then doubled haploid technology is the fourth.

Dr. Myers, from your presentation, I'm kind of wondering if we need to roll TILLING and transposons under induced mutagenesis as an umbrella, or if you think those categories still make sense? Could you clarify our weigh in?

DR. MYERS: Yeah. I would say that TILLING comes under the induced mutagenesis process. Now, there are ways to do TILLING that don't involve the use of mutagens. It's a process called EcoTILLING, which allows you to search for spontaneous variation in genes and identify those. So I think that's a solution for that.

CHAIR JOHNSON: Okay. Thank you. That's helpful.

All right. Who has questions?

Dilip.

BD. MEM. NANDWANI: Thank you, all of you, for your very in-depth and comprehensive presentation. There's a lot of information. I recall my days when I was reading

all about this haploid and TILLING and induced mutagenesis and breeding. So thank you again. I really appreciate your time.

The question I have for the panel, it's not specific to anyone, anyone can answer. Is there a way to determine whether induced mutagenesis has been used to produce a seed variety? The Board is in the impression that it is not.

And the second part is are there other methods that could be used to enforce limits, prohibitions on induced mutagenesis in organic seed? And thank you again.

DR. MYERS: Shall I take that one here?

BD. MEM. NANDWANI: Please.

DR. MYERS: So there's no way that I know of that you can look at, you know, do a DNA sequence and say, okay, this was induced, this was not. I think what you're relying on is for people who do this to tell you whether it was done in a particular way. And as Julie referred to, when people apply for intellectual property on something, they are probably going to disclose that sort of thing.

So that's really what you're going to have to rely on. I think you can create maybe a registry. I think it would go well with what Julie was saying, a registry of what the intellectual property is on various cultivars, but also you could include information as to whether induced

mutagenesis was used in their development.

DR. DAWSON: Just to tag on that, I think the induced mutagenesis that leads to something that would not naturally occur in the general environment likely would be part of a utility patent application. If there are processes that lead to mutation that are more natural, you know, exposing things to extreme stress or eco-TILLING, that might not be patented, but it also might be acceptable for organic breeding. And so that may allow you to draw a line between what is considered not natural, and therefore can be patented, and what is maybe considered aligned with processes that naturally occur, and that would be allowable. But I don't think you can detect something by just looking at the DNA.

BD. MEM. DESCHENES: Thank you. That's helpful.

CHAIR JOHNSON: I'm going to insert myself and just ask a follow-on to that. So what you're describing is, it sounds like a relatively closed universe of seed that would be available to organic producers. Do you think that would leave enough flexibility and room? Is it feasible to maintain a list of all the seed that organic producers could use? Or is there some narrow set that would need to be listed and then a broader carve-out for, say, open-pollinated varieties or something like that? Can you dig into a little bit, as a practical matter, what that would

look like?

DR. DAWSON: Yeah, I mean, it would be very difficult, I think, to maintain an accurate list without a broader transparency in the IP system in general, which is something that pretty much everybody would like to see is a declaration of what patents actually apply to seeds. I think that the range of things available to organic should be all of the things that are out there other than the relatively narrow group of varieties that have had excluded methods used to create them.

That might be a lot of the corn and soybeans that is currently grown. There's a lot less of vegetable crops and small grains, like there's still a lot of genetic variability out there that is accessible for organic breeding. I don't think you want to try to create a list of all of that for every crop. It would be all of the National Germplasm System, plus all the OPs. That would be really tricky. But trying to get a better system of transparency around intellectual property rights might be more tractable.

DR. MYERS: I would say one of the things I've been seeing with utility patents, I don't know whether it's still a trend, but not putting in pedigree information into utility patents. To me, that's very problematic. It will be described in the patent as breeding book numbers crossed to one another. But you'd really have no way to trace that

back to what original material was used, and that's something that really needs to be changed in the granting of utility patents.

CHAIR JOHNSON: So to put that in very lay terms, are we talking like ancestry for lettuce where you look up your lettuce variety and you go, oh, it has 2,000 cousins that are related in these ways? Is that -- you sort of see the family tree of a seed, is that the idea?

DR. MYERS: Yes. For example, if I release something, and I publish the release notice in HortScience, I'm supposed to trace it back as far as I can to known varieties and come up with a pedigree tree to show the relationship. And that's what you really need if you're going to be able to say, okay, there was maybe induced mutagenesis used to create this ancestor back somewhere in the origin of this material.

DR. DAWSON: Yeah, and those can be very short or they can be long. Like for the wheat variety that we just released, we crossed Brewster-Bordeaux, which is a non-historic variety, with Warthog, which is publicly available at this point, it's off of PVP. People could get those two varieties and cross them, then we describe what we did to actually create the variety.

Other pedigrees, you might have to go back to the grandparents, great-grandparents, great-great-great-

grandparents before you get something that's actually a publicly available variety that people could start with to recreate that pedigree.

But it is very doable. Breeders keep track of this information. It is something that breeders do have for varieties that they release.

CHAIR JOHNSON: Okay. That's really helpful. Thank you.

More questions?

Cat?

BD. MEM. MCCLUSKEY: Thank you all for coming this morning and for your presentations. They're really informative.

I have a question, Thomas, for you. Is it possible to differentiate between maize inbreds that have been bred using conventional DH versus spontaneous doubled haploid?

DR. LÜBBERSTEDT: In case of spontaneous doubling, that involves genetics ultimately that facilitates the doubling process. So when I talked about inducers and the doubling, inducers are outside the elite germplasm, they are just used as a tool, whereas this doubling mechanism has to be present within elite germplasm to facilitate the haploid genome doubling and to overcome the need to do it by chemical means.

And that's, of course, whatever traits are incorporated into elite germplasm, breeders are careful about that because they could come with negative other characteristics due to linkage or so, and that's something we are looking into. But it's natural variation that we are exploiting within maize germplasm, and we are looking for other sources as well.

In addition, it has been shown that if you're using this process over several generations, there's also some inadvertent selection going on. So the longer you're using this doubled haploid process, the better your elite germplasm is responding to the process.

DR. DAWSON: So is there DNA from your source of the spontaneous doubling that you could use to trace to say, yeah, that one, that line was used with a natural source versus a chemical source?

DR. LÜBBERSTEDT: Yes. So when we did evaluate this A427 as a donor of the haploid genome doubling, we did subsequently a case control study. So we used a sample of BS39, and then through colchicine treatment, we used a sample of BS39 that was crossed with this haploid genome doubling donor. And what we found was that this chromosome 5 region that we also mapped independently showed up, and that suggested to us that this locus was really helping those DH lines to be generated in the first place.

And so we have markers that can be used, and so this A427 is publicly available. Anyone can order it from the germplasm collection and can use it if it's going to be used for the DH process.

BD. MEM. MCCLUSKEY: Thank you, Thomas and Julie. I'll just be maybe very lay in my question here and a little blunt. So if the Board were to recommend that DH be considered an excluded method, right, it's on the TBD list, and annotated to allow for spontaneous -- so non-colchicine use doubled haploid development -- is that a viable possibility? Is that known? Would that be testable, and would that be able to be followed by the breeding community?

DR. LÜBBERSTEDT: It could be tested. I mean, it would, again, relate to what we just heard about how lines have been developed, what is in the pedigree. And so it would be possible to describe which ancestors have been used in arriving at a certain inbred line or hybrid, and so it would be in the description if a DH line has been, or has A427 for example in its background, and it could be tested with DNA markers if this particular genome region is present, which would likely show up.

CHAIR JOHNSON: So whereas with induced mutagenesis, Dr. Meyer was saying, because the pathways are identical between a spontaneous mutation versus something that is induced, you can't test for it. But in the case of

doubled haploid, you could potentially test for the presence of certain genetic markers to figure out whether it came from the spontaneous process or a chemical process.

DR. LÜBBERSTEDT: Yes, in this particular case. I mean, down the road there may be other doubling donors that will be identified, and then it would depend on which ones have been used.

Also as mentioned, breeding companies may become so efficient in the process that they selected for regions that are more quantitative inherited -- so multiple loci contribute -- and then down the road it may be harder to show, and to really take a single marker and clarify this must have come out of spontaneous doubling versus induced colchicine-treated or mediated doubling.

CHAIR JOHNSON: Okay. So kind of evolving, but at this point probably there are some indicators. Thank you.

More questions?

Javier, and then Andrea.

BD. MEM. ZAMORA: Well, so much information, and so -- anyway, thank you for your expertise and all the science behind the breeding, trying to create something that is unique or is more resistant or is just adhering to what the market is asking for you to do. And you touch on several things, and I like the ethics part. I think the ethics part, sometimes it gets thrown away and it's

overlooked.

Me as a farmer, I remember when I was in middle school, and in Jalisco there's a part of -- the University of Wisconsin had an area that it was reserved for them because they found the original maize, those short little plants and probably happens, you probably know more about me, about that, actually, in the 1940s or whatever.

So that area, it's still you know, secret and guarded by many people because it's some of the original stuff. And it comes back to me, another thing is like, I mean, some of the seeds as a farmer that our family saved from our grandfather, you know, the harvest was done, and then you saved it. You always saved the best. And me now as a farmer, sometimes I see a squash that is kind of unique, and then you save it for four or five years, and then you kind of get something that it's almost identical.

What I wanted to say is that we definitely need all this research, and we need you because of your expertise and how you can have maybe, during the season, replicate four things, versus us maybe just one or twice during the season to create something. But it almost feels like it's an area where the Board needs to pay a lot of attention and needs to be educated because some of these excluded methods might -- they just sound a little bit fishy, if you will, not being able to identify how those new varieties were

created.

So me as a farmer, I'll be very cautious on really trying to understand better so we don't continue watering down what the organic seed is. So I appreciate your knowledge and your help. Thank you.

CHAIR JOHNSON: Andrea, go ahead.

Thanks, Javier.

SECRETARY HATZIYANNIS: Thank you all for coming to present and helping to inform us for our seed discussion. My question is about bringing the organic seed to market. I'm curious if you could describe that process to us, how long it takes and what types of variables can impact that outcome.

DR. MYERS: I guess I can take a stab at that, at least from my perspective which is, I think, going to be different from Thomas and Julie because I'm working primarily in vegetables.

And so, typically, what happens at our university is when I release something -- and this is both conventional or organic, there really isn't a big difference here, the end point would be -- but I have to write it up -- I have to document the performance of a line, write it up, it goes through a variety release committee who gives it a thumbs up or thumbs down.

And assuming it passes that, then it gets

registered in our college, and then it's sent over to the tech transfer people who are responsible for licensing and the intellectual property side of things. They don't usually know who to contact, so they'll be coming back to the breeder and saying, you know, who's tested this, who might be interested in growing this variety? And then I can provide that information.

For an organic variety intended for organic production, then it might be contacting companies that do that sort of thing and saying we have this and here are the attributes and why you might want to consider it. So that's the general process for a vegetable crop. The seed, I produce breeder seed ,and then that goes to the company, and then they're pretty much responsible for maintaining that seed.

DR. LÜBBERSTEDT: Maybe I'll say a few words. I mean, at Iowa State -- independent of organic or conventional -- I think it's more straightforward to work on line-type of varieties like soybean, because once you have a line, that is a potential variety. And Iowa State is very set up to work with our soybean breeder or other breeders who work on line varieties, and go through the process -- similar to what Jim described -- for hybrid varieties you first need to find a partner ultimately. So it's more complex to develop hybrids, and for us there's no good path

at this time to really get promising candidates tested enough and marketed. So there's a broken link ultimately.

And I think it also has to do with hybrid corn in particular being very valuable so that industry has taken off, and public breeding has kind of stopped being competitive in this field corn arena decades ago. And in the organic world I think there's now an opportunity, because it's a bit neglected by major breeding programs, to try to develop something that is better-adapted to organic conditions.

But as I tried to describe in my presentation, it's a major step to go from the initial candidates testing of maybe hundreds of candidates in small-plot trials to actually going to on-farm trials or the actual seed production step, which then has different characteristics in terms of seed production under organic conditions than what we looked at in our initial hybrid evaluation trials. And that's something that we are kind of, I would say, we learned how if you find something interesting we can really take it to the next step.

And with the typical length of projects of four years, to start somewhere with a breeding cross and to end up with something that can really go out to farmers' fields, that is not realistic. So you really need subsequent projects in order to take something that you developed in a

first project phase to something that can be upscaled and can make it through the whole pipeline.

DR. DAWSON: And just to add kind of a couple different aspects, it works very similar at Wisconsin to what Jim and Thomas have described. I think for independent breeders who have their own seed companies or breeders that work at a seed company, the path to market is faster once they know that that variety might do well. So we've been working with independent breeders in tomatoes. The varieties that were developed were released through OSSI, so there wasn't really a step that went through any kind of intellectual property rights process that can add time. The breeders could sell seed directly because they were working as small seed companies, and so once they knew a variety was promising they could scale up seed and get it to farmers right away.

The main challenge that those breeders have is actually getting noticed by farmers because the varieties are doing well. They don't have access to the same testing networks that a lot of larger breeding programs do, and they definitely don't have the advertising staff. And so tools that organic certifiers could use and organic farmers could use to find varieties that have been developed organically could really support those independent breeders that are trying to produce varieties for organic systems.

On the public side we are not seed companies, and so we have to work with a seed company that wants to produce organic seed. And so luckily we do have partners like that that do want to produce organic seed. In small grains we have double-certified seeds, so for the variety we released it's certified organic seed and it's certified blue tag seed which means it's state inspected for noxious weeds and germination and quality.

So that process can take a while for small grains. It generally takes three years to get from breeder seed at release to commercial seed for farmers to buy because of the length of time it takes to multiply seed that's different for different crops.

So I think that having more independent breeders and small seed companies that can really respond to organic growers is really important. And there's a distinction between just producing certified organic seed of varieties that are already out there that might have been developed in conventional systems. That can be done in one year, right? You take seed, you put it in an organic system, it has to be untreated seed, but it can be conventionally produced. You put it in an organic system, you produce certified organic seed.

But that's a conventionally bred variety so it doesn't necessarily meet all the needs of organic growers.

And so actually getting seed that is bred organically in organic systems and then released as organic seed and is found by organic farmers, that is kind of the challenge that we're facing in scaling up.

SECRETARY HATZIYANNIS: Thank you all for your answers and very helpful insights. Sounds like the inputs for organic and conventional are similar in time it takes to get to market in that the certification wouldn't be an extra burden as the breeders are already having most of this documentation readily available and tracking most of these items as well.

CHAIR JOHNSON: I'm going to ask a follow up that flips it, and then get Nate.

So if you're thinking from the farmer's side, trying to source organic seed, you look out in the marketplace and don't find anything this year. If we were to add a requirement around looking into the future, do you think you could say what's your plan to have -- to use organic seed in one year, two years, three years? Or would it need to be more open-ended like what's your plan to get it in the future if you can't find it now because of this kind of time variation that you've described. Do you think we can set a time frame, or is that too hard because of the variation in crops?

DR. DAWSON: I think the way that Europe has done

it has been crop-specific and geography-specific in terms of once there are enough varieties that are organically adapted on the market, you are no longer allowed to use conventional seed for those crops and geographies.

I think that burden shouldn't be only on the farmer because just looking for organic seed is not going to result in more organic varieties on the market. I think there has to be a timeline that's communicated to the breeders and the seed companies, and there also has to be a lot more emphasis that the purchasers don't specify varieties that are not organic. The contracts that make it very hard for farmers to actually source new organic varieties and test them and try them, that's a barrier for a number of organic growers. And so the whole process, I think anyone that is processing or handling organic products, like they should also be making an effort to figure out which varieties that are available as organic seeds work in their processing equipment and for their markets, and that will help farmers find varieties as well.

And then having more testing and more research at universities or non-profits that can actually help farmers test different varieties and try them out and not just say, oh, you need to get here, you know, in three years, but say, okay, here's how you might do tests, here's where you might find more information. That will help because it is very

hard for a farmer to evaluate the many, many varieties that might possibly do well.

Getting things dialed down a little bit more and saying, okay, these are a few that are most likely based on trials in your area, why don't you test those, and then if one of them works, scale up that. So, obviously, that's not a very organized list, but that would be my suggestion.

I was wrestling a little bit with the term equivalence, so this would be rather a question back to the NOSB. How is it defined? Does it mean that there has to be exactly a variety that is conventionally available as organic variety, or does it allow similar varieties? And if yes, what are the limits if it's about yield? So I was struggling a bit with that term, I must admit.

CHAIR JOHNSON: Yeah, it is a struggle. It's quite open-ended, so it leaves a lot of leeway to find the reason to not use an organic variety, and so that's one of the things that we're looking at.

I saw Nate next.

BD. MEM. LEWIS: Yeah, thanks y'all so much. I really appreciate your expert testimony and joining us. I

And I think this question is for Jim, and I just want to also acknowledge I was able to sample your popping beans at the Radicchio Festival this year in Portland, and that opened my mind to a whole new world of food, and I

really appreciate you pushing the edges there.

My question for you is related to the induced mutagenesis issue and I just want -- I'm just curious if you can give us some context on how common that technique is utilized in the modern variety development stage. Are we dealing with kind of a relic technology? Are you out there zapping seeds every day and looking for new mutations? So I just want to gauge, have all the mutations that have happened, are they done and it's not really that popular, or is it a pretty commonly used breeding technique?

DR. MYERS: You know, I'm not sure I know for sure the answer to that question. But my sense is that it is -- I'm not sure I would call it a relic technology but it's kind of old school, and people may still be doing it today but not on a large scale. I think where the real development is is with the CRISPR Cas9, so the induced mutagenesis. I go to meetings, and people are doing that all over the place with various traits and all. That's going to hit us like a tidal wave.

BD. MEM. LEWIS: And just as a follow up, is that just because the traditional induced mutagenesis is kind of like a blunt instrument? You get a lot of random mutations as opposed to targeted and specific? Am I following -- am I kind of thinking about this correctly? DR. MYERS: Yes, it is kind of a blunt instrument, traditional induced

mutagenesis. Now, the CRISPR Cas9 you can be very precise in what you're changing in the genome, but you have to know what gene you want to affect and you have to know where in that genome or in that gene might cause the effect you want in the phenotype. So that's kind of the downside that it takes a lot more of the genomic information to be able to do it.

DR. DAWSON: There's also not a fast process to optimize that system. It takes quite a bit of trial and error to actually get it to be reliable.

BD. MEM. LEWIS: This is the traditional induced mutagenesis, or CRISPR Cas9?

DR. DAWSON: CRISPR.

BD. MEM. LEWIS: Oh, okay.

DR. DAWSON: I mean, like once you get it working, you can do a lot. But each crop needs to be optimized, and they're kind of -- I don't do it myself but I certainly know people who have been working for years on getting their system optimized. I think also with the traditional like or older mutagenesis, those things are not particularly safe for people either, and so if people have an option to use a different technology they might choose to do that.

DR. MYERS: The other thing with CRISPR Cas9 is it generally requires a regeneration system, and for some crops we don't have that or the systems are very inefficient, so

it just doesn't work very well. Beans is a prime example of that where we never have really had a good regeneration system for beans.

BD. MEM. LEWIS: Just to be the layperson here, can you clarify what a regeneration system is?

DR. MYERS: So, generally, in a CRISPR Cas9 system you're working at a single cell level, and you're inducing the change in the DNA in this cell, and then you want that cell to multiply and then differentiate from just a cluster of cells into a plant, a new plant basically. So that's really been a limitation for some crops.

BD. MEM. LEWIS: I think I got it. Thanks.

DR. LÜBBERSTEDT: Maybe one addition. So I'm aware of a company in Denmark, spin-off from Carlsberg, it's called Traitomic. So I don't get funding from them, but they developed a TILLING-like method but with low mutation rate, and they tailor the method for countries where regulation prohibits to use editing. And they use extensively efficient sequencing technology to sift through thousands or ten thousands of families that then carry a mutation in a gene of interest ,and their goal is to get it in backgrounds that are already elite. So they are kind of a more recent kind of induced mutagenesis kind of company that offer that for specifically countries with restrictions in regulation.

BD. MEM. LEWIS: That's fascinating. Thank you so much. That's really helpful information.

CHAIR JOHNSON: Franklin.

BD. MEM. QUARCOO: Thanks so much for enlightening us on this very important topic. I've heard elements of what I'm about to ask, but if you can shed more light on what will drive more organic seed? I heard about the regulatory path and other things, but what are the general things that can be done to make sure we have more organic seeds available?

DR. MYERS: Well, I would say more varieties would be very helpful. You know, I think one of the things that we tried to do with the NOVIC program was to trial, it was a combination of trialing vegetable varieties to identify those that might not be available as certified organic that would do well in an organic system, but also to breed additional varieties. And I don't remember now how many releases came out of that, but there were a number of releases. So that helps, I think, to produce more varieties that show a range of adaptations that might be more suitable to growers in a particular region, and that sort of thing.

DR. DAWSON: Yeah, I agree. I think looking at the programs that are releasing varieties that are adapted to organic systems or have been bred with organic farmers and in organic systems, a lot of them are public sector

programs or small to mid-sized companies, and there are a few international companies like Vitalis that does organic breeding.

But the market doesn't necessarily always reward those breeders with increased seed sales. I think closing the loopholes or closing the exemption so that there's a timeline, time frame where that will sunset and where companies that would like to serve the organic market know that they have to produce certified organic seed. That would help. And then supporting kind of smaller-scale independent breeders, like I said, for public sector breeding programs.

I think that if you have organic varieties that are bred in organic systems with organic farmers, you will see performance increases. Right now, most growers that buy certified organic seed are getting certified organic seed of conventionally bred varieties. So the variety was not bred in an organic system but the seed was produced organically. In that case, you might not see any performance benefits, so you only see the more-expensive seed.

If you get the performance benefits of organic breeding, then I think there's going to be more willingness to support the higher cost of organic seed. But there has to be both kind of the supply of more varieties and the certainty that there will be a market for those once the

effort's put into developing them.

DR. LÜBBERSTEDT: I think testing networks is another thing. Like there has been something organized in maize or corn some years back, which for some reasons disappeared, and it's more ad hoc. If there's a new project, then you find partners that do on-farm trials and so on, but it's not something that you can just use independent of projects.

BD. MEM. QUARCOO: Thank you.

CHAIR JOHNSON: Andrea?

SECRETARY HATZIYANNIS: So in listening to your comments, the variety and the demand for specific varietals is really driving this in the market. So to help really the producers and the end users and buyers understand that to open up their purchasing behavior to new varietals will help expand the use of organic seed in the market is an important takeaway.

CHAIR JOHNSON: Go ahead, Corie.

BD. MEM. PIERCE: How do you know if you're an organic grower if you're getting organically bred seed versus just seed that's been grown organically?

DR. DAWSON: Yeah, that's a good question. I think that's why we need more transparency. So, often people that are doing organic breeding will put that in the catalog or in the description on their website or other

places. So they'll be talking about it as an advantage of that variety, but we don't have any registry of which varieties are grown in organic systems after having been bred conventionally and which varieties are actually bred and then produced organically as organic seed. So I think right now you're relying on people disclosing that if you're a grower.

CHAIR JOHNSON: Kathryn?

BD. MEM. DESCHENES: I've been struck by this lack of disclosure and transparency, and I'm not in the seed world so this is all quite new, but what motivations or tools could be used to increase transparency within the entire seed world, perhaps? Do you have any ideas there?

DR. DAWSON: I think, yeah, so in general requiring the transparency if you want intellectual property rights would be a good start because that would apply to all seeds that apply for intellectual property rights, which is most of the commercial seeds in commodity crops and a good percentage of them in specialty crops as well. That would be something that could be required.

And then for voluntary options, having, I think, a community of seed professionals that values transparency and values fairness will get us a lot of the way there. I think that many of the smaller seed companies in the public sector do value transparency, and sometimes it's hard to fit it all

in the catalog or, you know, there are obviously logistical issues.

Sometimes the larger seed companies may not provide all the information to smaller seed retailers, but if it becomes a community norm, then it can be kind of voluntarily enforced. And I think the lever we have for transparency being required is on the intellectual property rights side.

BD. MEM. DESCHENES: Thank you.

CHAIR JOHNSON: Dilip?

BD. MEM. QUARCOO: I think we've got a minute or so. So very quick. Thank you again for your expertise. I really appreciate that. I have a very simple question.

Many of us here are non-biotechnology background, and honestly, we don't understand about DNA, RNA, and all this technology. So if you don't mind, please tell us in a very simple language answer that in five of these technologies we've been talking, and actually subcommittees are scratching their heads how to navigate this very, I would say, complicated topic.

So let's say induced mutagenesis is TILLING, transposons, haploid culture, and CRISPR. Which technology directly involves gene editing, which plays really genome of that particular cell? My limited understanding is that CRISPR, yes, it does change a gene.

Induced mutagenesis is natural as well as spontaneous, or it could be done in the lab. So whatever you want to share in a very simple language to us, that will be helpful to understand that really these technologies alter genes of that particular cell or that takes ultimately to development of a new variety. Thank you.

DR. MYERS: I guess what I would say, trying to put this in the simplest form, these technologies all alter the gene sequence in a genome. They're altering the DNA sequence. Maybe replacing bases for one base with another that changes the function of that gene or causes the transcription of that gene to prematurely stop those sorts of things that happen. So they're all forms of altering the DNA sequence in an organism. I don't know if that encapsulates what you're asking here or not.

BD. MEM. NANDWANI: Sure, indeed. This is the answer I was looking for, and that's on the record too.

DR. LÜBBERSTEDT: My thought there is, I mean, there's a lot about what can happen naturally kind of, and what's going beyond natural processes. And when it comes to a few of those technologies, natural variation is there and can be used, for example, for identifying inducer genotypes or finding these doubling genotypes. But also for mutagenesis, there are mechanisms out there, like biological transposons, or radiation is everywhere, cosmic or radon or

whatever. So there will be a certain rate of mutations occurring.

The question is more what is done beyond what is possible in this variation that is out there, and that would be primarily using transgenics or using CRISPR technology at this point, I would say.

CHAIR JOHNSON: Yeah, and I'm not sure -- so doubled haploids, you're not trying to alter the genome sequence?

DR. LÜBBERSTEDT: That's right, yes.

CHAIR JOHNSON: But you are trying to essentially double half of the genome so that you get a line that is equivalent to an inbred line immediately. That process probably does increase the baseline potential mutations or other things just because it's a stressful process, but it's not targeted at changing the genome. And I think probably the natural forms of that are not as likely --

And I'll look at Thomas here because I am not an expert on this. They're not as likely to have so much stress on the genome as a chemical process.

BD. MEM. QUARCOO: And that doubled haploid you mentioned ,that is done by colchicine treatment in the labs, not the natural way of getting doubled haploids?

BD. MEM. LEWIS: Once again, what was the question?

BD. MEM. QUARCOO: So doubled haploid, we get it through colchicine treatment in the labs. But is there any way we can get in nature doubled haploids?

BD. MEM. LEWIS: Yes, I mean there's genetic variation that facilitates this genome doubling step in the absence of colchicine. And I mean one also has to consider that such genome changes are very important to create species like wheat, for example. I mean, wheat wouldn't be there if there wasn't some doubling that happened after two incompatible genomes came together. So it's something that is happening.

BD. MEM. QUARCOO: Thank you.

CHAIR JOHNSON: All right. Thank you.

Franklin, I'll give you the last question, and then we'll wrap up.

BD. MEM. QUARCOO: Okay. I'm interested in -- and sometimes I talk to geneticists, I've talked to breeders, and one of the things I get is, okay, this method we are using, it could have occurred naturally. But we are using a mutagen that speeds it up, and so if you want to classify it, you can say this could have happened naturally. But it didn't. You've used something, and maybe the amount of radiation is not usual, it would take some unusual amount of radiation to get that, amount of radiation used.

So what I'm trying to ask is do you consider that

natural because it could have occurred by chance? I just wanted to see what you individually think about this whole idea of it could have happened naturally, but it didn't.

DR. MYERS: I think in the case of induced mutagenesis, there are a number of mutations you could have occur either way, either through induction or spontaneously. I think what you have to do is you have to think of these in the context of the ethics and values of organic agriculture, and that helps you draw a line as to what should be allowed and what should be an excluded technology. That's about as deep as I would go into it right here.

DR. DAWSON: Yeah, I think for me, so mostly what I do is I will use things like marker-assisted selection or genomic prediction, which is observing variation but not changing the genome., but using information on what is there to make selections. I do think that there are ways of potentially increasing mutation rates, or increasing the amount of variation, that could be, you know, they're higher than natural if you just left it out in the field, but they're not unnatural. So like if you put plants through stress, they may mutate more. If you put maize under stress, it out-crosses more, even though it's a normally-selfing species.

So if you're using essentially the environment and how you set up your environment to accelerate the creation

of some of this variation, and then you're using an organic environment to select for what's useful, that's already allowed, and it is technically increasing the mutation rate through something that you're doing.

I think that once you're in the lab using chemicals that would not normally be allowed in organic systems if you were a farmer, then it's much easier to say, well, that is not natural. But it may be very hard without going through the principles and what people feel about where the natural line falls to draw a very clear line that everyone agrees on about what could be natural and what is definitely not natural. There's a lot of crazy things that happen in nature to genomes.

But there's also a lot of variation that we can use and that we can select for in organic systems without needing the techniques that actually manipulate the genome. So there's a lot of potential innovation that's out there that's not necessarily holding us back for certain crops and for certain traits if we don't use those lab techniques.

DR. LÜBBERSTEDT: I think an alternative approach to inducing mutations is to screen germplasm connections, and that has been successfully done, for example, to look for resistances which can be rare and induce mutagenesis. I think the goal is to increase the mutation rate in order to make the screening more feasible.

I've been involved in a maize lethal necrosis disease project, and that was mostly conducted by CIMMYT, and I think they looked at ten thousands of accessions to just find five or so that had a reasonable level of that disease resistance. So it's imaginable that one could have tried to increase the rate of such carriers of this important resistance by mutagenizing plants, but that hasn't been done in that case.

So I think it's this combination of -- it's a random process. I see mutagenesis as something if you are not aware of any source of that particular characteristic, then it's the hope to find something, but it is necessarily connected with a large phenotypic evaluation effort, and that's where this mutagenesis comes in. I think that's the motivation to just make it more feasible to find something where you're not sure if it's really out there.

BD. MEM. QUARCOO: Thank you.

CHAIR JOHNSON: Wow. Well, thank you. I feel like my thinking on this evolves with each person I speak with, and getting to speak with the three of you for two hours is a lot for us to digest. So we really appreciate you spending all this time and translating your very, very technical knowledge into language that we can understand and try to move now into recommendations for how we move forward. So thank you so, so much for taking the time with

us.

And the slides that you shared today will be posted on the meeting page from this meeting on the NOSB website. So if anyone wants to go back and do some further digestion of all this information, that will be available to you.

Thank you all so much and hope you have a wonderful rest of the day.

For those of us here in the room, we're going to head to lunch. We'll come back at 2:15. And those of you listening virtually, you'll join us back then too. And we'll move on to the CACS Subcommittee at that time. Thank you.

(Whereupon, at 12:50 p.m., a lunch recess was taken.)

A F T E R N O O N S E S S I O N

(2:13)

CHAIR JOHNSON: All right. Welcome back, everyone. We are contemplating cheering here to compete with our neighbors in the excitement level. You're on notice that you may be called on to give us an "O" at some point.

All right. We're going to shift into the Compliance, Accreditation, and Certification Subcommittee report led by Kathryn.

Over to you.

BD. MEM. DESCHENES: All right. So here we are for CACS. Just getting set up here for those of you on Zoom.

(Pause.)

BD. MEM. DESCHENES: So we're going to head right into -- so we have a couple of topics, three topics. First, the proposal on Residue Testing for a Global Supply Chain: Regulation Review, and then e-commerce, and then we're going to do a verbal update on consistency of seed use.

So we will get started with residue testing. I first wanted to give a brief overview of what was in the residue testing proposal, and then if Board members have any questions, of course we would love to take them throughout.

If I miss a question, just feel free to, Allison, maybe flag me down.

So at a high level, this proposal recognizes that residue testing has been a part of organic certification for years but the environment we're operating in has changed. Supply chains are more global, detection methods are more sensitive, and we continue to hear concerns about fraud and fairness. So this work is really about tightening the system where it matters without turning organic into a zero residue or outcomes-based standard.

I want to thank Kyla Smith and Amy Bruch who worked extensively on this, and really until they came off the Board in January. So this is really their -- they had extensive work here and did a lot of the work going into this, so I want to make sure that they're recognized for that.

So starting with the mandated 5% of operations testing, stakeholders were very aligned here. There was a strong agreement that the 5% minimum should stay, and where the feedback shifted around was how certifiers were selecting these operations. Right now, the regulation focuses on quantity but gives a lot of flexibility on selection of operations.

Today, many folks feel that there's an opportunity to be more intentional. So the proposal recommends updating

the regulation to require a mix of risk-based and random selection. Risk-based selection helps target higher-risk operations, complaints, or investigations, while random selection maintains a deterrent effect across the system. Importantly, the proposal does not lock certifiers into specific percentages. It allows selection to reflect the risk profile of each certifier's portfolio.

Any questions there?

(No response.)

BD. MEM. DESCHENES: No. And then next, the cost of testing. So we propose to revise the regulatory language to allow certifiers to pass along cost of residue testing in certain circumstances, and when contamination is determined to be caused by an intentional application or failure of an operation's OSP, then the cost can be passed on to them.

The proposal tries to strike a narrow balance. It recommends allowing certifiers to charge operations only when these two things are true. First, that the test is tied to credible complaint or investigation, and second, that the result shows intentional application or failure of the OSP.

Any questions there?

(No response.)

BD. MEM. DESCHENES: All right. Public access to results. There are currently two regulatory sections that

reference public access to residue test results, but they don't clearly line up. That's created some confusion about what access looks like in practice. The proposal recommends a simple fix, explicitly linking those sections so it's clear that results are made publicly available through existing certifier procedures.

Separately, many stakeholders supported the idea of aggregating test results over time to identify patterns by crop or region. Others raised concern about that approach, given costs, interpretation, and liability. So rather than mandating a database, the proposal encourages continued industry-led efforts and incentives for certifier participation.

Next we have one of the most discussed topics, downstream notification to buyers. Right now if a product tests non-compliant upstream, there's no regulatory requirement to notify downstream buyers, even when residues exceed action levels. Stakeholders overwhelmingly supported changing that, particularly as supply chain traceability expectations increase under SOE.

The proposal recommends establishing regulatory authority for downstream notification but in a very targeted way. Notification would be required only when residues exceed action thresholds, for example, greater than 5% of an EPA tolerance or when willful violations occur.

This isn't about trace detections, potential UREC cases, or creating automatic recall-style systems, but some of this could have been misinterpreted just based on what we heard from our stakeholder feedback. It's about preventing no non-compliant product from continuing in commerce, and supporting buyer due diligence.

And lastly we have UREC and drift. As analytical methods improve, we're seeing more trace-level residues even when operators have followed their prevention measures. A reoccurring issue is when residues are detected for substances that don't have EPA tolerances, which forces certifiers to default to the 0.01 PPM and can lead to outcomes that feel arbitrary or unfair.

Stakeholders were very clear. Most do not want to change the regulatory definition of UREC. Instead, they strongly support updating NOP 2613 guidance to give certifiers clear, science-based direction, particularly for inadvertent, indirect contamination like atmospheric drift. The proposal urges NOP to implement the Board's prior recommendation to modernize that guidance so certifiers can distinguish unavoidable contamination from negligence while still holding operators to strong prevention expectations.

Questions from the Board?

Yes, Nate.

BD. MEM. LEWIS: Just some going back to a couple

of the earlier sections. I really appreciate the good thinking around cost of testing and figuring out how to pass that along, and particularly to operations that are sort of egregiously allowing their products to get contaminated or not taking the right steps. I think that's kind of the right place to get there.

And I have curiosity around the 5% quota. and whether like residue testing that is part of a settlement agreement or something like that would be counted in that 5% or not? Because I seem to recall when we were doing comments way back in the day and implementation of the residue sampling rule, there was this discussion about whether investigative sampling should count or not.

So if it's part of this, like, if you know something is going on, and you're using sampling as part of an investigatory tool, that seems to be something that maybe shouldn't count towards your 5% of monitoring. But anyway, I don't know, it might be diminishing returns, so I realize, you know, but I'm just curious if there's some discussion around that in that 5%?

BD. MEM. DESCHENES: I think today it can count toward that 5%. And sometimes with a smaller certifier that might put them over the threshold, per discussions with Kyla. But also if others have thoughts, I know we have others with certification backgrounds as well. But I don't

know that we really got a whole lot of opinions on that because we didn't discuss it more explicitly. Perhaps something for the future.

BD. MEM. LEWIS: Fair enough. I appreciate it. Thanks.

BD. MEM. DESCHENES: Yes, Allison.

CHAIR JOHNSON: Thank you. I wanted to echo your thanks to Kyla and Amy for pushing. I know often after your last meeting on the Board, you kind of start to wind down your work. The two of them were determined to continue moving this forward as the last piece of this big package of risk-based proposals we've been working on. And Kathryn and Amanda jumped in and took the torch and did really great work on it. So thank you all.

There were a lot of public comments around kind of tinkering with details of this proposal. And we've seen it a bunch of times, so it's tempting to keep moving it forward. But some things that stood out to me were not having a certifier seat filled as we finalized the decision. We heard public comment from our former certifier representative who worked on the proposal recommending that we do take it back to subcommittee, so I take that pretty seriously.

And particularly the downstream notification seemed like it raised worries that it wasn't intended to

worry, so it does seem like it may be worth spending a little bit more time to make that crystal clear, like what the boundaries are so that we're not inadvertently raising concerns about recalls or deterring people from offering organic products for fear of a contamination issue. So those were some things that stood out to me and I think lean me towards taking a little bit of time to continue working on this.

BD. MEM. DESCHENES: Yeah, and I would echo that I think the downstream buyer notification, we certainly didn't intend for it to become some big red flag. So being more intentional about how it's worded and how we go about that might be -- would probably be worth taking the time.

And I should also do a shout out to Amanda because she also helped bring this to the finish line.

Go for it, Amanda.

VICE CHAIR FELDER: Thanks for stealing what I was going to say, Allison. But yes, I think we were surprised by the amount of public comments about downstream notification. I think for us that were part of writing this and our opinions, that we've kind of already been part of this, so to us it was normal, but not maybe to everyone. So I do think that we could be clearer in what we were thinking this would achieve as far as helping to enhance fraud prevention and not so much a recall event.

So I do think that it would be best to bring it back to subcommittee for just a clearer path of what our intentions were. It clearly was not carried through clearly to the public.

BD. MEM. DESCHENES: Nate?

BD. MEM. LEWIS: Yeah, just to weigh in, it sounds like I'm hearing the momentum to bring it back to subcommittee, so that means we can maybe refine some other sections or at least solicit some input on them. And I think one of the areas that gives me pause is the public access to results. And the thing that gives me pause about it is that these aren't surveys conducted by statisticians to sort of demonstrate the rate of pesticide residues or contaminants in organic products, and so it is not part of a pesticide data program.

It's not sampling structured within statistical, you know, getting a statistical look at that. And I just want to be cautious as we make it easier for the public to get information about this that we can package it in a way that shows that you can't draw -- like what conclusions can you draw from it, what conclusions can't you draw from it?

And so I definitely am one hundred percent behind transparency, and I want that transparency to come with some wrapping or some packaging that gives the public some understanding of how to interpret those results, because I

think it'd be very easy to go off on some tangent correlation causation -- social media influencers, you know, I can just imagine what that could be like. So I don't know whether that belongs in this next iteration or not, but it just I -- anyway, I just elevate the point and want to make sure we think about that and offer some sort of input on it if we can.

BD. MEM. DESCHENES: Yeah, I think point well made Nate. And as we heard from public comments even yesterday, there are things that turn up that, you know, we don't know where they come from. And so we want to ensure that when something is coming in through other contamination routes, that we're not punishing the small farmers, the small operations.

Allison?

CHAIR JOHNSON: Yes, I just wanted to agree and say that's something we thought about. It's tricky because there's pretty strong transparency language in the rules, and that is important. And I share the worry that then you get the headline that says, like, organic contaminated, when likely the residues that are showing up in not-tested conventional products are much higher, but you don't necessarily see that relativity. So I think it is something we need to be really thoughtful about.

BD. MEM. DESCHENES: Go for it.

BD. MEM. LEWIS: Because, right, it's like you could say organic contaminated, or you could say cheaters caught, right? Like, those are the two different headlines, same amount of data that you could -- or using the same data. So anyway, I think the point is taken that offering some input there could be really helpful in how it's packaged and delivered to the public.

BD. MEM. DESCHENES: Javier?

BD. MEM. ZAMORA: I think I understand it a little more, and you guys have a pretty good point. I think with this social media frenzy, that people just get on their phones and then all hell breaks loose. It's kind of scary.

I would probably recommend to go back to Kayla and see what they think. I mean, they're part of the public and farmers. So, and see how these can be tailored in a way that gets the people that are doing the wrong thing, but it doesn't really create or open up a can of worms for others that perhaps, you know, they might not have much to do with it. So I get it. I think it needs a little more work, but it also does not need to be kicked down the line far enough. It needs to happen fairly quickly.

BD. MEM. DESCHENES: Yes, I agree. I think we appreciated all the public feedback and maybe the blind spots that we can fill in here in this next round.

Any other questions?

Yes, Allison?

CHAIR JOHNSON: Just to acknowledge one more bucket of concerns that was raised where I think the proposal landed in the right place but I want to hear and recognize the concern around how do we define risk. I think this is something that we talked about extensively in subcommittee, and the balance between giving clear enough direction to certifiers but not creating safe harbors where suddenly you're, like, off the hook for something.

So I think we're going to just have to sit with some vagueness and judgment calls from certifiers, but hopefully build in enough to point people in the right direction and to have certifiers feel secure that they're not going to have the NOP coming in and saying, like, you didn't do this or that, so that they can exercise that discretion.

So I just wanted to make sure that's acknowledged in the discussion here, and that area I think we do really want to stay the course of what we've laid out for the most part.

BD. MEM. DESCHENES: Yes, I think it's certainly a valid point, and I understand that today certifiers are doing it all in their own way, probably in very sufficient and sophisticated ways. But we don't have all that information, so I think maybe gathering a little more there

on what the thought process is, and getting a little more granular perhaps, or not.

Anything else?

(No response.)

BD. MEM. DESCHENES: No? Then I think the motion is to send it back to subcommittee, but I will formally motion to send this back to subcommittee.

BD. MEM. MCCLUSKEY: I will second.

BD. MEM. DESCHENES: Nate seconded.

CHAIR JOHNSON: Cat got on the transcript first.

BD. MEM. MCCLUSKEY: Yes.

CHAIR JOHNSON: Do you want to be on the record with a hand held --

BD. MEM. MCCLUSKEY: Yes.

CHAIR JOHNSON: Okay. Second from Cat. So we have a motion from Amanda to take the proposal back to subcommittee, seconded by Cat. Are we ready to vote? Any further discussion?

(No response.)

CHAIR JOHNSON: Okay. We will start the voting this time with Franklin.

BD. MEM. QUARCOO: Yes.

CHAIR JOHNSON: Corie.

BD. MEM. PIERCE: Yes.

CHAIR JOHNSON: Kathryn.

BD. MEM. DESCHENES: Yes.
CHAIR JOHNSON: Cat.
BD. MEM. MCCLUSKEY: Yes.
CHAIR JOHNSON: Javier.
BD. MEM. ZAMORA: Yes.
CHAIR JOHNSON: Nate.
BD. MEM. LEWIS: Yes.
CHAIR JOHNSON: Andrea.
SECRETARY HATZIYANNIS: Yes.
CHAIR JOHNSON: Amanda.
VICE CHAIR FELDER: Yes.
CHAIR JOHNSON: Dilip.
BD. MEM. NANDWANI: Yes.
CHAIR JOHNSON: And the Chair votes yes.
SECRETARY HATZIYANNIS: We have 10 yes, 0 no, 0 abstain, 0 recuse, 0 absent. Motion passes to go back to subcommittee.
BD. MEM. DESCHENES: Thank you all for all your work there, and we look forward to incorporating more of your comments in the next iteration.
BD. MEM. DESCHENES: Okay. And the maybe second-most commented piece in the public comments, e-commerce Organic Labeling Requirements.
So NOP received a petition regarding a regulatory amendment to expand the certified organic buyer requirements

to include for online e-commerce platforms, ensuring that full information panels are displayed at the point of sale. And with that, CACS recommends that NOP provide guidance rather than pursuing rulemaking on e-commerce labeling practices with the goal of improving clarity and consistency in how organic claims are presented online.

The guidance should outline recommended best practices for displaying the USDA organic seal and core labeling elements, encourage accurate and timely updates by retailers and platforms, and reinforce expectations for truthful organic claims across digital channels. Importantly, this approach would allow the NOP to harmonize its recommendation with FDA's forthcoming guidance on digital labeling, promoting coherent federal policy, and minimizing conflicting obligations for industry.

So with this, we had a lot of calls from the public to not stop at guidance and really ask the Program to pursue rulemaking. In my role in handling, working for Danone, I work mostly on labeling issues, and in that have a little bit of clarity to how data flows through the system. And what we have today is an imperfect system where we, depending on the platform, depending on the retailer, you know, they take or don't take the information that we provide. Sometimes the information, you know, we can provide them timely updates but it may not get on the

platform. And my feeling is that absent FDA action here, it may be difficult to move the needle.

I think that we would have great -- with guidance, we could use bigger companies and some of these platforms and make requests, and hopefully move toward information that's more complete online. But I don't want to diminish the importance here. The importance is huge for consumers online to have accurate information provided to them at point of sale. So, certainly don't want to diminish that thinking by going to guidance, but also want to balance that with the realities of the world we're working in.

Any questions, thoughts, other reactions from written or oral comments?

Go for it, Andrea.

SECRETARY HATZIYANNIS: Thank you, Kathryn. This issue is very important to all of us as we continue to see more and more of the market move online. And really we want the consumer to have that same experience they're having in the stores, and feel strongly the guidance should be that all of the same labeling requirements for the product be applied to the product when it's online. So really depicting the product's label and all the information that's on the label for the consumer to make that choice is important.

And also really underscore the vast complexity of

the e-commerce market. Where we have direct control, we will maintain that control. But there are also third-party sellers and other e-commerce platforms where we might not have as much influence and direct control, and need to make sure that they're portraying the product in its certified, proper light.

BD. MEM. DESCHENES: Javier?

BD. MEM. ZAMORA: I think anyone selling anything organic, whether they sell it at a farmer's market, store, online, or via, you know, whatever model it is to get to the end consumer, should adhere to all the rules and should comply with what it is that they're selling.

I think there is some rule making to be made right there. Because farmers, we adhere to all the rules, and just because of the fact that you are selling somebody else's potatoes or strawberries or whatever it is, you shouldn't be free to do that good old switcheroo between the farm or the warehouse to the end consumer. So it's a huge opportunity there, and some ruling needs to be made. That's my take.

BD. MEM. DESCHENES: Yeah, I think the other theme here is the Program already has authority over misleading or, you know, claims that aren't truthful. So if someone is selling something and it's not actually organic and displaying it as organic, I think there's already mechanisms

there. I think we just need the through line to this online platform, which has a larger problem. It's FDA products. If you've gone online and bought something and it turned out, at your house, to look different than what you thought, that's a bigger problem than NOP.

Nate, I think you were first.

BD. MEM. LEWIS: I'm just curious about the conversation around are the e-commerce platforms retailers or not. I mean, anyone who is involved in it, I think some are, some aren't. It's really clear about the record keeping responsibilities of a retailer who's exempt from certification, but are all these e-com -- I'm just curious what that conversation looked like.

BD. MEM. DESCHENES: I don't know if others recall getting to that granular level, but I think if someone -- there are retailers that are certified, there are retailers that are exempt from certification. So maybe it's beside the point, but --

BD. MEM. LEWIS: If I can clarify.

BD. MEM. DESCHENES: Yeah.

BD. MEM. LEWIS: Like, a retailer that's exempt from certification still needs to show -- right? There's an obligation there to maintain the records, to show compliance, even though you don't need to get certified.

BD. MEM. DESCHENES: Yes.

BD. MEM. LEWIS: So ultimately, it goes like if these e-commerce platforms are retailers, one would assume they should also maintain that thing, but I don't know if they are retailers or, you know, it's in a little bit of a gray area.

BD. MEM. DESCHENES: Yeah, I think there are some distinctive -- so if you're talking about like Instacart, you know, someone purchases something from the Kroger store, and then it's delivered by Instacart. Were you doing it on the Instacart app? Were you doing it on the Kroger app? So I think there are a few nuances here that are probably undefined.

Amanda?

VICE CHAIR FELDER: I would argue that if you're not considered a retailer as an Instacart, then you would need to be certified organic. So therefore, they would fall into that retailer category, which they would still need to have documentation because they're exempt. You're either exempt or you're not, and if they fall into the retailer, you're exempt category. You'd still be held to the same standards.

I think the concern is just the difference between having a photo of the label and is it accurate? Like, I make labels. I send them to the retailer. The retailer, in theory, puts it on their website. Maybe they take an old

one. Maybe you have your own platform, and you just pulled something off Google from 10 years ago.
Not going to be my current artwork, right? So who's held accountable for that?

But that's a different reflection which would still fall under a different type of labeling thing. I think the bigger picture is just we have so much space on a package for labeling requirements, which falls under our jurisdiction for NOP, right, for enforcement. But websites, as a whole, that goes around the label photo is outside of that, because that's just marketing and claims that's not a label. So it's a distinction of label versus website and clicks that go to other websites with maybe misleading information.

BD. MEM. DESCHENES: Allison?

CHAIR JOHNSON: Yeah. Just to build on the point you made previously, Kathryn, there are two things that give me comfort around recommending guidance rather than rule making here. Or maybe three things. One, Erin got into yesterday in thinking about the rule making process. Guidance still goes through a public comment process, so there's still an opportunity for input, for people to weigh in. You will see this again if NOP acts on this recommendation.

And even though guidance is not binding, as a

practical matter, people follow it. Guidance is often helpful when we want to be a little bit more narrative and kind of explain in detail why something should be the way it is, go on and on. It's a lengthier form of explaining what we want to see versus a rule that tends to be a little bit more concise and simple. So I think guidance is an appropriate vehicle in order to dig into some of those details and also recognize that this is a relatively new area that's evolving and there may need to be a little bit more flexibility there.

The other piece already came up as well. There's a complaint process. So the certified organic by statement on a label, for me the primary function is to tell you who to go to if there's a problem. So certified organic by CCOF , like, okay, I'm calling CCOF because I see something wrong with this product. If it's not there, you can still go to the NOP complaints process and they can do that digging. It's sort of like a shortcut to get to the right person when you see a problem. But we have a lot of systems in place to identify potentially misrepresented product or places where the rule hasn't been fully upheld.

So between those two things I think we're getting at the core concern of this petition which is making sure consumers get real organic product when they're buying organic product, and to make sure that we are addressing the

evolving marketplace.

BD. MEM. DESCHENES: Anything else?

(No response.)

BD. MEM. DESCHENES: All right. Then I will motion to accept the proposal on e-commerce labeling.

Andrea seconded.

SECRETARY HATZIYANNIS: I'll second the motion.

BD. MEM. LEWIS: Just a point of order, I think the motion came to this -- it's already been made and seconded. So I think we just need to proceed to the vote.

BD. MEM. DESCHENES: Oh, right, yeah. Sorry.

BD. MEM. LEWIS: I hate to be the raining-on-the-parade parliamentarian here.

BD. MEM. DESCHENES: Thank you for keeping us in order. We will just vote, then.

CHAIR JOHNSON: So we have a motion before the Board to accept the proposal on e-commerce. So it was moved by Kathryn and seconded by Cat. And now we're ready to vote.

And this vote will start with Corie.

BD. MEM. PIERCE: Yes.

CHAIR JOHNSON: Kathryn.

BD. MEM. DESCHENES: Yes.

CHAIR JOHNSON: Cat.

BD. MEM. MCCLUSKEY: Yes.

CHAIR JOHNSON: Javier.
BD. MEM. ZAMORA: Yes.
CHAIR JOHNSON: Nate.
BD. MEM. LEWIS: Yes.
CHAIR JOHNSON: Andrea.
SECRETARY HATZIYANNIS: Yes.
CHAIR JOHNSON: Amanda.
VICE CHAIR FELDER: Yes.
CHAIR JOHNSON: Dilip.
BD. MEM. NANDWANI: Yes.
CHAIR JOHNSON: Franklin.
BD. MEM. QUARCOO: Yes.
CHAIR JOHNSON: And the Chair votes yes.
SECRETARY HATZIYANNIS: We have 10 yes, 0 no, 0 abstain, 0 recuse, 0 absent. Motion passes.
BD. MEM. DESCHENES: All right. Thank you all for your questions there. Next we have the verbal seed update which Allison is going to lead.
CHAIR JOHNSON: Thank you.
So if you've been following along with our work on Consistency in Organic Seed Use, you'll know that this is a thorny and complex topic. We've had two discussion documents where we've gathered information about barriers, about challenges, about where in the landscape we could focus this ongoing work, whether there's still support for

previous recommendations that were passed in 2018 and 2019. And we had our excellent expert panel this morning who I think gave us a lot more to think about.

So our trajectory at this point is we would like to bring a discussion document to the fall meeting that gets pretty concrete about the direction we'd like to go. I think that will likely include recommendations for updates to the guidance, as well as potentially some recommendations for work that doesn't fall within the NOP's purview but the NOP could act in collaboration with other agencies to explore in the name of continuing to increase organic seed use and make sure that organic seed production remains a viable and thriving avenue within this sector.

So I wanted to just open it up for a little bit of discussion. I really appreciated the kind of preview discussion around agroforestry this morning. So if we could do something similar here, if anyone has reflections from the panel and from the comments that we've received so far, that will give us an opportunity to incorporate some of those thoughts into the discussion document for the fall. Or if you're just so overwhelmed, we can just think about it for a while.

Nate?

BD. MEM. LEWIS: Just a couple of thoughts from the panel this morning. I was really intrigued by -- I'm

going to completely get the technology wrong -- but the doubled haploid -- where kind of like the mechanisms to create that sort of synthetically or artificially don't seem to quite align with organic principles, and then yet there are these genetic traits like preventing the drift of GMO pollen which are very attractive traits, in my view.

So I was just intrigued by this yet again juxtaposition of these organic values that seed is at the root of. So I don't have a particular solution on that. I was just struck by you can use a technology that is like, eh, I don't really know why it's on the TBD list to achieve a goal which is like actually seeming like it would be a value as a trait I would love to see in an organic crop. So I was just struck by that. and I can kind of just leave that there as a comment.

And then I'm also intrigued by the idea of implementing continuous improvement as a concept throughout this whole thing. I know that's not particularly a new concept, but I really am eager to see a way for the handlers to be pushed into a position where they can take a lead role on that. And they're often the ones holding the cards when it comes to the selection of the varieties. They're the ones generally profiting most on the supply chain.

And I just want to see us be equitable in how we distribute the burden of the forward progress of the organic

seed industry to go across the whole supply chain. So, again, just leave it there, but I would really love to see that not be shouldered entirely by farmers.

CHAIR JOHNSON: Yeah, and it was exciting to see Dr. Lübberstedt's research is what investment in organic research can get. He's doing the work that is done typically with a chemical, but without it. So there is this in-between path where you don't have a chemical stressor, you can do it another way. And then questions remain about can we draw those lines in a way that's enforceable and practical? But I thought it was really promising that his research is doing what's been done in a chemical way but without the chemicals.

Andrea?

SECRETARY HATZIYANNIS: Thank you, Allison. Jumping off from your point, I was also interested in that as well because we talk about -- with the materials already on the list -- their source, but also their extraction and manufacture is equally as important. And we can apply that same logic to the seeds, right? Yes, we want to make sure the seeds are being produced in this fashion, but also their source and then how they came to be is equally as important.

And knowing his research is providing other pathways to provide these mutagenesis, not just through chemical means, is interesting as well. You can look at

modified starch in a similar fashion. There's chemical and physical types of modification, and we perceive one as more severely processed than the other. Because the goal is to help broaden the use of organic seed usage and not limit it, we want to be careful in the way we discuss it to help the availability of it and make it clear on where it's available.

CHAIR JOHNSON: Amanda?

VICE CHAIR FELDER: Yeah, I appreciated the distinction today of organically bred versus organically grown. And I think a lot of us think it's as simple as just growing seed organically. It's not that hard, just use less chemicals, it's great. And it's not that simple that the organically grown seed doesn't perform the same as organically bred seed. And that's where that commercial availability part fits in.

But the need for research and for breeding in that pathway is not as simple as just grow this organically. Which just makes it more complicated than we already thought it was.

CHAIR JOHNSON: Yeah. I really appreciated that point as well. And the pathway to more organically bred seed that's specialized for an organic production system is probably longer, but also could get at some of the issues we've heard raised. I appreciated Dr. Dawson's point around

paying for value, and if you're getting a seed that performs better in your system you're going to be more incentivized, likely, to seek out that seed.

So it is really tied to is this commercially available? Well, does it work for my operation? And the answer to that question may have a lot to do with the breeding process itself.

Javier?

BD. MEM. ZAMORA: Like anything else, I think there's a lot to learn and understand how things are really working. Me, sitting here as a farmer, I see things in a different way because I'm boots on the ground. And some of the stuff that has been mentioned here, it resonates so much because we thought with a panel, you know, one of them mentioned a couple of times about ethics and disclosing things.

Nate talked about how some of us farmers are almost being pushed to get varieties that will perform better versus on who's helping us sell it. They are even providing the seeds or the crowns or whatever it is for you, farmer, to grow what they want because that's what they want. And so they're kind of telling us, this is what you do or else we're not really having a partnership here.

I feel like some methods of -- well, there's a couple of things. I think the certifiers right now, they

come to you once a year or twice a year or whatever, and they say how much of your materials or seeds are grown are actually organic? And most farmers just go, they're little. And so the skill is always -- is not available.

So there's more to that, what I just said. The middleman is telling you what you should grow. So, and the certifier says that because if you're growing lots of seeds organically, they're really organic, and then you get a discount on how much you deduct that out of your sale. So that helps you. So there's an incentive for a farmer to use organic seeds.

But on the other hand, if they're not available because they're not performing as good as something that is hybrid or might not go untreated. So I think here is it's just putting everybody together, the certifier, the farmer and the middle person, the shipper, the packer, and really understanding what is it. Let's just disclose things.

I mean there's some materials that are not available for us to grow organically. Seeds again, strawberry crowns, other things. So there's a lot of work that needs to be done.

There's a lot of thought behind this because we also don't want to have organic seed breeders disappear. Those are smaller companies, which I was I saw some companies there but I had absolutely no idea that they

existed.

So now I'm going to go and support them because there's an option for me instead of just telling my certifier yes, I talked to this, I called this, I called that, and just making it up. When in fact there are smaller companies that are creating organic seeds that could potentially avoid and eliminate some of these pushbacks that the middle men are forcing farmers to do. So I think there's an opportunity there for some changes and some support from farmers to new companies that are breeding new seeds.

CHAIR JOHNSON: Thank you. I saw some of my favorite seed companies on that slide. I was happy to see them.

Any more questions or discussion?

Cat.

BD. MEM. MCCLUSKEY: Yeah, thanks. I actually think that in, you know, Amanda to your point of like hearing about the whole breeding process, right? Like breeding for an organic system, I actually think that this doesn't complicate this conversation or thinking on it. Instead it illustrates that this system in organic seed from germplasm to breeding to seed increase to commercialization is very similar to the conventional system.

What the organic system is needing, from what we

hear in comments and have seen throughout the last 15 years, is a regulatory signal for the investment, for industry to invest in that entirety of that system more confidently. I think I'll leave it there.

CHAIR JOHNSON: Yeah, go ahead, Kathryn.

BD. MEM. DESCHENES: I was struck by -- and this is along the lines of what Cat said -- I think one of them said market rewards for organic seed growers and that that's missing. So like we're talking economics here, supply and demand, and that there's no force there, you know, no need to search and find, or no way to search and find. It sounds like there's also a problem there.

So we have a couple of things like rewarding and making sure that organic seed is first, and then from there making sure we have a mechanism for farmers to find organic seed produced in the way that they need it to be produced.

CHAIR JOHNSON: Yeah, and that stood out to me as one place where maybe we could get more specific in resources for certifiers. Like, did you check here, here, and here? If your grower didn't know about those resources, did you connect them with those and make sure that they were checked? That kind of thing. It seems like a stepping stone that can help us in progress.

Javier?

BD. MEM. ZAMORA: So there will be a lot of

changes in the future. We're probably not going to be driving. A drone will probably drop us off in California and bring us to D.C. the same day. I don't know.

What I'm saying is, I think there's a huge opportunity for the future to use part of that AI that is coming along and is making its way to almost for every industry. We should probably be thinking of having AI somehow tell every farmer that is certified organic that all these companies and all this information is available, so they know and so they can source from those companies that are growing seeds organically.

We definitely have to bring the usage of organic seeds to where it should be, not where it is now, right? So I think we need to think about that. AI will probably be a really good tool in the future for those things.

SECRETARY HATZIYANNIS: One more comment, as you were speaking about this. The varietal discussion is fascinating to me, especially being on the side we're doing a lot of the buying. To have that feedback loop to the buyers that there are varietals that are similar and will serve the same consumer need but these may be available to you, we maybe have that discussion of how to have that feedback loop between the seed manufacturers, the farmers, and the end buyer.

It's really a big ecosystem, and they all need to

be working together towards the same end goal. It might help serve the purpose, too, to demonstrate that organic can have just as good yields or better yields, right? Maybe we're trying to force them into a varietal that's not suited to organic production, and they would get much more success and yield out of this variety.

So really helping to open that dialogue for the buyers so that they know what's available for their consumer demand and not be so forced into one varietal like Cavendish banana, right? There are other types of bananas that are suitable for consumption that may be grown in a better fashion organically. I don't mean to pick on the banana, but it's a well-known varietal, okay?

CHAIR JOHNSON: Any other comments or reflections at this point?

(No response.)

CHAIR JOHNSON: Cat and Kathryn, you more articulately than I was going to made the point that I had in mind as far as having a clear signal. We heard in comments sort of this chicken and the egg thing perpetually where we're not producing it because no one's going to buy it, and no one can buy it because it's not available. So we somehow need to break into that dynamic and set the signal like, yes, there's a market, there's people who are going to buy it, there's people who are going to produce it. And so

I think figuring out what we can do with that signal is the biggest question in front of us and something that hopefully we can make progress on in the next few months.

All right. Thanks for the discussion. Thanks for making time for the seed panel today. I found it really useful and hope you all did too.

Back to you, Kathryn, probably give it back to me.

BD. MEM. DESCHENES: Back to you, Allison. That concludes CACS business.

CHAIR JOHNSON: Great. Yeah, we're set to start crops after a 3:30 break, but I think it's probably natural to do a little break now unless that messes with anything. Yeah, so let's take 15 minutes, whatever that turns out to be. Let's call it 3:25 to come back. Thank you.

(Off the record from 3:08 p.m. to 3:25 p.m.)

CHAIR JOHNSON: All right. Welcome back, everyone. Hope you had a good little break ,and now we're going to hear from the Crop Subcommittee.

Hand it over to you, Franklin.

BD. MEM. QUARCOO: All right. Thank you, Allison.

So this is the Crops Subcommittee, and today we have one proposal and a number of Sunset documents. The first item is the proposal of pear ester, and I'll call on Franklin to do that. (Laughs.)

All right. So this is not the first time we are

talking about pear ester. We've been here twice already. The main reason why we had to take it back and bring it was because of a notation, but I'll get to that.

So, because we've discussed this a couple of times, I'm going to just highlight a few points and then move on to what needed to change, which we have now changed -- or needed to be fixed.

So this proposal is in response to a petition from Trécé Incorporated, in September 2023, requesting for pear ester to be added as a kairomone. Before now, pear ester used to be treated as a pheromone, and when it was eventually correctly classified as a kairomone, then it was left hanging. So does it still qualify to be in the group where it doesn't fit in terms of classification? So that's what brought all of this about.

And so there are different chemicals. We have pheromones, which a number of organisms, mainly insects, used to communicate between species. We have kairomones which an organism releases, but then it benefits the other organism receiving it. We call them food callers. And then we have allomones.

So there are different categories of semiochemicals. These ones, they send it, and then it benefits the sender. So now that we reclassified it, we just had to be sure that we had it listed separately because

it didn't belong to the previous group.

And so, normally, with pheromones, kairomones, and all of these other things, they put them in a trap so they are passive. So the target organism goes to it, so normally it's not something you spray out. But then there was one of the formulations, which is the micro-encapsulated formulations which we, in attempting to exclude that, that was what led to us having to come back.

So I will quickly go over some of the main points. So, in trying to control the codling moth in pear and apples and other tree fruit crops, we had the codling moth being a major problem. One of the things that need to be done, when pheromones are used to trap the moth, that's good, but then more insects are trapped, and you get a better indication of when to apply treatments -- which we call the biofix point -- when you use kairomone together with the pheromones.

So there are all kinds of things that are done. Trapping is one of them, mating disruption, where basically you put in all these semiochemicals that are confusing the males so they are going to synthetic traps instead of actually finding females for mating purposes. So that is also part of the control, because they are not mating. So that's another.

And then we have the micro-encapsulated formulations that I'll get to shortly. Those are made of --

and the main concern with that is nano and micro plastics, plastic pollution and all of that.

So it's been discussed back and forth. I don't want to go over all the previous discussion. Some of the discussions were that, well, maybe this kairomone was already covered under pheromone. Maybe they wanted to talk about pheromone. Maybe they would have used semiochemical if they knew exactly the differences, but the word is the word. We have to be sure we have these classified separately to remove any ambiguity.

So those are some of the things that we've been going back and forth but to cut a long story short, the last time, everything was fine until we had an annotation that said that -- well, the annotation inadvertently could have been interpreted to mean that we were disallowing mating disruption, which is a major, major use of this material.

That was not the intention of the subcommittee or the Board, so we took that notification in good faith. We went back and cleaned it up. So I'm going to get to the cleaned up version. So the previous Board decisions, we would have done that in the fall, except when we had a truncated version of the fall meeting in the spring, this one didn't make it onto that list, and so we're here today to do that.

There were two motions, a subcommittee, which will

be the same two motions here. The first will be the motion to classify pear ester as synthetic, and the second one is a motion to add pear ester to the National List at 205.601(f). That was another correction that was made, that it was put at (i) instead of (f), so the correction is made here with the following annotation: microencapsulated formulations prohibited.

It is clear that when you keep your work short and clean, there are less mistakes. So the annotation is now microencapsulated formulations prohibited. Full stop. So that's where we are. I didn't want to go over all the details because we've discussed this particular proposal, this is the third cycle.

Thank you.

CHAIR JOHNSON: Any discussion or questions?

Nate.

BD. MEM. LEWIS: Just a couple of comments. One, I kind of can't underscore how critical pheromones, kairomones are to IPM, integrated pest management in -- I'm from, represent Washington State, number one in pears, apples, and cherries, organic and otherwise. Without these tools, we would not have an industry. and so it is the foundation of pest management. And this was sort of a technical correction. They're very clearly necessary. They have been used.

There was confusion around what is a kairomone and what is a pheromone. So in this way, we're kind of cleaning that up. But I really just wanted to stress these are foundational elements of how these growers succeed in the challenges that they face with pests in their orchards.

And then just to put a finer touch on the various methods, Franklin, you did a really good job of kind of talking about the traps and the passive pheromone dispensers. And we'll actually touch on that a little more when we get to one of my Sunsets, which is the List 3 Inerts.

And then this micro-encapsulated formulation. So we heard from public commoners, manufacturers, that they have it as a lure for the traps. They have it formulated into a passive pheromone dispenser which kind of looks like a twist tie, like a plastic tie that -- as you correctly pointed out -- confuses the male insects so they cannot find their mates.

And then the third was the micro-encapsulated version. And those, my understanding is, are applied via a sprayer sort of in the air around the thing. And so it is that form of the material that we're proposing to prohibit with this annotation.

And what we heard from the growers was that that is not a foundational element of their system. So that's

not what they're typically using, and while the manufacturer does have a formulation like that available, that particular one is not necessary at this juncture for organic growers.

So I appreciate all the effort that you have put into this and untangling the web of kairomone es and pheromones and all those semiochemicals. And yeah, I just appreciate the work and the focus on this.

BD. MEM. QUARCOO: Thank you.

CHAIR JOHNSON: Any more discussion before we vote?

All right. There is a motion to add pear ester to 205.601-(f) with the following annotation: micro-encapsulated formulations prohibited. The motion was made by Franklin and seconded by -- oops, I went too far down on the slide. Sorry. Backing up.

We will have two votes. First, a classification motion. So there's a motion to classify pear ester as synthetic. This was moved by Franklin and seconded by Brian.

The voting will start with Kathryn.

BD. MEM. DESCHENES: Yes.

CHAIR JOHNSON: Cat.

BD. MEM. MCCLUSKEY: Yes.

CHAIR JOHNSON: Javier.

BD. MEM. ZAMORA: Yes.

CHAIR JOHNSON: Nate.
BD. MEM. LEWIS: Yes.
CHAIR JOHNSON: Andrea.
SECRETARY HATZIYANNIS: Yes.
CHAIR JOHNSON: Amanda.
VICE CHAIR FELDER: Yes.
CHAIR JOHNSON: Dilip.
BD. MEM. NANDWANI: Yes.
CHAIR JOHNSON: Franklin.
BD. MEM. QUARCOO: Yes.
CHAIR JOHNSON: Corie.
BD. MEM. PIERCE: Yes.
CHAIR JOHNSON: And the Chair votes yes.
SECRETARY HATZIYANNIS: We have 10 yes, 0 no, 0 abstention, 0 recuse, 0 absent. Motion passes.
CHAIR JOHNSON: Great.
Okay. Now on to the National List motion. There's a motion to add pear ester to 205.601(f), with the following annotation: micro-encapsulated formulations prohibited. This was moved by Franklin, seconded by Amy.
And this time the voting will start with Cat.
BD. MEM. MCCLUSKEY: Yes.
CHAIR JOHNSON: Javier.
BD. MEM. ZAMORA: Yes.
CHAIR JOHNSON: Nate.

BD. MEM. LEWIS: Yes.
CHAIR JOHNSON: Andrea.
SECRETARY HATZIYANNIS: Yes.
CHAIR JOHNSON: Amanda.
VICE CHAIR FELDER: Yes.
CHAIR JOHNSON: Dilip.
BD. MEM. NANDWANI: Yes.
CHAIR JOHNSON: Franklin.
BD. MEM. QUARCOO: Yes.
CHAIR JOHNSON: Corie.
BD. MEM. PIERCE: Yes.
CHAIR JOHNSON: Kathryn.
BD. MEM. DESCHENES: Yes.
CHAIR JOHNSON: And the Chair votes yes.
SECRETARY HATZIYANNIS: We have 10 yes, 0 no, 0 abstentions, 0 recusals, 0 absent. Motion passes.
CHAIR JOHNSON: Great. Thanks for all your persistent work on this one. It's a long road, Franklin. Appreciate you seeing it through. Back to you for the rest of the Sunsets process.
BD. MEM. QUARCOO: The next item on the list is the Sunset process. And we are going to have some chlorine materials once again. And Franklin will be taking the first chlorine material, which is calcium hypochlorite.
So calcium hypochlorite is listed at 205.601 as an

algicide, disinfectant, and sanitizer including irrigation system cleaning. And the annotation is for pre-harvest use. And one of the main things is that the residual chlorine levels in the water that is in direct crop contact or as water from cleaning irrigation systems applied to soil must not exceed the maximum residual disinfectant limit under the Safe Drinking Water Act. So that's a major part of it.

Now, the chlorine materials, they are regulated by the FDA, EPA, FSIS. So a number of the things that we talk about, EPA deals with aspects of it because it's a pesticide.

So let me start. The EPA approved the registration of calcium hypochlorite for use in crops and soil and livestock to control bacteria, fungi, and slime-forming algae that cause diseases. And I've already talked about an annotation where safe water standards, the amount the residual level should not exceed.

Another important thing I want to mention about calcium hypochlorite is that it's an indirect food additive approved by the Food and Drug Administration.

So I'm not going into the manufacturing. When it comes to international acceptance, there are places where it's not explicitly mentioned in their regulations and stuff.

Now, when it comes to the human health and

environmental issues, it's a chlorine material. I've talked about most of the human health and environmental issues when we're dealing with livestock. But anything that is a strong oxidizing agent, you have to be very careful and follow some of the things.

It's a chlorine material. In 1991, the EPA stated that it was highly toxic to freshwater fish and invertebrates. And then there are all kinds of studies that were done to show some of the problems that chlorine materials cause.

But in 2025, the EPA did a study, and reported that 88 of the 651 chlorine material incidents reported to the U.S. EPA, it said that most of them were due to calcium -- these were due to calcium hypochlorite which was far less than what was stated for sodium hypochlorite. Sodium hypochlorite recorded 556 out of the 651. So this is one of the chlorine materials that was not recording a lot of incidents in terms of people, human fatality, and other things like that.

Discussions previously talked about the essentiality, and this runs through all chlorine materials. It's essential. You want to maintain the integrity of organic food. You don't want people to get sick by eating it. But then, this is a strong oxidizing agent. And then it has some environmental issues that we need to look at and

make sure that they are properly used.

So this is the main -- I'll be talking about some other chlorine materials, I'm sort of trying to save me the trouble of having to go through the same -- it's similar for some of the other ones. So when I get to the subsequent ones, I'll be skipping. It's not because I don't know where the material is. It's because I'll be telling you the exact same material under a different label.

So that's what we have for this particular material. If there are any questions, I'll take them.

(No response.)

BD. MEM. QUARCOO: No? No questions? All right. If there are no questions, we move on to the next one, which is chlorine dioxide. Same 205.601, also an algicide, disinfectant, sanitizer used in irrigation systems, with the same annotation. When you apply it to soil and other things, the residual limit must not go above the safe drinking water limit, residual limit, that has been set by the safe drinking water.

So we had a TR in 2025, and that TR, like I said, is a treasure trove, and it's been helping us with these materials. Is there anything I want to stress about this particular material that we didn't talk about in the previous one? Not really.

There are some differences, of course, but

chlorine dioxide is a strong oxidant. It is likely a better bactericide than hypochlorous acid. In general, the disinfection efficiency of chlorine dioxide decreases as temperature decreases, so that's one of the things.

International acceptance, different countries, different stuff, they are accepted as teat dips, and it's permitted for that in Canada and a few other places. There are places where it's not explicitly mentioned in their regulations.

When it comes to human health and environmental issues, the same issues that we've been talking about. But then the limit that has been set for chlorine dioxide is 0.8 milligrams per liter, which is lower than the limit that we've been talking about for some of the others.

One of the things I want to mention, in 2025, when we were doing Sunset review of potassium hypochlorite, the subcommittee received comments that were not in support of a proposed annotation that we were talking about of some of the methods that make the chlorine that is used in manufacturing these chlorine materials.

Two of the methods are not environmentally friendly. One of them is. So, initially, there was a proposed annotation that maybe folks should try to get chlorine that uses that method that is more environmentally friendly, but the general view on that was that it will make

things too difficult getting the chlorine materials if that is introduced. So that's not part of what we have currently.

So that's all I have to say about chlorine dioxide. Any comments?

(No response.)

BD. MEM. QUARCOO: Okay. Then I move to another chlorine material, hypochlorous acid, which is generated from electrolyzed water. Same, it's listed at 205.601 as an algicide, disinfectant. There is nothing here that is different from what I read for the previous one. So let me keep going and see whether --

Okay. So one of the things I want to stress is that the hypochlorous acid molecules, they are neutral and they are small in size. So when the hypochlorous acid molecules -- and they exist in equilibrium with their hypochlorite ions -- and they easily go into the cell wall of bacteria, and then they affect a very important enzyme that these organisms use to digest glucose.

When that happens, it effectively destroys these microorganisms. That's how it works. And hypochlorous acid does a pretty good job as a disinfectant.

International acceptance. There are places where, as a food-grade cleaner, it is permitted -- that's in Canada -- without a mandatory removal event. Then, for other uses,

when it's in contact with surfaces, for which a removal event is mandatory. So differences in the European Union, it's not explicitly mentioned in their regulations. So different things in different regions.

In 2025, the EPA reported that one of the 651 chlorine materials incidents. You remember the one I mentioned for the previous one? So they were just comparing all the chlorine materials, how many incidents are recorded. So all of that is in there.

But as the chlorine materials -- I've talked about the disinfection byproducts that we've been talking about when you have chlorine materials. So they mentioned some of the disinfection byproducts that chlorine forms, which is another thing that was here. Hypochlorous acid is reported to kill a broader range of microorganisms than any other approved sanitizer. So that's another thing that I want to highlight here.

So the same things. Subcommittee level, we are in the middle of, well, it's essential because you want to make sure people eat food that is safe. But the other part is it is a chlorine material with all these interactions with its environment and human health implications, especially when people don't follow directions on how to use them. So, same considerations at the subcommittee level, and comments have generally been for these are needed.

There are always comments concerning alternatives. And when you look at alternatives, it's always an issue of, well, unless you say this is so bad you want to remove it, it should be one of many items in the toolbox so that folks are not put in a position where they rely on just one item.

So that's about what I have for hypochlorous acid. Any questions, comments?

(No response.)

BD. MEM. QUARCOO: No? I'll move on to what is my last chlorine material for this spring meeting, sodium hypochlorite. Same listing, 205.601, as an algicide, disinfectant, sanitizer used in irrigation systems. Let me see whether there's anything --

It is an indirect food additive approved by the Food and Drug Administration Agency. What else is different here? Okay. So, nothing that is --

Sodium hypochlorite was the most commonly used material for post-harvest handling, along with calcium hypochlorite and chlorine dioxide. They are also common, but sodium hypochlorite was the most commonly used, based on the information we got.

International, it's listed for use in Canada but there is stipulation that, well, of course, the same one where it's not supposed to exceed maximum levels for the safe drinking water, according to the Safe Drinking Water

Act. So there are places where it's not explicitly listed, but I'll leave that alone for now.

There was a study that was conducted where they were using the various chlorine materials, and trying to determine their effect on some very important enzymes. For some of them with sodium hypochlorite treatment, urease -- which is an enzyme that is needed in the formation of ammonia for plants -- it was reduced when this was applied.

So chlorine material is good. They help us, but we have to watch out for some of the environmental impacts. And for some of them, you use this, it increases the enzyme, the other one decreases it. So you have to know what you're doing when you are using these products.

So the subcommittee, same discussions, we are thinking about human health, making sure that we disinfect things that could make us sick, but at the same time we want to make sure that we are thinking about environmental and human health impacts.

So that is about all that I have on the last chlorine material that at least I have for this meeting. Any questions or comments?

(No response.)

BD. MEM. QUARCOO: No? Well then I'm happy to call on somebody else at this point, which is Dilip to talk about copper sulfate. Thank you.

BD. MEM. NANDWANI: Okay. Thanks, Franklin. I'm sure you're tired of talking chlorine.

Good afternoon. It looks like everyone is awake. Nobody is feeling sleepy after lunch.

I'm going to talk about copper sulfate. It has some interesting information, as all of our stakeholders and Board members -- we also know about it, but I'll go through this. So there are two references for this substance, 205.601(a)(3), copper sulfate for use as an algicide in aquatic rice systems, and 205.601(e)(4), copper sulfate for use as tadpole shrimp control in aquatic rice production.

So in both cases it is limited to one application per field during any 24 month period, and application rates are limited to levels which do not increase baseline soil test values for copper over a time frame agreed upon by the producer and accredited certifying agent.

We have the Technical Report, 2022, available. And it's used, as I mentioned earlier as an algicide for rice crops, as the growth of algal matting in flooded fields can dislodge young seedlings. And it is broadcast aerially into the flooded rice fields by plane. Rice farmers, they also spray copper sulfate to control a freshwater vertebrate. It's called Triops longicaudatus. It's known as tadpole shrimp.

Manufacture: copper sulfate is manufactured by

treating copper metal with hot concentrated sulfuric acid. Copper oxides can be treated with a more dilute sulfuric acid, H2SO4, to produce copper sulfate which is also known as copper vitriol.

International acceptance, it varies with agencies, and I'll go through with each one. In the Canadian General Standards Board Allowed Substances List, copper is permitted as a soil amendment, permitted as a production aid, and also permitted as an essential nutrient, and for topical use like foot baths.

In European Economic Community (EEC) Council Regulation, it's actually permitted used as a biocidal products. And Codex, it's permitted with the condition for use, and that is as a fungicide on condition that the substance be used in such a way as to minimize copper accumulation in the soil. And in IFOAM it's permitted as calcareous and magnesium amendments of mineral origin, with the conditions for use which is restricted to cases where soil plant nutrient deficiency is documented by soil or tissue testing or diagnosed by an independent expert.

So you can see that it varies with the agencies. And lastly, with Japan Agricultural Standard for organic production, copper sulfate is permitted with the criteria, and that is limited to the use for the preparation of Bordeaux mixture.

Copper sulfate has some concern with environmental and human health issues. So copper sulfate is readily dissolved and suspended in the water, and is lethal to fish and other aquatic organisms at fairly low concentrations.

In the soil, copper can concentrate heavily in the topsoil, and over time altering the soil microbiota and killing soil-dwelling animals such as earthworms. And it is also toxic to bees, particularly in tropical environments. And also, copper sulfate is classified as a human carcinogen by the European Chemicals Agency, ECHA, with specific concern for renal cancers.

And when copper sulfate is applied to flooded paddies, the copper becomes fixed to soil particles after seven or more days. Thus, the use elevates soil copper levels but does not contaminate other water bodies when the field is drained.

So this is some basic information. Now, discussion. So it's a difficult substance to evaluate as there appears to be broad consensus throughout the US, EU, and Canada that it is hazardous to both human health and the environment.

Despite this, its use has repeatedly been extended in all three jurisdictions as there isn't yet a viable organic alternative for copper in certain applications. The EU, Canada, and Japan all exclude copper sulfate for organic

rice production but allow it as fungicidal spray in organic orchards and vineyards. In terms of copper sulfate used in rice paddies to control tadpole shrimp, it appears that there may have been ways to circumvent the need for chemical control.

An important issue for this use of copper sulfate on organic farms is the annotation requirement, and that is 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 the 2022 TR dictates that available soil copper levels have been shown to increase dramatically over time in some situations.

There is a Swiss study also available, I think, which showed yearly copper leaching rates. I'm not going to go into detail in this talk.

To conclude, we have sufficient evidence which indicates that use of copper sulfate in rice fields can cause environmental damage. Also, to seedling practices that could eliminate the need for copper sulfate, as both algae and tadpole shrimp cease to be problematic once seedlings are established. And international standards do not allow spraying of copper sulfate for organic rice production.

NOSB subcommittee review, we received several

comments in 2021 spring NOSB meeting, written and oral comments, and the majority in favor of keeping copper sulfate on the National List. Two of the organizations most opposed to the use of copper sulfate did not advocate immediate delisting, but rather strongly urged the program to get serious about continuous improvement and to put some real effort into finding alternative methods to materials that would limit or end its use.

And lastly, we asked a few questions to our stakeholders on how do certifiers verify compliance with the annotation. And there are a few other questions we have listed here about organic rice rotations and a few other we have listed here.

So, thank you. That's all I have. Chair, back to you. Any questions?

BD. MEM. QUARCOO: Thank you, Dilip.

Any questions, comments?

Nate.

BD. MEM. LEWIS: Yeah, I'm really intrigued by this topic and was lucky enough to just recently be traveling in Europe at an organic rice farm who grows aquatic rice and doesn't have the same challenges that folks do in California. And my understanding is that they're at similar scale, but they have much more availability of water, so they are able to flood and drain the fields

multiple times to do the same techniques, and it doesn't appear as though the tadpole shrimp exists in Europe. So I think that there are some interesting elements to why it is necessary here in the United States and maybe not elsewhere.

So I also am intrigued by the comments we heard, both written and oral, on these particular uses from the rice farmers in California where it seems like this practice is the most -- where it's most commonly implemented, and it doesn't appear that -- it didn't seem like there was causation attributed between the use of copper sulfate for these purposes and increased baseline copper levels in the soil.

So I just bring that up because I would like the subcommittee to take a look at these annotations and consider whether they are achieving the protections that we sort of expect them to achieve, and bring forward the notion that we really should take a second look at annotations that fall on the shoulders of producers and require producers and certifiers to do a bunch of extra work without potentially achieving the desired results.

So I would like the subcommittee -- and I'm happy to contribute to that component -- to take a look at these annotations and consider whether a parallel motion for the fall meeting eliminating these annotations is appropriate.

So saying that now out loud for the record, for the Board to hear that, and for folks paying attention that if that is something the subcommittee considers valuable and worth considering that they're not surprised to see a parallel motion come forward. I have interest in exploring that.

BD. MEM. QUARCOO: Thanks, Nate.

Any other comments?

Allison?

CHAIR JOHNSON: Just a clarifying question for you, Nate, on that point. Are you looking at just the last part, the application rates contributing to baseline soil values, or the time limitation or frequency limitation?

BD. MEM. LEWIS: Yeah, what I would love to just explore is can we just limit it to tadpole shrimp control and as an algicide in aquatic rice production? In terms of the one time per use, I also heard the public commenter say, like, you know, in the 90s I said I use it every other year. And I don't really feel like that's a great way to write an annotation.

So anyway, I'm not saying I have the conclusion here, but I would like for the subcommittee to consider just removing entirely the application time period and the agreement, and perhaps replacing it with a parallel language like we have for the other copper sulfate listings for disease control. So anyway, more to come. I don't want to

wordsmith it right now in real time, but I just want to flag that I have interest in exploring a parallel motion along those lines.

BD. MEM. QUARCOO: Thanks, Nate.

Any other comments?

Okay. Thanks, Dilip.

So we'll move on to the next material, which is ozone gas, by Amanda.

VICE CHAIR FELDER: All right. So ozone is listed in 205.601(a)(5) for use as an irrigation system cleaner only. A lot of public comments for these that, you know, your alternatives are the stereotypical chlorine, PAA, but most effectively this is used for misters and drip irrigation.

So irrigation that sits in the field a long time is more prone to algae buildup, and ozone is just very effective at clearing that out. And the alternative to that would be disposal in single use where then we create a different problem of a lot of waste stream of plastic from irrigation.

So there also were a few public comments noting that we should add an annotation prohibiting from soil application, but it's already used only as irrigation system cleaner. So I will further dig into this, I think, at subcommittee of, you know, is there inadvertent application

to soil that we should be more aware of, or is this just such a fear.

So that's it. Questions? Sorry, mine's short and simple.

BD. MEM. QUARCOO: Yeah. Thank you, Amanda. Any questions, comments?

(No response.)

BD. MEM. QUARCOO: No?

All right. Thanks, Amanda.

The next item is peracetic acid, by Corie.

BD. MEM. PIERCE: All right. Thank you.

So peracetic acid is listed at 205.601, and has several different uses. So (a)(6) is for use in disinfecting equipment, (c) is in asexually propagated plant material, also permitted in hydrogen peroxide formulations as allowed in 205.601(a) at a concentration of no more than 6% as indicated on the pesticide product label.

Also, at 205601(i)(8) for use to control fire blight bacteria. Also permitted in hydrogen peroxide formulations as allowed in 205.601(i) at concentration of no more than 6%.

So this has several uses, and specific uses as mentioned, and peracetic acid is a very effective sanitizer, widely used, and also very important in apple and pear production to control fire blight. So, in general, it's

seen as a straightforward material that's made from and decomposes back to acetic acid, oxygen, and water.

In terms of human health and environmental issues, it can be an irritant for humans to eyes, skin, and lungs, and so, you know, like a lot of these materials, following the directions is very important, and just using it according to directions. But it's a highly-desired sanitizer, it works well. It works well specifically in cold conditions.

And so, yeah, it's important for all the reasons that you talked about all of yours, Franklin.

So let's see, widespread support by stakeholders to continue listing this. And yeah, I think I'll leave it at that.

BD. MEM. QUARCOO: Thanks, Corie.

Any comments, questions on peracetic acid?

(No response.)

BD. MEM. QUARCOO: No?

Thank you, Corie.

The next item is magnesium oxide, by Amanda.

VICE CHAIR FELDER: All right. So magnesium oxide is 205.601(j)(5), with an annotation for use only to control the viscosity of a clay suspension agent for humates.

So with that annotation, it's being added in a small amount to adjust how thick or stable a liquid mixture

is, which helps the clay stay suspended evenly in the humate product. So practically, it makes it less watery, it prevents separation, it improves pourability, and maintains uniform suspension during storage and during application. So the annotation's important because it's limiting the role of its use to technical formulation purpose.

General support from public comments noted as it's the most effective material that's added for viscosity control. No notes from the public of any alternatives or concerns of use outside of it's needed.

Questions?

BD. MEM. QUARCOO: Thank you, Amanda.

Any questions or comments?

(No response.)

BD. MEM. QUARCOO: Okay. Thanks.

Next item on the list is EPA List 3 Inerts, by Nate.

BD. MEM. LEWIS: So hopefully this is the last time we see an inert list of outdated inert lists at Sunset. That's what we're hoping for.

So, up for Sunset review is EPA List 3 Inerts of unknown toxicity for use only in passive pheromone dispensers, listed at 205.601(m)(2). As the Program indicated, they are actively engaged in rulemaking related to updating how the organic industry reviews inert

ingredients for compliance with organic standards, and that will result in an update to the National List.

As a reminder -- what was that, a year and a half ago, fall 2024? Is that when we did it? Portland? The Board passed a recommendation to the Program giving it two options on how to deal with and how to address the listing of inert substances used in organic pesticide products. These particular inerts are on EPA list 3 which is, again, an outdated list and a list that is of unknown toxicity. And these are only limited to the ones that are used in passive pheromone dispensers.

So to try to, you know, what does all that mean? As I mentioned earlier when we were talking about pear esters, one of the critical components of tree fruit production's integrated pest management is the use of pheromone twist ties, and they are literally just a plastic tube with a wire in it that is impregnated with these species-specific pheromones. They are twist ties -- they twist tie around trees. And the way EPA has set up its formulation requirements, all ingredients in these twist ties must be part of the EPA's Confidential Statement of Formula.

So you've got the specific compounds, the active compounds, the pheromones, plus those plastics that are included in the twist ties. I think the wire is part of it

too. I don't have access to these Confidential Statements of Formula, but it's sort of a product of the way EPA registers these materials, and so we needed to have plastic, essentially, which is on List 3 -- or was on the outdated List 3 -- included.

So that's why this is on the National List, that's why we are reviewing it right now, but my understanding is as the Program moves forward with rule making, part of that rule will be to remove these outdated lists.

So the organic industry came to some areas of consensus. There wasn't full consensus on how the inert should be listed, whether they should be listed individually or listed as a group with some exceptions. But there was consensus on this one area which was that if you were using it in a passive pheromone dispenser, it should be allowed. These things are formulated into a twist tie. Those things can be collected and tossed out. They don't kind of just go off into the environment.

So we are doing this one more time to renew this listing so that we don't lose access to pheromones, but our understanding is that as the Program moves forward with rule making on inert substances, these will be wrapped into that, the substances used in these passive pheromone dispensers will be wrapped into it. And when that final rule ultimately comes out, the understanding is that both

outdated listings of List 3 and 4 will be removed from the National List, and we won't have to do this again. We'll have to do a Sunset review of the new system.

So that's the background, and so again, this is kind of just to keep this on the list, to keep List 3 inerts for passive pheromone dispensers available. Folks that use them commented very heavily that passive pheromone dispensers are critical to integrated pest management systems, and there was a number of comments related to the inerts issue writ large which I think I sort of addressed in kind of the lead up to this. So it's not a settled topic. There remains disagreement about how that should go, but what I expect that we'll have is a proposed rule that will offer a comment period and a final rule that will ultimately settle the topic.

I think that's it for me on this one.

BD. MEM. QUARCOO: Thanks, Nate.

Any questions on inerts? Comments?

(No response.)

BD. MEM. QUARCOO: Okay. Thanks.

The next item is calcium chloride, by Corie.

BD. MEM. PIERCE: Okay. So, calcium chloride, 205.602(c). The brine process is natural, and it's prohibited for use except as a foliar spray to treat physiological disorders associated with calcium uptake. So

this is used to manage many different physiological disorders in crops including bitter pit in apples I think is the most notable. So it's a very important -- but for many others as well -- but it's a very important tool for growers to use. It's limited to foliar sprays for this treatment.

So there was just strong support to relist. And I think I'm just going to leave it there.

BD. MEM. QUARCOO: Thanks, Corie.

Any questions, comments?

(No response.)

BD. MEM. QUARCOO: Okay. We are moving at breakneck speed.

The last item on this list is rotenone, and that will be by Amanda.

VICE CHAIR FELDER: All right. So rotenone is on 205.602, so non-synthetics that are prohibited for use in organic production.

So while this is not historically used here in the U.S., it is used in other countries. So all public comment is in support of keeping this on the list, and really emphasize that the benefit of having this -- while this isn't used in the U.S. and it was voluntarily removed-ish -- that for things that are grown, and imported into the U.S., it keeps it on a level playing field. So something that might be used in a different country isn't being used here,

so it keeps it fair, and we know that something that's toxic to the environment isn't being applied and being found in organic production here.

That's all I have.

Questions?

BD. MEM. QUARCOO: Thank you, Amanda.

Any questions or comments?

Javier?

BD. MEM. ZAMORA: I just want to thank you all for doing all this work in my absence. It's not that I didn't want to collaborate, it's just I got other big issues to eliminate. But you did a great job. Thanks. I know it was a lot of work for all of you, and you did a really good job, and I thank you for what you're doing. And thanks for inviting me back, and it's so nice to be part of this Board. I think I'm going to miss it.

BD. MEM. QUARCOO: Thanks, Javier.

Any other comments?

(No response.)

BD. MEM. QUARCOO: If there are no other comments, then I'll hand it over back to Allison.

CHAIR JOHNSON: All right. Thank you so much, Kathryn.

BD. MEM. QUARCOO: Sorry. Before you hand over, I just want to thank the Crops Subcommittee for all the work

that they put into all these materials. A lot of work has been done.

And Javier, I'm glad to have you back.

BD. MEM. ZAMORA: Thank you.

CHAIR JOHNSON: Thanks, Franklin. I was going to say the same both to Kathryn and Franklin for leading great discussions this afternoon, and to CACS and Crops for all the hard work that went into all of these discussions. We ran through them pretty fast because there's a lot in writing that we've all had a chance to review. And we'll do it all again in the fall for the Sunsets, but I really appreciate the thought and care and continued input from the organic community on all these materials and thorny issues that we have ahead.

So, with that, we are in recess until tomorrow 9:00 Central on Thursday, May 14th. Thanks to everyone who's hanging with us on Zoom. You can use the same links to join tomorrow. And Board members, please stick around for a group photo. Thank you.

(Whereupon, at 4:23 p.m., the meeting in the above-entitled matter was adjourned until Thursday, May 14, 2026, at 9:00 a.m., Central Standard Time.)

CERTIFICATION

This is to certify that the attached proceeding before the:

NATIONAL ORGANICS STANDARDS BOARD

IN THE MATTER OF: SPRING 2026 NOSB BUSINESS MEETING DAY 2

PLACE: Embassy Suites by Hilton, Omaha, NE

DATE: May 13, 2026

was held according to the record, and that this is the original, complete, true and accurate transcript which has been compared to the recording accomplished at the hearing.

Elaine M LaRosee

_____

Elaine M. LaRosee, CDLR

Official Reporter

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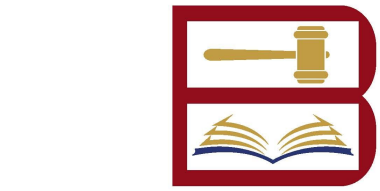
In The Matter Of:

NATIONAL ORGANIC STANDARDS BOARD (NOSB)
SPRING 2026 BUSINESS MEETING DAY 3

Vol. 3
May 14, 2026



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UNITED STATES DEPARTMENT OF AGRICULTURE

NATIONAL ORGANIC PROGRAM (NOP)

NATIONAL ORGANIC STANDARD BOARD (NOSB)

SPRING 2026 BUSINESS MEETING

DAY 3

Thursday,
May 14, 2026
Embassy Suites by Hilton
Platte/Elkhorn Room
Omaha Downtown/Old Market
555 S. 10th St.
Omaha, Nebraska 681020

National Organic Standard Board (NOSB) Members

Allison Johnson, NOSB Chair

Amanda Felder, NOSB Vice Chair

Andrea Hatziyannis, NOSB Secretary

Kathryn Deschenes

Nate Lewis

Cat McCluskey

Dilip Nandwani

Corie Pierce

Franklin Quarcoo

Javier Zamora

National Organic Program Staff

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Jennifer Tucker, Deputy Administrator

Erin Healy, Division Director

Jared Clark, Assistant Division Director

Michelle Arsenault, NOSB Advisory Committee Specialist

Johanna Mirenda, Agricultural Marketing Specialist

Andrea Holm, Agricultural Marketing Specialist

Penny Zuck, Agriculture Marketing Specialist

Alexis McInerney, Program Analyst

Virtual:

Andrew Malone, Assistant Deputy Administrator

Heather Kumar, NOSB Food Technologist

Devon Pattillo, Agricultural Marketing Specialist

Jason Edmonson, Agricultural Economist

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P R O C E E D I N G S

(Time: 9:01 a.m., CST)

CHAIR JOHNSON: All right. Good morning, everyone. Thanks for sticking with us into Day 3, the final day of our Spring 2026 meeting. Welcome to everyone who's here in the room and with us on Zoom.

Let me get our agenda going here. So we have some hefty topics to still get through today. We'll start the morning with our Materials Subcommittee, and then Policy Development. We'll take a short break, and then we'll have the Handling Subcommittee. We'll see how we're doing on time and if we want to keep that lunch break in there or if we plow through the afternoon content and wrap before lunch. We're just going to see how the discussion goes.

And with that, I'd like to hand it over to Andrea to lead our Materials discussion.

SECRETARY HATZIYANNIS: Thank you, Allison. And I'm going to hand it over to Franklin for our first agenda point. We're going to review our research proposal priorities for 2025.

BD. MEM. QUARCOO: All right. So this session covers the research priorities, which we do every year to talk about different research priorities for different sections. Livestock, Crops, and Handling subcommittees will come up with their research priorities.

About a year or a million ago, we started adding one category we call the interdisciplinary category which captures things that are not in any specific category.

So let me start with the summary lists, and I'll start with the interdisciplinary research priorities. Like I said, these are research priorities that are not specific to any of the groups that I just talked about.

These are some of the interdisciplinary research priorities: increasing access to organic foods, barriers to transition to organic production, whole farm ecosystem service assessments, research-based information on the economics of organic certification.

We have things like organic yield gaps and system-level productivity, information on availability, quality, and cost of farm labor, organic agroforestry and perennial-based systems -- we talked about that a little bit yesterday.

So the first session I'll cover quickly, and I'll be going over their top priorities and a few other things. I'll not delve too much into details on any one of them.

But the top priorities for Crops. One of the things is access to the extent and impact of plastic use in organic crop production. We've been dealing with plastic in part of the discussion we had yesterday. There was plastic issues there.

Another thing is to do side-by-side trials of organic pesticide products, both synthetic and natural. And then you look at cultural methods and even synthetic materials that are allowed in natural products just to see their performance -- comparative performance-- so we can always continue making the decision on whether some of these allowed substances are needed.

PFAS continues to be one of their top priorities for research under Crops. And then there is assessing the extent, economic impact, and potential compensation mechanisms for GMO contamination which is also still high on the list. And then, conduct a whole-farm service assessment to determine economic, social, and environmental impact of farming system choices.

There is also ongoing work, including the one on biodegradable film mulches, an evaluation of microbial inoculants or conditioners. All of these things are going on. There is ongoing research on the demand for organic nursery stock and wi-fi supply.

So these are already ongoing now. I'll not focus on them too much at this point, but those are the inputs --- what I just listed are for the input aspects of the Crops research priorities.

Now, when it comes to the systems, the ongoing research includes practices that reduce greenhouse gas

emissions, we have organic till and low-till practice, we have more ongoing research for research extension and education so that to fully understand the relationship between on-farm biodiversity and pathogen presence and abundance.

Studies on the effect of long-term effects -- that's more than two years -- of having plastic weed barriers, landscape fabric, and stuff like that. Research-based information on corn and soybean trade deficits is also an ongoing research topic. So that covers the Crops aspect of the research priorities.

I'll move on to Livestock. When it comes to Livestock, we have two top priorities. One of them is to elucidate the barriers to increase domestic organic pork and beef production and markets. The second one is to develop balanced organic livestock rations incorporating a high percentage of diverse, regionally adapted green crops to complement corn and soybeans, creating more marketing opportunities for robust crop rotation. So those are the top priorities.

Then these are the ongoing organic livestock research topics. Prevention and management of parasites continues to be an important thing that continues to be of research interest. Then there is evaluation of natural alternatives to methionine in a systems approach for organic

poultry feed programs, and then the development of dairy programs that address climate change mitigation strategies.

Alternatives to eliminate usage and remediation strategies just so we can deal with this issue of PFAS substances. There's also barriers to increase organic insect production. So these are all ongoing research topics.

Then we move to food handling and processing. Okay. So one of the things is improving methods and practices for organic handling and processing. We have best practices for identifying potential vectors of heavy metal contamination in organic systems. We also have effect of various food packaging products, including those that contain phthalates, plasticizers, PFAS, and BPA. Then there's also this important area of evaluating post-harvest physiology of organic foods, and just knowing more about effective decay management practices.

There is also expanding market opportunities for organic products, because you have to grow the stuff, but then you have to sell it. So research is needed on identification of markets and other things and how folks can get the best out of the effort they are putting in there.

There is the aspect of alternatives to conventional celery powder for curing organic meat. Also, research on organic produce items with strong pigment levels that could

be sold for direct consumption and processed into organic colors, particularly important because some of the artificial ones are no longer going to be used.

There's also a complete food materials review research on the creation of an overarching ancillary ingredient review process for materials. That's versus reviewing ancillaries as part of the petition or Sunset Review process.

So Materials, these are some of their research priorities. One of them is the fate of genetically engineered plant materials in compost, integrity of breeding lines and ways to mitigate small amounts of unwanted GMOs, genetic material, assessing the genetic integrity of organic crops that are at risk. prevention of GMO crop contamination, testing for fraud, improving our understanding of the potential threats and costs to the organic sector that result from the use of excluded methods.

So these are the main ones, and then there are expanded versions. I'll cover a few of them, and then bring this to a close.

When it comes to the interdisciplinary research priorities, I did talk about increasing access to organic foods. The main idea is to look for the factors that influence access to organically produced food. A lot of studies are needed in this area, including constraints that

can be arrived at by asking what community, market, and policy-based incentives will enhance access to organic foods.

When it comes to barriers to transitioning to organic production, there is a call for some kind of statistical analysis of what to expect economically during the transition process is needed, and that helps transitioning growers to prepare and successfully complete the transition process so they don't have the wrong idea of what it's going to take and then be open to surprises.

There's also research-based information on the economics of organic certification and production, and research-based information on farmer mental health. This is one aspect that didn't used to be on the list, and it was added. A very important thing to add. So it's important, so I'll read what we have here.

Much research has been done on farming stresses and their effects on mental health. More needs to be done and results circulated to farmers and farm service providers. So this is an important addition.

There's a call for a comprehensive study of National List sanitizers used in all phases of organic production and handling. So I promised I wasn't going to go into the details on each of the materials, of each of the sessions. So let me see, maybe I may bring this to a close

at this point.

Yeah, so that's about it as far as Handling, Materials, Crops, Livestock. This is not a comprehensive presentation of all that we have here, but it captures some of the highlights of what is in our research priorities document. Thank you.

SECRETARY HATZIYANNIS: Thank you, Franklin.

Are there any questions or comments about the 2026 research priorities proposal?

Allison?

CHAIR JOHNSON: Thank you for separating this very long list along. I had a few things to raise. I think the proposal is great. and I'm comfortable moving it ahead as it is written, but there are two things I'd like to see in the next round.

One is boosting the breeding of seed specifically for organic systems moved up into the top priorities for Crops. I thought Dr. Dawson's points yesterday were really compelling about both the need for organic-specific breeding and the benefits and potential for increasing uptake of organic seed if it really is offering specific benefits to organic producers. So I'd like to see that boosted in the next round.

And then we had a few comments about insurance and risk management, and I don't think we have anything related

to insurance here, particularly around the impact of insurance availability and risk management tools on the uptake of things like rotational crops.

I had the pleasure of speaking with our former Chair, Amy Bruch, earlier this week. And she was saying that there are a lot of farmers in Nebraska who are interested in integrating more crop diversity onto their farms, but the risk management tools that are available really steer people away from that.

So putting a finer point on that would be a really helpful thing for someone out in the research world to dig into and then hopefully convey those findings into our policy process. So that's something else I'd like to see added in the next round.

And then we did have at least one commenter say, like, what's this process for anyway? Is this obsolete? Do we really want to spend our time on this?

And I'm curious to hear what other Board members think. We have had reports back from researchers who have taken up some of these issues from the list and have found those really valuable. So I do see value in the process, and we've played with how we can prioritize and focus the list more, but just having kind of a summary of the wide range of needs for organic research I think has value on an ongoing basis, but I'm curious to hear from the rest of you

all.

SECRETARY HATZIYANNIS: Thank you, Allison.

Nate?

BD. MEM. LEWIS: Yeah, I applaud the ongoing work here. One of the elements of our meetings over the years that I've really enjoyed is hearing from our partners at various departments within the USDA that serve organic producers, whether that's risk management -- or we heard from NRCS a few meetings ago.

And so I just have a suggestion for the Fall meeting would be to invite NIFA or someone who presumably might use the research priorities for prioritizing government research dollars to come and just kind of give a report to us on OREI grants or how they're looking to administer those programs.

So just planting a seed for more engagement with our partners in the USDA, and I think this would be a good place to start and perhaps a good way to add some context to the question you just asked, Allison, about how can we make this process better, what's the purpose -- and do a little refresh through that investigative process.

SECRETARY HATZIYANNIS: Thank you, Nate. Great suggestion to add some transparency to the process.

Dilip?

BD. MEM. NANDWANI: Thanks, Franklin, for your

comprehensive presentation on these research priorities. I'll just make a quick comment that these research priorities are every year being reviewed by the Board, so it's not that they are really final.

If there are any inputs from the stakeholders, we do consider and include in these priorities. So I would urge stakeholders from all the sectors to give their comments if there is anything they think is still missing from this priority.

Second is over the past four years on the Board, I have seen that past couple of years we've been working, and these research priorities are very detailed and actually comprehensive. I think in the first or second year, I saw that we had good ones, but they were brief. So I think the committee or the work group, they have done an excellent job in expanding, but again, if there is anything missing from this, stakeholder input is welcome. Thank you.

And I'd like to add to and echo Nate's suggestion that -- by the way, OREI, the Organic Research and Extension Education Initiative, today's the deadline for the grant funding -- and it's a good idea to bring someone from the NIFA or the Organic National Program leader to invite them and ask them how they feel about these research priorities also from their expert point of view. Thank you.

SECRETARY HATZIYANNIS: Thank you, Dilip.

Does anyone else have any other comments?

Franklin?

BD. MEM. QUARCOO: Yes. So in response to the comment why do we keep doing this every year, first of all, this gives us an opportunity to have a document that says this is what the community needs. So that in itself is good that we have it documented that that is a need.

Every now and then you look at an RFA -- or now called NOFO -- you look at it and you find some of the elements of this in there. If for nothing else, as a researcher myself, every now and then you look at what the community needs, you have a request for proposal that does not specify one of them that you are interested in but it sort of tangentially covers it. You can have your main objectives and then squeeze that in there because, as part of the research community, you know that's needed.

Those reading the proposal, and it is compelling enough, they are not going to say this is terrible. So it's good for government agencies, it's good for the research community, it's good for the professionals to know that, apart from your local area and people that you contact, on the national level this is what is considered a research priority.

So I think it would not be a great idea to say, okay, we have these research priorities, we don't see many

of them on some of the requests for proposals, so let's stop it. It's good to continue polling people in the industry to see what is needed so we have it documented, this is what folks need. And we, those who have to do the work, we know it. Those who have to release money for funding the project know it. So there's no excuse of ignorance. That's all.

SECRETARY HATZIYANNIS: Thank you, Franklin.

Javier?

BD. MEM. ZAMORA: Yes. I'd like to echo what Alison said about the RMA, Risk Management Agency, to perhaps send someone that has pretty good knowledge on how it's operating and how can it operate better for farmers. We just mentioned that there are people perhaps here in this state that would like to grow different things, and they don't really know whether there's someone that might be able to take the risk with them if they indeed do decide to go the route.

And there are other farmers in our neck of the woods that are not really comfortable with how things are working and how difficult the access to those programs are, because it's a state that has a lot of specialty crops and it doesn't have the big-commodity things that are growing in other places in the country.

Just to give you a little good example, in the Watsonville, Santa Cruz area, Monterey County, San Benito

County, there's not a single agent that can sell some of the programs or some of the insurance policies that RMA boxed up.

So there's just a lot that should probably be a priority because it trickles down to how can we get more farmers to transition to organic or specialty crops or diversity that is one of the biggest goals of this Board, when some of the programs and some of the main agencies are not really working for them.

SECRETARY HATZIYANNIS: Thank you, Javier.

Any other comments or questions?

Cat?

BD. MEM. MCCLUSKEY: Thanks, Andrea. Yeah, I see a high value to the research priorities. I would encourage us to think through some kind of bringing NIFA, bringing folks here for more interaction. But having a better loop or designing some sort of loop where we are actually getting access to the research findings from awarded projects to help inform our thinking. And I know we're doing that, right, through lit searches and these other ways.

But it would be really, I think, helpful to have some more kind of through thread of the findings of what we're identifying as priorities as they relate to our work agenda items. I don't have a brilliant answer for that, but I would encourage us to be thinking about that next step.

SECRETARY HATZIYANNIS: Thank you, Cat.

Allison?

CHAIR JOHNSON: Yeah, I really like that idea. And just thinking about space that we have in these agendas, we've heard from different TOPP regions at each meeting for the last five years or so. But as that program winds down, maybe that's something that we could put in the place to have a consistent space carved out to hear back from OREI.

And it doesn't have to be every project they funded, but maybe pick a few to bring forward, helpful for the Board and also helpful for the community who tunes into these meetings to get access to information that way. That might be one way to do it.

SECRETARY HATZIYANNIS: Thank you, Allison.

Any other comments, questions?

(No response.)

SECRETARY HATZIYANNIS: Great. I think we're ready to motion to accept the 2026 Research Priorities Proposal.

Thank you, Allison.

CHAIR JOHNSON: Thanks, Andrea.

Okay. So we have a motion to accept the 2026 Research Priorities Proposal. Just to note, these were intended to come forward at the Fall 2025 meeting. We held them back with the short agenda in January, so they're now

the 2026 priorities since that is the year that we're in.

The motion was by Andrea, seconded by Cat, and we will start the voting with Javier.

BD. MEM. ZAMORA: Can I have a question first?

CHAIR JOHNSON: Yes.

BD. MEM. ZAMORA: Will these two motions that we talked about be included or --

CHAIR JOHNSON: My suggestion was that in the next round, they'll go in there, rather than amending this at this time.

BD. MEM. ZAMORA: Okay. Thank you.

CHAIR JOHNSON: Yeah.

BD. MEM. ZAMORA: So, yes.

CHAIR JOHNSON: Nate?

BD. MEM. LEWIS: Yes.

CHAIR JOHNSON: Andrea.

SECRETARY HATZIYANNIS: Yes.

CHAIR JOHNSON: Amanda.

VICE CHAIR FELDER: Yes.

CHAIR JOHNSON: Dilip.

BD. MEM. NANDWANI: Yes.

CHAIR JOHNSON: Franklin.

BD. MEM. QUARCOO: Yes.

CHAIR JOHNSON: Corie.

BD. MEM. PIERCE: Yes.

CHAIR JOHNSON: Kathryn.

BD. MEM. DESCHENES: Yes.

CHAIR JOHNSON: Cat.

BD. MEM. MCCLUSKEY: Yes.

CHAIR JOHNSON: And the Chair votes yes.

SECRETARY HATZIYANNIS: Great. We have 10 yes, 0 no, 0 abstain, 0 recuse, and 0 absent. Motion passes.

All right. Thank you all for the discussion about our research priorities. The next topic that the Materials Subcommittee has to review is our induced mutagenesis discussion, which is being led by Cat and Dilip.

So I'm going to hand it over to Cat.

BD. MEM. MCCLUSKEY: Yeah, thanks, Andrea.

So, yes, we're going to structure this as a conversation, as we've been doing with agroforestry and the seed panel discussion yesterday. So a little bit of update and background reminder here on induced mutagenesis.

So I've sort of been added into this work that was, when I came on, being led by Dilip, with Brian's support, I believe. And we collaborated on our subcommittee for a Fall 2025 discussion document that focused both on induced mutagenesis but also on a process for analyzing and assessing genetic technology -- well, excluded methods on a whole, right?

And so from that discussion document we received

nine comments, all encouraging the Board to continue working on induced mutagenesis, and concerns around should the Board decide that induced mutagenesis should be and is an excluded method, our ability to actually analyze and know which varieties have induced mutagenesis in the background. We heard from Dr. Jim Myers yesterday who talked a little bit about this as well, the traceability.

And so it's also a bit unclear as to how much reliance on IM there is in the background breeding of organic seed varieties, and the comments also were really supportive of this sort of three-prong approach in which the question of -- you know, prong one being the method.

So there's three key prongs, right, to the excluded method definition. Methods used to genetically modify organisms or influence their growth and development, two, by means that are not possible under natural conditions or processes, and three, by means that are not considered compatible with organic production. To be an excluded method, a method needs to fall within all three of these things, right?

So we have continued to discuss and work on IM, and for this meeting we received two comments really just encouraging, again, us to continue working on this. And we are preparing for the Fall, a proposal for our next meeting.

And I'm really looking forward to this discussion

and to hear what folks think. You know, I got a lot out of yesterday's seed panel in several different ways, but particularly with Dr. Meyer's discussion around IM, and the future and existing technologies that are actually more current than induced metagenesis, right? Particularly CRISPR Cas9.

And so, yeah, I'd love to hear where folks are on thinking around this, particularly given the comments from last session -- or from Fall, excuse me, -- but also with the panel discussion yesterday. But before that, I'm going to --

Dilip, do you have anything you want to add for updates?

BD. MEM. NANDWANI: Well, yeah.

Thanks, Cat, for your update. It's beautifully presented. I'd like to add just one sort of refresher for all of us, and a request to stakeholders, too.

We've been working the past couple of years, as she mentioned, with Brian and others, and discussing in depth because this is one of the difficult topics the Board is dealing with and we have to be cautious and navigate carefully.

Just for a refresher point of view that induced mutagenesis, it can be natural, right? So while IM usually refers to the intentional and artificial use of chemical or

physical agents like radiation by humans to create mutations and alter genetic material, the same types of agents exist in nature causing similar changes in genetic material.

So it could be environmental agents like sun. That has also natural radioactivity. It could be biological agents like microorganisms, and there could be some other ways. While the mechanism is similar, IM in a scientific context usually refers to the high frequency and intentional acceleration of this process compared to spontaneous or natural mutation rates.

So I'll stop here, and I'll just add that we do have a very good TR 2023, and that provides a lot of details. And we continue to need from the stakeholders input and suggestions to help us -- you know, as Cat mentioned, we are going to work on this proposal.

So I'd like to end here and open for discussion. That's my two cents. Thank you.

SECRETARY HATZIYANNIS: Thanks, Dilip.

Thank you very much, both of you.

I want to open the floor for questions and comments.

Nate.

BD. MEM. LEWIS: Yeah, I think my thinking on the topic has evolved quite a bit, and hopefully I can carry folks along this mental journey that I've been on. I have

remained unconvinced that products of induced mutagenesis meet the full definition of excluded methods.

I've been having a hard time thinking of wheat and barley varieties bred through that way the same way I think about Roundup Ready corn. So I've been having a hard time putting products of induced mutagenesis into the excluded methods bucket.

And Cat, you brought up CRISPR being kind of under the umbrella of -- CRISPR is something that, again, I'm not that familiar with, but I have an easier time putting CRISPR into the GMO, quote unquote, or excluded methods bucket. And I found that Dr. Myers' description of that was illuminating, and illuminating in a way that made me realize that the way we're approaching this is always about chasing down the train that's already left the station.

So it's almost like the question on whether or not these technologies are excluded methods, which is the static definition and one that we have heard the Program is reluctant to put much time into updating. Perhaps that's not the way to address the fundamental issues of the organic seed conversation, which was then also described by the panelists yesterday that the tools we have in organic seed breeding are already there. We have the tools we need to get the varieties we need.

And so I'm kind of trying to navigate this, like

we need to protect organic, and we need to protect the non-GMO claim and keep organic there, but we also really need to send a bold signal to the industry to invest in organic seed breeding.

I think we need to do both things at the same time, and I think what's excited me is thinking about what that bold signal is to the market. So I'm excited to kind of keep engaging on it, and I really encourage us to just use our position to try to send that bold signal. And I don't know how effective it will be, but if we don't try, we'll never know.

SECRETARY HATZIYANNIS: Thank you, Nate.

Any other comments?

Javier?

BD. MEM. ZAMORA: Do these excluded methods that we're talking about also include nursery stock and some other vegetative products? Or are we just talking seeds. Or are we talking strawberry crowns and all those things?

Or that's kind of -- I'm a little -- I think this could be very big. I really think this could be controversial in the future because if you're talking about nursery stock, and you're talking about specific things like strawberry crowns and other stuff, by using some of these methods, maybe the horse has already left the barn. We don't know because we just don't know.

What I'm really afraid of as an organic grower is that some of these methods would allow certain individuals to create something that will be like just one shot, and every year the farmer needs to be buying from certain vendors only. That's the part that I'm scared about. That's really scary because that's very similar to having GMO -- or what is it -- Roundup Ready corn GMO, that sort of thing.

So I think we'd really have to understand what these methods are, and how are they using it, and what are they using it with or for? Because that's a big one. I believe in the future it will be a big one.

SECRETARY HATZIYANNIS: Thank you, Javier.

Allison?

CHAIR JOHNSON: Yeah, thank you for all the comments so far, and I feel like my thinking shifted from the panel, as well.

And, Nate, you named one of the points that Dr. Dawson named that we actually have a lot of tools to do good breeding already. And Dr. Lewis's research, he has found a way to do something that was traditionally done with chemicals without the chemicals.

So there's a lot of room for innovation and creativity, even with more classical breeding methods, and assisted by technologies that help us understand more

quickly the genome and what pieces are doing what without the kind of tinkering that introduces unknowns that I think the organic community is so uncomfortable with and the reason that the excluded methods definition made it into the ranks in the first place.

The other points that stood out to me were Dr. Meyers grounding the discussion in integrity, and different types of integrity, so by species, by genome, and I think that can help guide our thinking as we move forward with a proposal.

And then finally, one thing that has been a hangup for me in this discussion is enforcement. How do we know what was used where if we can't test for it? And what I took away from yesterday is the breeders know, in many cases, and they just don't have to tell us.

So there are a lot of situations in organic where we use an affidavit to say, you know, was this used, was it not? Does this meet certain criteria? So I think that's a tool that we could consider using.

It doesn't have to be perfect. We don't need to chase down every last trace of IM that was used 40 years ago to create a variety. But to the extent that that information is available, we can get at it through requests and kind of do the best that we can with that.

So I think that gives us some ways to think about

a really simple path forward that is grounded in how the excluded methods definition got there in the first place, and guarding against some of these newer technologies as they start to come in. The more simple we keep it, the more simple it is to keep us on check.

SECRETARY HATZIYANNIS: Thank you, Allison. I had some comments, too. Thinking about the induced mutagenesis brings me back to the principles that we use when we're evaluating the materials. Where is the source, and what is the method? And I think both of those two things need to be factored in because the source can be natural and the method could not and or vice versa, right, so we want to make sure that both are in the spirit of organic.

And hearing them speak about the research yesterday, I concur with my fellow Board members. I'm encouraged to hear that there are methods that could be used that are not including chemicals and more natural and could be allowed in organic.

So to be able to not take this method just from its name and for what it is and what it's doing, we can argue that this has been in the farming community since the beginning of time. We're talking about the corn and wheat varieties that have been developed.

So we want to make sure that we're providing tools to help grow the organic seed usage and not limit it, right,

and to understand that it may not be perfect in its first iteration, but our goal is to push the research to get to where we need to be, and it needs to start somewhere.

Any other comments or questions about the induced mutagenesis?

Franklin?

BD. MEM. QUARCOO: I've also been grappling with this issue for a while. Especially when I started thinking about it -- and Dilip can correct me if I'm wrong -- but induced, initially this is the way I used to think about it, it was overly simplistic. Now I see it was overly simplistic.

But this is how I used to think about it. Okay. So we had conventional or classic breeding methods -- and I'm using conventional in another context -- like this is how, traditionally, we've bred different lines. And then we had genetic modification which had transgenic organisms and also gene editing like CRISPR and others.

So when the discussion started, I just asked, I just want to find out from breeders is induced mutagenesis a conventional breeding method? So I was just looking at it. Is it conventional? If it is conventional, and that's what we have been breeding -- even when we're not talking about GMOs -- this is what we were doing all along, and we thought it was okay.

Now we are worried about GMOs, and then, now are we reclassifying induced mutagenesis as no longer a conventional breeding method? Then later I started thinking about, okay, let's look at the spirit behind the organic movement. Now we start talking about these very harsh chemicals that are sometimes used as part of conventional breeding, like colchicine and other things.

So that was when I started going deeper. I said, well, it's not just putting them into two different categories. Its a little bit more complex than that, and yesterday hearing that there are other methods that can be used to do the same things.

My worry, though, is that how many researchers or how many places are using those methods? So if we do a hard break, we had to hear it from researchers yesterday. So how widespread are these methods? So whilst we are trying to clean up, I think we have to be very careful.

And I also liked one of the ideas where we're talking about, what was done in Europe about the organic seeds, and for various crops they gave a certain number of years for folks to get their act in order. I think that that's not a bad idea.

That's all I have to say. Thanks.

SECRETARY HATZIYANNIS: Thank you, Franklin.

Any other comments or questions?

Cat.

BD. MEM. MCCLUSKEY: Yeah, I appreciate the discussion.

And Franklin, I just want to lift up the idea of having a ramp, a timeline. Should we come to the conclusion, based on public input and our research, that this is an excluded method, definitely to have a timeline to provide a signal and encourage new innovation.

And to not leave growers in the lurch. Javier, like, heard loud and clear. And that's been a lot of the discussion, both when I was on that side of the table and on this side too, around IM. And that's a core tenet of not wanting to pull high-quality varieties out of farmers' toolboxes, right?

SECRETARY HATZIYANNIS: Thank you, Cat.

Any other comments and questions?

(No response.)

SECRETARY HATZIYANNIS: Okay. I think that concludes our discussion on the induced mutagenesis, certainly a topic that we're all going to be watching closely. And that also concludes the business for the Materials Subcommittee for this meeting.

CHAIR JOHNSON: Thanks, Andrea and the whole Materials Subcommittee. These are tough topics, and the depth and breadth of these discussions I think is going to

get us to a good final place.

All right. Up next we have the Policy Development Subcommittee with Amanda.

Over to you.

VICE CHAIR FELDER: Good morning. All right. So last year, last semester, the subcommittee did a lot of work on making updates to the Policy and Procedures Manual, and we were trying to make things more efficient. We tried the Sunset Review efficiency process, and we will discuss that further. But it's nice to try new things, see if it works. Sometimes things don't work, sometimes things do.

So a lot of credit to last year's subcommittee to putting the work in. This was originally on the Fall agenda. We pushed it to the Spring now to allow for time since we were constricted.

And now we're kind of moving through, after we get through these updates today, kind of focusing on how do we make the Board work more efficient for small farmers, for Board members when we're short members, things like that. So I'm excited for what we're bringing in the future and then the work that the committee did previously.

So I will pass it off to Nate with the updates that the committee did.

BD. MEM. LEWIS: Thanks, Amanda.

So, as Amanda mentioned, we deferred the work of

the PDS from last year to this meeting because of the cancellation of the Fall meeting and then the truncated timeline that we had for the Winter virtual meeting.

For those of you who have been in the room, you'll remember Milwaukee, and I was PDS Chair then and presented some PPM updates our last round. In order to keep the conversation light, I donned a novelty item on my head of the cheese head because we were in Milwaukee.

And so I was trying to figure out what to do for this meeting to do the similar thing, and I was delighted to find out that the company that makes the cheese head also makes a corn head for the corn huskers. So I will wear that. It's organic. OCIA did an expedited inspection for this meeting. It was great. So here we go.

All right. Can I go to the next slide, please?

So the Policies and Procedures Manual is the document that guides our work and gives us transparency to the stakeholders on how we do business. We try to update it from time to time to reflect the ongoing evolution of our work and to integrate new processes. So I'll go over some of the work that we did this last semester to accomplish that.

We made an update to actions the Board can take around participation of Board members. We did some work on clarifying when a third-party technical review should be

conducted for newly petitioned substances. This grew out of conversations we had during the meloxicam petition.

And then we tried to codify the process for a separate annotation change at Sunset Review. This is an ongoing work agenda item that we agreed to with the Program so that, as we review substances for sunset, we can bring forward parallel motions for annotation change proposals. And then we did a few cleanup-word updates and those types of things throughout the document.

Next slide. So we added a sentence to the guidelines for Board members, and in the case of members not being able to participate or not showing up to meetings it authorizes the Chair to send a letter to the Secretary requesting replacement or removal of a Board member from the Board.

And we can just proceed to the next one. The third-party technical review, this was, like I said, a conversation we had with stakeholders during the meloxicam petition. For those of you new to the process, meloxicam was a substance petitioned for pain relief in livestock. And during that review, the Board, the Livestock Subcommittee, elected to do an internal technical review. There was expertise on the Board, there was a tremendous amount of information provided within the petition, and we conducted the technical review sort of internally.

What we failed to do was provide transparency about that decision and what exactly those review parameters were to the stakeholders. And so what was in some ways a distraction from the merits of the substance, we ended up spending a lot of time talking about just what information was being used to come to these conclusions, and I think stakeholders had a very strong point around transparency.

The National List is our closed list, it's the way we restrict organic practices, and in order to add something to the National List it's a very high bar. The information we used to do that analysis is critical, and showing transparency there is really important.

So we heard the comments around that process during that time and are making these suggestions. Again, the new words are in red. So if the petition is for a new substance without a TR, or an existing substance that has a TR that is over 10 years old, a new TR should be requested. And then we say if the petition is for --

So basically, if it's a new substance we've never reviewed it for, we should get a TR. So this would be a third-party technical review. That would mean that both the Board and stakeholders are evaluating the substance using the same set of information. In this scenario where it's an existing substance, meaning something already on the list, and there is a TR that's less than 10 years old, we carve

out the rationale the Board may use for not requesting an additional TR.

And if we go to the next slide, I can detail that. Again, what is in black is already in the Policies and Procedures Manual, and then what is in red is new additions. So we would want to make sure that any new information provided in the petition has been vetted for potential conflicts of interest or bias that may obscure National List concerns, is all information available to the subcommittee also available to the public?

And I think that was a lesson learned by the subcommittee during the meloxicam process, and one that we want to make sure doesn't need to be learned again. So making sure that everyone sees the information being used to evaluate substance is really critical.

And so when we make a decision, so internally -- what you all don't necessarily see is we have a lot of internal conversations about TRs. And when we determine a TR is needed, we send a note, we document that via email to the Program about, you know, for such and such material we'd request a TR.

We also do that if we aren't going to request a TR, and I think the aim of this last section would be that in that communication to the National List manager, we would describe what we are going to use, and so that sort of

memorializes it at least internally for the rationale about why we chose not to, in this one scenario, request an updated Technical Review.

Next slide. I'm pivoting a little bit here. This is a whole new section within the sunset process portion of the PPM, and this tries to codify the process for separate annotation changes at Sunset Review. This work agenda item, this ongoing work agenda item, kind of grew out of interest in providing the Board with more than just a yay/nay option at Sunset Review. You know, should it remain on the list or should it be removed?

And part of that is because science reveals new information about substances, our certification system evolves and gets more sophisticated, and there are times when products on the list should be further restricted with an annotation or should be less restricted by the removal of an annotation. And historically, we've relied on the industry and public, you know, the folks on the non-Board side of the equation, to petition for those changes.

And we identified that, as we're doing these Sunset Reviews, we're getting comments from folks saying, you know, this should stay on the list but we should restrict it to such and such a use because there's now availability of this alternative or whatever, what have you. And we asked the Program for some flexibility during the

sunset process to update annotations to further restrict products and provide the Program with another recommendation besides just whether or not to keep the product on the list at that Sunset Review.

So we have trialed that over the last few years. We, for example, in Fall of 2024, voted to remove the restriction on methionine, the inclusion rates per ton of feed, and I believe the Program is moving forward on rulemaking action there. That was a Sunset Review that we were doing at that time, and we brought forth the parallel motion. For folks who weren't here yesterday, and again, just to illustrate this as an example, Dilip did a presentation on copper sulfate. I expressed interest in having the subcommittee explore whether or not that annotation is still relevant and necessary for the topic.

So what we wanted to do is for that process, again, add some transparency about what that might look like, so that stakeholders aren't surprised, and that Board members can have a reference in how to go about doing that. So I'll kind of walk through the steps that we laid out here, and that will conclude the components of these updates, and we can have some discussion there.

So first step of this process would be to determine if the substance is a candidate for an annotation change. This can happen during the TR determination

process, which again, for those of you out there, we do that a year before. So the substances we will review for sunset in 2027 next year, right now, the subcommittees are identifying whether or not to order a, updated TR on those substances. And that is a great opportunity to go, oh, let's just take a look at the comments we received or the facts on the ground about whether or not we should start considering whether or not a parallel separate annotation proposal could be considered.

So that's step one is determine whether or not it's a candidate for the annotation change. So then step two is when we are doing our Sunset Review, that would be when we would propose an update to the annotation or a new annotation.

So the subcommittee drafts the Sunset Review and consider whether they would propose to remove the substance. This is the normal process. We normally review every substance every five years in Sunset Review, and we would do that step first. Second part of that is look at the questions of stakeholders, and use that as a tool for eliciting public comments around the annotation change that we might consider.

And then a suggestion here is that each substance sunset summary should include a dedicated section on annotation to prompt consideration and ensure any discussion

is memorialized for future reference. This is a great place for future Boards to glean information about what the conversations were like and whether or not an annotation change consideration should be made.

Next slide. Step three would be to actually draft a separate annotation change document, and this would be for the Fall meeting, and that is typically how it's been done. So for each proposed annotation change, the subcommittee will draft a discussion document or proposal for the Fall meeting. In addition to the Sunset Review write up, each proposed annotation change will be tracked as a separate work agenda item on the work agenda spreadsheet and documented in the subcommittee notes table.

And then step four is to consider timelines. The annotation change proposals are not required to follow the same timeline as Sunset Reviews. So the Sunset Reviews have to happen every year. If there is a parallel motion that goes along with that Sunset Review, and further tweaks and conversations are needed, that can be deferred to a subsequent meeting because they are parallel. They are not intrinsically linked to the sunset process. And that sort of goes into this last bullet which is annotation changes do not need to be completed by the Fall meeting. The subcommittee should anticipate that additional drafting or revisions may extend beyond the standard two-meeting Sunset

Review timeline.

Next slide. And then step five is voting on these annotation change proposals. The full-Board vote on annotation change proposals occurs independently from the Sunset Review and vote of substance, although they may occur at the same meeting.

So what does that mean? That means we are under a statutory obligation to do our Sunset Review. Those must happen in the Fall meeting of the year that it is being reviewed. The parallel motion related to annotation change can have its own trajectory because those will be distinct, independent proposals.

And, should an annotation change proposal pass the full Board, the Program now has a suite of options. When we do Sunset Review, the Program takes our recommendation, and it decides whether it's going to renew the listing or remove the listing depending on what our vote was. But it's ultimately the Program's decision to make that rulemaking decision. When we provide them with an annotation change proposal, we simply give them another option.

And I want to acknowledge some comments we received on that particular fact from stakeholders, which described that as, quote-unquote, relinquishing the control of the Board. I personally disagree with that opinion because I feel like the materials are on the list.

The program is ultimately the entity that controls decision making around when to engage in rulemaking. However, we do have a role in advising the Program on that, and when we think an annotation needs to be changed or modified, providing them that advice in the form of a proposal makes it much easier for them to take those next steps. So I just wanted to acknowledge that comment and sort of describe some of the thinking from the PDS in terms of how assertive we were in this writing.

So I think I'll stop there, and I'll let Amanda run the discussion, but open up there for clarifying questions on this and any comments. And I don't know if y'all can still take me seriously or not, but we'll try.

VICE CHAIR FELDER: It is a little hard, but we appreciate it, and it brought a lot of smiles to our face. I did feel like we needed like a corn chair or something, but I'll take the hat.

Questions, comments?

Go ahead, Allison.

CHAIR JOHNSON: Thank you, Nate, for keeping it light here while also moving this process forward.

Just a few notes to add. First, I wanted to recognize Michelle in holding this PPM in her brain. It's technically in the PPM, but it's the Vice Chair's responsibility to shepherd the PPM along. But that person

changes year after year, and Michelle is always quick to say -- if we're like, well, what do we do about that -- oh, that's in the PPM. Oh, that's in the PPM. Check the PPM.

So we really appreciate you keeping it alive and helping us remember to use it. It's a very useful document, and I know I often forget about it and then am gently reminded that I should be looking at that as one of my first resources. So thank you, Michelle, for your role in making sure it's there, and helping us use it.

Just to talk a little bit about the non-participation point. I think this part really needs to go hand in hand with the continuing work on what it means to participate on the Board, and being flexible and creative in making sure that there's an appropriate role for everyone on the Board.

We've had ongoing challenges with keeping small farmers engaged, and making sure that service is accessible. It's a heavy lift for someone like me who sits in front of the computer all day in regular work hours. And when you're out on a tractor driving hundreds of miles between different fields, things like that, it's a really big ask.

So I think we've been really successful in working with each other, recognizing that five years is a long time. It's not unusual for a BD. MEM. to experience both personal or professional or both joy and tragedy in the same year.

And so the new language is there to recognize that each role on the Board is really important, and we want to have tools to make sure that everyone's active, but it's really intended to be a last resort.

And we did get some comments about, you know, should the whole Executive Committee or the elected leaders participate in a letter decision if it came to that. But I think if we're getting to that point, so many steps have already come before that that that change is not necessary. So yeah, I'll just leave that there.

And then I want to push back a little bit, Nate, on that last point about the annotation change proposal. I don't read that as giving the NOP boundless discretion about which recommendations to take or not. I think it's there to say if there's a recommendation on the sunset in an annotation, those can be combined in the rulemaking process, but it's not a choose-your-own-adventure, by my read.

So yeah, those are the points I wanted to give.

VICE CHAIR FELDER: Thank you, Allison.

Javier?

BD. MEM. ZAMORA: I think there's non-participating Board members, especially farmers. This is not a new issue. I mean, I've talked to several people, and there are a lot of farmers out there who have the time, they're qualified, but they still need some help, maybe some

technical help, some computer skills. There's just a diversity of things that a farmer needs in order to fulfill this farmer seat on this Board.

We're unique, we're different. We're all different, we're all unique. We have something to contribute to boards or society or something like that. I think we need to really figure out a way of how can we maintain and have a farmer seat or a farmer participate on this Board?

What tools can we -- not only as Board or NOP -- but people out there on the other side without really pushing him, pushing her to vote or go or sway the way they wish him or her to go. That's what I found the little bit hard part because, in my case -- and I'm just going to talk about my case -- I really don't talk about anybody else. I talk about what I've seen and what I've heard.

You know, I talk to people like Zia. I talk to people like Tom Broz -- in my area -- and Phil Foster, Tom Willey, that are really qualified as people or farmers to be on the Board. But they have a bunch of different things that contribute, but they lack all kinds of skills in order to really fully give what the Board asks for them to do. I think if we put our heads together -- again, this is nothing new, you already know. And what farmers have done, they just quit. They just resign. And just quitting and

resigning does not fix things.

I'm sure some of you will agree and some others will not, it's America. We have to figure out some tools that the farmer can get without pleasing a group of people so they can -- he or she can solely be independent and can speak their minds. There were some tools that were available to me when I needed them, but I felt like they were asking me to go their route. And as far as I know, when you do that, you're not really -- you're not being yourself.

So let's work on this. Let's not just pinpoint people, and figure out what the farmer, what she or he can actually bring to the Board, and make the best use of it. Because we all are part of our society that we all have something to contribute. Gracias.

VICE CHAIR FELDER: Thank you, Javier.

Any other comments or questions?

Dilip?

BD. MEM. NANDWANI: This is a comment for my fellow Board member, Javier. I do understand your sentiments, what you are saying about that. I think from the Board, we do have a mentor assigned to new Board members which really advise and help a new Board member.
In my case, I remember that I had a mentor, you know, working for the university, and they have the computer

skills.

But I really didn't know a lot of these things, what to expect when I got on the Board, and my mentor really helped me. So I would just add that I'm not sure who was your mentor or you have, but from the Board, we do have some help, not only mentor.

But in case if you -- if someone needs any help with the computer, I think this Board is excellent. We have very good, you know, the members here and they look out for each other, they help each other. So if there's anyone who needs help, we all are here to help and support any Board member. So, thank you.

VICE CHAIR FELDER: Thank you, Dilip.

I will add that the subcommittee, now that we're kind of post-PPM updates, that our focus really is learning on the challenges that Javier has experienced. Javier and Corie are on the subcommittee. So, taking challenges from specifically small farmers on what works and what doesn't, and acknowledging the changes for accessibility that the Board and the Program have made the last few years to make things more accessible, more efficient, and more friendly across the board with support.

We've had babies born, we've had changes like Allison called -- you know, how we've all pitched in. And I think we've come a long ways as a Board in working together

as a team, and not quite so divisive, to get the work done and to carry it through. So we're definitely reviewing those challenges and seeing what can we do to move forward and make even more -- to avoid this type of thing in the future.

Any other comments and questions?

Yeah, go ahead Alison.

CHAIR JOHNSON: Yeah, just to add on and build on the last few points. We do have the tech support specialist. Heather has been a great help, and I think we can be more creative in how we work with her. If an individual Board member needs specific support with a technical issue or understanding something, I think she's -- the reason she's there is to help make Board service accessible, and we can do a better job working with that role to open up possibilities.

And then just sort of the same reflection that I had on the agroforestry commenters. When we see that this system is not working for the people who are at the heart of this production system, there's a problem with the process. So I do really think it's indicative of a need for rethinking how the Board works. If it's becoming so paperwork and bureaucracy heavy that a small farmer can't participate, then we have a problem, and the problem is not the farmer.

And then just broadening that out, I think we want this Board to be a place where anybody in this community could participate. I was thinking of family members with ADHD, like if it's hard to sit down and read a 30-page document, but you have a deep ability to go into the weeds on another issue, that's something that's a benefit that we can leverage. And so, you know, really being creative about what participation looks like.

It doesn't need to be the same for every person, but there are so many strengths, and the structure of the Board is designed to bring people with different strengths together. So I think we need to really be thoughtful in how we integrate that into our Board operations. I'm grateful for the work PDS is continuing to do in this space, and I think it has a lot of promise for us.

VICE CHAIR FELDER: Thank you.

Anybody else?

DR. TUCKER: I'm going to make a couple of comments here. I really appreciate the conversation that just happened about rethinking how roles might be distributed and that's also encouraged you to kind of broaden out and think how could you make it simpler to have these folks.

And then, so I periodically do my thing about annotations. They're enormously complex, and they don't

invite the simplicity that you guys are talking about. And it worries me that, okay, we're going to have this big annotation process that's going to do nothing but encourage more annotations, is my fear.

And so my advice for the community and for the Board is to embrace this concept of sound and sensible risk-based oversight. And so if an annotation comes up, the question is, is this truly needed for organic integrity? And if so, why and how? And why does it matter? And how much work is it going to take to do it? That's a lot of work you just kind of laid out there.

And so, yeah, let's broaden that to work agenda items. Folks have kind of pet projects that they're interested in and want to be on the Board to work on. That's also, though, a lot of work ,and sometimes those don't go anywhere. Then people can say, well, I worked on it, and maybe it'll get picked up someday, but that was an awful lot of work for the Board for something that may get picked up someday. So I just invite you to please, please keep that in mind as you are choosing what to work on, both big projects and tiny ones.

I did want to just briefly touch on the non-participation. I think Heather offers a really, really valuable role for the Board, and I do agree with kind of relooking at should we -- she only has so many hours in a

day, too, and when other staff are out, she does need to back them up. And that's just the reality of having a small program right now, just like you guys are backing each other up.

But I do wonder -- we can't do what's called personal services, but we can provide different forms of technical support, and I think that is worth a conversation to make sure the resources really are going where they're most valuable.

My final comment is really just a protocol one. This is something that we can kind of drop in in finalizing this, but I think it's important that the Board Chair would never, protocol-wise, send a letter to the Secretary. It always comes through NOP. And so it didn't happen recently, but that would not be okay. And so I'd like to add the clause, through the National Organic Program. And I promise it has much better luck of getting through to the Secretary if it comes through us than if there's this blind letter from the outside going all the way up to the Secretary. So that would be a minor change that we would make.

I really, really appreciate this conversation, and everything is a trade-off in terms of time and effort, and what are we doing to most protect organic integrity and have people at the table who have a really important voice in that. So thank you, and thanks for letting me jump in.

VICE CHAIR FELDER: Thank you.

Allison.

CHAIR JOHNSON: Thank you for the insights, Jenny, and the advice. Should we -- I'm just looking back at this language -- should it say the Chair may send a letter to the NOP to send to the Secretary? Should we integrate that or just now that the process --

DR. TUCKER: That's fine, or through the NOP, or we'll add it. It's up to you. I don't consider that a substantive change. It's just a protocol change.

CHAIR JOHNSON: Yeah, technical. Okay.

BD. MEM. LEWIS: I'll note there's already a comma splice in there that needs to get cleaned up, so we'll --

CHAIR JOHNSON: Okay. So we'll just acknowledge that there'll be a protocol cleanup in the final version of this that acknowledges that the Chair's request will go via the NOP. Thank you.

DR. TUCKER: Thank you.

CHAIR JOHNSON: All right. Any more discussion before we vote?

(No response.)

CHAIR JOHNSON: Okay. So we have a motion to accept the Policy and Procedures Manual updates. Motion by Nate, seconded by Allison -- me.

And the voting on this one will start with Nate.

BD. MEM. LEWIS: Yes.
CHAIR JOHNSON: Andrea.
SECRETARY HATZIYANNIS: Yes.
CHAIR JOHNSON: Amanda.
VICE CHAIR FELDER: Yes.
CHAIR JOHNSON: Dilip.
BD. MEM. NANDWANI: Yes.
CHAIR JOHNSON: Franklin.
BD. MEM. QUARCOO: Yes.
CHAIR JOHNSON: Corie.
BD. MEM. PIERCE: Yes.
CHAIR JOHNSON: Kathryn.
BD. MEM. DESCHENES: Yes.
CHAIR JOHNSON: Cat.
BD. MEM. MCCLUSKEY: Yes.
CHAIR JOHNSON: Javier.
BD. MEM. ZAMORA: Yes.
CHAIR JOHNSON: And the Chair votes yes.
SECRETARY HATZIYANNIS: We have 10 yes, 0 no, 0 abstain, 0 recuse, and 0 absent. Motion passes.
CHAIR JOHNSON: Thank you, everyone. So now we have our discussion document about the Sunset Review Efficiency Update.
So, back to you, our friendly corn man, Nate.
BD. MEM. LEWIS: So this is just to try to close

the loop on an effort that the Board engaged in last year. We have heard from community members and from Board members that our Sunset Review, and especially the voting process, is cumbersome, lengthy, and of diminishing value.

And it's not a reflection on the sunset process itself. Everyone is in agreement that we do need to do our sunsets, and we need to do comprehensive reviews of each of these substances. It's more just about the mechanics of long meetings stretching into long afternoons, all voting no or sort of predetermined outcomes.

And so we tried on a couple of different options. And one of them was to think about implementing a sort of, quote unquote, consent agenda of sorts where we group what we were calling non-controversial or substances that we generally could anticipate having unanimous support for relisting into a group vote, and presenting all those as one group and taking one vote to kind of reduce just the mechanics of voting on each substance individually.

And so we put some contours around that, and we developed some procedures, and we sort of pulled from Robert's Rules -- which is the rules of order that the Board generally adheres to in our deliberations -- on how to do a consent agenda and try to incorporate some of them. And we got some great public feedback.

I'd say that the public comment response was

mixed. There were some folks really excited about it, some folks who elevated some very real concerns about diminishing the review of each individual substance.

When we presented it to the full Board, everyone had questions about how the actual procedure would proceed, and ultimately we came the conclusion as a subcommittee that, in the words of a previous Board member, the juice was not worth the squeeze, hat we were going to save a little bit of time maybe in doing these votes but spend a lot more time briefing and orienting folks on a new voting procedure and explaining ourselves.

And so, ultimately, we just decided to sort of tie a bow around that process which I think had value because we did take a look and try something. I mean, we didn't try to implement it, but we seriously took a look at it and solicited comments and really evaluated it for whether or not it was going to support the Board's work or not.

And this discussion document just kind of concludes that work by saying we're not going to mess around with the Sunset Review process, the Fall meeting may get a little bit long and dry as we vote on all of our various sunset materials, but it's kind of a don't fix what isn't broken.

And we'll continue to -- as Amanda said -- it's like we're looking at ways to make Board service more

sustainable, and I think efficiency is something that should be thought about in that. This didn't seem like the way to add that efficiency. So we're just concluding the process and bringing the stakeholders along and the thinking on there. I'm happy to answer any questions we may have about that.

(No response.)

CHAIR JOHNSON: Thank you, Nate.

And just to be clear, we're not going to vote on this here, but it's here just to close the loop and document that we tried and failed to save someone the trouble of going down this road again. But I do think it was a really valuable exercise, and where we landed is just everyone be efficient in your presentations and focus on what's most important for the materials and keep it peppy, and I think that's been really successful at this meeting. So thank you. I appreciate it.

BD. MEM. ZAMORA: I think that's the right thing to do because when you bundle things, people are not always happy and -- well, the public will likely not be happy, and maybe some Board members will do some reconciliation at the end or that sort of thing. So I'm glad.

I saw a little bit of that, though, with the chlorine and all those things today. But those are not really controversial and that sort of thing. But I think

that's pretty good. I'm glad you guys are no bundles, no specials. That's good. Yeah, you don't really save a lot of time, so it requires a lot of time anyway.

VICE CHAIR FELDER: Thank you, Javier.

Nate?

BD. MEM. LEWIS: Yeah, and I'll just add as a great example and the chlorine materials. It's great to bundle them in the discussion of them at this discussion thing, and each one will get its own vote, as it should, individually. So, right, we will save time in the discussion, we will make sure each substance gets its vote, and proceed like that.

VICE CHAIR FELDER: Thank you for clarifying that.

Cat?

BD. MEM. MCCLUSKEY: Yeah. Just a very quick thank you to PDS for looking for ways to build more efficiency in the process, testing something out, documenting it, and coming to the conclusion. I really appreciate it. Thanks.

VICE CHAIR FELDER: Thank you.

Others?

(No response.)

VICE CHAIR FELDER: That's it. So that wraps up PDS for today.

CHAIR JOHNSON: Thanks, Amanda, for your

leadership, and the rest of the subcommittee for the work that you've been putting in. One of the more internal-facing subcommittees that I think is really essential to the good functioning of the Board. So thanks for taking the time with it.

All right. We are ready for a break. We'll come back at 10:45 for the Handling Subcommittee.

(Off the record from 10:27 a.m. to 10:46 a.m.)

CHAIR JOHNSON: All right. Welcome back, everyone. We are in our final subcommittee, Handling, and we'll see how we're doing on time if we do some wrap-up before lunch or if we break and then wrap up after lunch.

I'll hand it over to Andrea to lead us in Handling.

SECRETARY HATZIYANNIS: Thank you, Allison.

We have a few topics for the Handling Subcommittee today, but really our subcommittee has been focused on the Sunset Reviews and managing the petitions that have come in. Today we have two proposals to discuss, one petition and one reclassification, and then we'll review the 2028 handling sunsets. And I'm going to start, because I reviewed the chitosan petition.

We had this petition come in December 2024. This petitioner is requesting that chitosan be added, classified as a non-synthetic, and added to the National List

205.605(b) as a non-agricultural product. The petition focuses on the use of chitosan derived from fungi as a processing aid in winemaking to improve clarification and filterability, prevent and treat volatile aromas, and boost micro-stability.

In summary -- oh, I'm going to continue to talk a little bit more about chitosan. So chitosan is currently used in non-organic winemaking, and it's the same one, which is derived from aspergillus niger. It is used as allowed by the U.S. Food and Drug Administration and the Alcohol and Tobacco Trade Bureau.

So we understand that chitosan is an effective material in winemaking, and the question is, is it effective for use and appropriate for use allowed in organic? We based our decision on the information in the TR. The Handling Subcommittee, we found the chitosan as petitioned does not meet the OFPA criteria.

Our main reason for decision was that we already have a material listed, sulfur dioxide, as an alternative. But additionally, the subcommittee found that the TR clearly lists that the chitosan from the aspergillus niger is also synthetic.

A previous petition focused on the crustacean extraction methods for chitosan, and it was cited that they used harsh chemicals, and were previously not allowed. And

while the fungi source is a natural source that contains chiton, the manufacturing methods still rely on the chemical deacetylation of the chiton, and thus the material as commercially produced is synthetic according to the decision tree.

So there is future potential for this to be a non-synthetic in the future using enzymatic or other non-chemical methods, but these are not commercially available at this time. So the synthetic chitosan is not essential to organic production because of the sulfur dioxide use.

We had many comments on this, at least five, and all of them were concluding that they agree with the recommendation from the Board. There's not a case to replace the sulfur dioxide fully with chitosan, so it's not a complete replacement and therefore is not a solution to this.

So I wanted to open this up for discussion, questions, comments.

Allison?

CHAIR JOHNSON: Thanks, Andrea, for your work on this one. This is a brand new Board member who got thrown into this kind of complex petition, and you handled it beautifully. So, well done.

And I just want to underscore that I'd really like to see growth in the organic wine sector. There are all

these great producers out there producing grapes organically, and consumers would like to buy them. So if there was a potential to have more wines that were labeled organic because they didn't use SO2 and they used chitosan, that sounds like a great opportunity, but we didn't see that coming in in comments.

So just a call out to the community. If there is an interest and need for this material, I think we'd be open to looking at more information to support that. But without much in the record to support necessity, it's very hard for us to approve a new material, especially when it did come out as a synthetic. So just to underscore that point, maybe there's potential in the future, but at this time, we couldn't justify passing the necessity point.

SECRETARY HATZIYANNIS: Thank you, Allison.

Any other questions or comment on the wine petition for chitosan?

Nate?

BD. MEM. LEWIS: Okay. Yeah, I just want to acknowledge that the Crops Subcommittee has a petition for chitosan as a pesticide product, and that the decision here today doesn't necessarily impact that decision in the future as the Handling materials have a somewhat different set of National List criteria by which we evaluate whether or not they should be added to the National List.

So we'll be conducting a separate independent review of that separate chitosan petition, and we heard from the petitioner in public comments related to that. But we'll be doing that in Crops over this next semester, and we'll be seeing a proposal in the fall related to that. But the same material, different use, different production method. So just want to add that for the record.

SECRETARY HATZIYANNIS: Thank you, Nate. I was also going to clarify that they were separate petitions. This was a specific petition for the use of winemaking in the Handling Committee, and the other one is for pesticide application in Crops.

Any other questions or comments on the chitosan petition before we vote?

(No response.)

SECRETARY HATZIYANNIS: No.

CHAIR JOHNSON: All right. So we will begin with the motion to classify chitosan, as petitioned, as synthetic. And I'll just note that "as petitioned" language is specific to the processes outlined in this petition that we received, without bearing judgment on other forms that may be out there.

Motion by Andrea, seconded by Allison, and this worked out that you all are starting your items with a vote today.

So, Andrea.

SECRETARY HATZIYANNIS: Yes.

CHAIR JOHNSON: Amanda.

VICE CHAIR FELDER: Yes.

CHAIR JOHNSON: Dilip.

BD. MEM. NANDWANI: Yes.

CHAIR JOHNSON: Franklin.

BD. MEM. QUARCOO: Yes.

CHAIR JOHNSON: Corie.

BD. MEM. PIERCE: Yes.

CHAIR JOHNSON: Kathryn.

BD. MEM. DESCHENES: Yes.

CHAIR JOHNSON: Cat.

BD. MEM. MCCLUSKEY: Yes.

CHAIR JOHNSON: Javier.

BD. MEM. ZAMORA: Yes.

CHAIR JOHNSON: Nate.

BD. MEM. LEWIS: Yes.

CHAIR JOHNSON: And the Chair votes yes.

SECRETARY HATZIYANNIS: We have 10 yes, 0 no, 0 abstain, 0 recuse, and 0 absent. Motion passes.

CHAIR JOHNSON: Great. Moving on to the motion to add chitosan as petitioned to 205.605(b). Motion by Andrea, seconded by Amanda. This vote will start with Amanda.

VICE CHAIR FELDER: No.

CHAIR JOHNSON: Dilip.
BD. MEM. NANDWANI: No.
CHAIR JOHNSON: Franklin.
BD. MEM. QUARCOO: No.
CHAIR JOHNSON: Corie.
BD. MEM. PIERCE: No.
CHAIR JOHNSON: Kathryn.
BD. MEM. DESCHENES: No.
CHAIR JOHNSON: Cat.
BD. MEM. MCCLUSKEY: No.
CHAIR JOHNSON: Javier.
BD. MEM. ZAMORA: No.
CHAIR JOHNSON: Nate.
BD. MEM. LEWIS: No.
CHAIR JOHNSON: Andrea.
SECRETARY HATZIYANNIS: No.
CHAIR JOHNSON: And the Chair votes no.
SECRETARY HATZIYANNIS: All right. We have 10 no, 0 yes, 0 abstain, 0 recuse, 0 absent. Motion fails.
Excellent. Thank you all for the discussion on the chitosan. We'll move on to the next order of business for the Handling Committee which is the sodium bicarbonate reclassification proposal. And I'd like to give a shout out to Kyla because she did the work on this, and I'm just shepherding it through to the end of the process.

This came about with the Handling Subcommittee requesting the reclassification of sodium bicarbonate, it was a work agenda as a review of its 2025 Technical Report during the Sunset Review. There was old information, the last Technical Report was from 1995, and it raised concerns during the Sunset Review. So the Handling Committee proposes to update the regulations to clarify the classification of the different types of sodium bicarbonate based on their source and their process.

So I wanted to note, too, that the 1995 Technical Review only discussed two of the manufacturing processes, and neither of them were the direct method from the nahcolite, and based on that recommendation, sodium bicarbonate was listed as non-synthetic. But many certifiers and material review organizations consider the sodium bicarbonate from trona ore as non-synthetic, and sodium bicarbonate from the Solvay process as synthetic.

So during the discussion, we talked about the trona ore and Solvay process, as well as how it differs from the nahcolite deposit process. The trona ore and the Solvay process both involve chemicals and need to be classified as synthetic. There are chemicals used in the process to react the product to get the final sodium bicarbonate. Whereas the nahcolite process involves mining and using pressurized water to get the sodium bicarbonate pumping from the wells,

so it's a more natural process.

So both of these were considered in discussion in the Board, and two options were considered. Keeping the non-synthetic listing only, and this would be in the spirit of organic but significantly limit the allowed sodium bicarbonate as there is a limited source and amount of this process. So we propose the second option to add a listing for synthetic sodium bicarbonate produced by trona ore processing only, and this would align with the status quo of the certification decisions, and prohibit synthetic sodium bicarbonate produced using the Solvay process.

So the summary of our proposal is that we will have three different motions. We want to classify the sodium bicarbonate extracted from the nahcolite deposit as a non-synthetic. Additionally, we would like to classify the sodium bicarbonate produced from sodium carbonate, either the Solvay or the trona ore process, as a synthetic and allowed for use.

I want to open the floor for any questions, comments about the different types of sodium bicarbonate and the classification that we are proposing.

Allison.

CHAIR JOHNSON: I just want to note Jenny's comment earlier about annotations is giving me a little bit of pause in looking at this again. This is a funny material

in that, when we were doing a sunset efficiency, we were using baking soda as the example of the quintessential simple material. And then Kyla said, guys, I think we have a little more complication here. And we did really a deep dive into production, and so I think this gets us to a correct listing about what's being used, allows people to continue to access baking soda.

But I'm holding in mind that I hope it doesn't create more work that is not driving toward a tangible benefit. So I think we should go ahead with it, but keep an eye on it, and if this goes forward into rulemaking, and certifiers have observations about what it might do to their review process and all that, speak up.

SECRETARY HATZIYANNIS: Thank you, Allison.

Any other questions or comments or discussion about the sodium bicarbonate classification before we vote?

DR. TUCKER: Can I just ask a practical question? And this may have come up in public comments, I don't know. Do we know that buyers of sodium bicarbonate know which version they're buying? Is that a known characteristic?

SECRETARY HATZIYANNIS: It did come up in public comments, and it is a known characteristic, but more they know the source of their product.

DR. TUCKER: Okay. So this is something that could, theoretically, be implemented actually.

SECRETARY HATZIYANNIS: The bicarbonate manufacturers understand this process and where it's coming from.

DR. TUCKER: Okay. Thanks.

SECRETARY HATZIYANNIS: Amanda?

VICE CHAIR FELDER: Yeah. I think this is a simple -- of just adding to the affidavit list that we already get from supply chain of how is this made, and does it -- and it's a quick checkbox. And I think this is course correcting what's already in use. And for clarity across certifiers of some saying this is in use, how can we -- do we gauge more or less? It's maybe not as clear for enforcement.

So it's consistent now across industry of this is allowed and this is absolutely not allowed, and just clarifying that from a certifier implementation standpoint. But as somebody who goes through inspections, I don't think it's anything -- any extra workload, and completely verifiable at inspection.

SECRETARY HATZIYANNIS: Thanks Amanda. And yes, just wanted to underscore that point as well. This came up because it was a request to clarify something they felt was an error previously. So the previous classification on sodium bicarbonate was done so long ago that it really needed to be revisited and updated to be in line with how

we're approaching the substances now.

Nate.

BD. MEM. LEWIS: Yeah, and I think it is just sort of a consequence of the organization we have on the National List, right? We have 605(a) and (b) divided by synthetic and non-synthetic, and there's been lingering questions in my mind as to why we even care, but we do apparently, or that's how we've organized the list and it should be accurate.

DR. TUCKER: Someone cared at some point in time.

BD. MEM. LEWIS: So we live within a context, and the synthetic and non-synthetic decision making process is fundamental. And so respecting that I think ultimately leads to perhaps some unwelcome but necessary work to make sure those lists remain accurate. So anyway, just offer that up.

SECRETARY HATZIYANNIS: Kathryn.

BD. MEM. DESCHENES: It sounded like, in public comment, that certifiers were already excluding Solvay-processed sodium bicarbonate. But I don't know, Andrea, if you had more to add there.

SECRETARY HATZIYANNIS: Thank you, Kathryn. Yes, we saw overwhelming support for this in public comment. It does seem like this is something that's already happening and being looked for, and this is just kind of codifying it

in the language of the regulations.

Any other questions about the sodium bicarbonate classification?

(No response.)

I think we're ready for vote.

CHAIR JOHNSON: All right. Just to underscore that not even baking soda is simple, we have three votes on this. First, we have a motion to classify sodium bicarbonate extracted from nahcolite deposits as non-synthetic. This was motioned by Kyla, seconded by Andrea.

And we'll start the voting with Dilip.

BD. MEM. NANDWANI: Yes.

CHAIR JOHNSON: Franklin.

BD. MEM. QUARCOO: Yes.

CHAIR JOHNSON: Corie.

BD. MEM. PIERCE: Yes.

CHAIR JOHNSON: Kathryn.

BD. MEM. DESCHENES: Yes.

CHAIR JOHNSON: Cat.

BD. MEM. MCCLUSKEY: Yes.

CHAIR JOHNSON: Javier.

BD. MEM. ZAMORA: Yes.

CHAIR JOHNSON: Nate.

BD. MEM. LEWIS: Yes.

CHAIR JOHNSON: Andrea.

SECRETARY HATZIYANNIS: Yes.
CHAIR JOHNSON: Amanda.
VICE CHAIR FELDER: Yes.
CHAIR JOHNSON: And the Chair votes Yes.
SECRETARY HATZIYANNIS: 10 yes, 0 no, 0 abstain, 0 recuse, and 0 absent. Motion passes.
CHAIR JOHNSON: All right. Next is a motion to classify sodium bicarbonate produced from sodium carbonate, e.g. Solvay and trona ore, as synthetic. This was moved by Kyla, seconded by Amanda.
And the voting will start with Franklin.
BD. MEM. QUARCOO: Yes.
CHAIR JOHNSON: Corie.
BD. MEM. PIERCE: Yes.
CHAIR JOHNSON: Kathryn.
BD. MEM. DESCHENES: Yes.
CHAIR JOHNSON: Cat.
BD. MEM. MCCLUSKEY: Yes.
CHAIR JOHNSON: Javier.
BD. MEM. ZAMORA: Yes.
CHAIR JOHNSON: Nate.
BD. MEM. LEWIS: Yes.
CHAIR JOHNSON: Andrea.
SECRETARY HATZIYANNIS: Yes.
CHAIR JOHNSON: Amanda.

VICE CHAIR FELDER: Yes.
CHAIR JOHNSON: Dilip.
BD. MEM. NANDWANI: Yes.
CHAIR JOHNSON: And the Chair votes yes.
SECRETARY HATZIYANNIS: We have 10 yes, 0 abstain, 0 recuse, 0 absent. Motion passes.
CHAIR JOHNSON: Great. Thank you.
Okay. And then finally the motion to add synthetic sodium bicarbonate produced via trona ore processing only to 205.605(b), motion by Kyla, seconded by Andrea.
And the voting will start with Corie.
BD. MEM. PIERCE: Yes.
CHAIR JOHNSON: Kathryn.
BD. MEM. DESCHENES: Yes.
CHAIR JOHNSON: Cat.
BD. MEM. MCCLUSKEY: Yes.
CHAIR JOHNSON: Javier.
BD. MEM. ZAMORA: Yes.
CHAIR JOHNSON: Nate.
BD. MEM. LEWIS: Yes.
CHAIR JOHNSON: Andrea.
SECRETARY HATZIYANNIS: Yes.
CHAIR JOHNSON: Amanda.
VICE CHAIR FELDER: Yes.

CHAIR JOHNSON: Dilip.
BD. MEM. NANDWANI: Yes.
CHAIR JOHNSON: Franklin.
BD. MEM. QUARCOO: Yes.
CHAIR JOHNSON: And the Chair votes yes.
SECRETARY HATZIYANNIS: We have 10 yes, 0 abstain, 0 recuse, and 0 absent. Motion passes.
CHAIR JOHNSON: Thank you, and one more cheer to Kyla out in the audience for all your work to get this done. It was a complicated one. Thank you.
SECRETARY HATZIYANNIS: All right. That concludes our discussion on the sodium bicarbonate reclassification, and we can now move on to our sunset materials.
The first sunset material we have today is agar-agar.
CHAIR JOHNSON: All right. So agar-agar is a mixture of polysaccharides extracted from the cell walls of certain red algae. The main cultivated genus is Gracilaria. That will become slightly important later.
There are a variety of uses. It's a stabilizer, a thickener, a texturizer, an emulsifier, flavor enhancer, many other things, and its unique ability to withstand high temperatures and its neutral taste are particularly important to its necessity in organic.
It's fairly energy and resource intensive to

produce, and the typical process is to go through an alkali process where it's heated in sodium hydroxide solution before extraction, and that causes a chemical change that increases its gel strength. There are other species that have natural processes that can create a similar gel strength, but they're apparently harder to cultivate, and so the quantities aren't likely to displace the Gracilaria that's the dominant form.

There were questions in the past about classification. This is currently classified as a non-synthetic on 605(a), so there was talk of adding it to 605(b) as a synthetic while also retaining the non-synthetic listing. But the decision tree for determining synthetic status hadn't been finalized at that time, so the subcommittee decided to wait on moving forward with that new listing.

We did get a new TR that clarifies that agar-agar that's made with that alkali process is indeed synthetic, and since this is the primary form that's allowed, that's likely being used by a lot of operations that use this material. So now the subcommittee is revisiting this proposal to add a synthetic version to the list to, again, align the regulation with the actual process.

We asked stakeholders in the document whether agar-agar is commonly being used, and if so, what forms. We

had a couple of comments looking at the synthetic versus non-synthetic process and highlighting that there is the non-synthetic process using a couple of forms of algae, and that we should really pay attention to those as an opportunity, and make sure that that is not enough to meet the need, that we would really need the synthetic version if we're going ahead with that.

There were also a couple of comments pointing us to the Fall 2020 recommendation on protecting marine ecosystems from damage associated with harvesting microalgae, and recommending that we align this listing with that recommendation, so we'll make sure to spend some time on that over the summer in getting ready for the Fall.

There were a handful of certifiers who have members that are using agar-agar. It was noted that the ACA Best Practices for Materials Review document lists agar-agar as low risk for verification, which means that it's non-synthetic status doesn't need to be actively confirmed for approval. So it sounds like that is now maybe out of alignment with what's in the TR, but if we did add a synthetic listing, we could go back to not asking about it because either form would be allowed.

We also had quite a few comments supporting relisting. And I'll note that an additive manufacturer noted that it's important also because it can be used in

halal, kosher, and vegan foods since it's from seaweed, so that was an important use.

Any questions or discussion?

(No response.)

CHAIR JOHNSON: All right.

SECRETARY HATZIYANNIS: Thank you, Allison.

We can move on to the next substance, animal enzymes, with Kathryn.

BD. MEM. DESCHENES: All right. Animal enzymes. 205.605(a), animal enzymes. Within this listing, there are a number of substances, so rennet being the most used per public comments, and most used for cheesemaking, so very important. We also asked a lot of stakeholder questions, but received -- so on the feasibility of producing with animal enzymes from organic livestock -- lots of comments about barriers via not having sufficient quantities if we were to do that.

I think there might be a blind spot here, you know, what would it take for us to produce animal enzymes from organic livestock? We didn't receive a ton of answers, more like there would be barriers likely if that were a requirement.

It is permitted in other standards with some nuance. So, obviously, not all these enzymes are listed in every international organic standard. Human health effects

do not appear to be high.

And then in the discussion of alternatives, some folks are using microbial fermentation-based alternatives, but these are seen as a tool that is necessary for certain types of cheese production. So more unique or European-based cheeses, some of them require specific animal enzymes.

And the other big comment was about the fact that all of these animal enzymes are listed, but only one of them is primarily used. A couple of certifiers noted use of rennet primarily, but then that they didn't have anyone using catalase, pancreatin, or tricin. So I think that's something we could look into and would want to make sure that public comments -- that the public stakeholders had a chance to verify that these are really not in use.

Questions?

Yes, Nate?

BD. MEM. LEWIS: Yeah. Just to make sure I got it right, we just didn't get comments about like are there processing aids that you need. Like, we just don't know at that point, right?

BD. MEM. DESCHENES: Yeah.

BD. MEM. LEWIS: I mean, clearly we would need a lot of like calf stomachs to start with.

BD. MEM. DESCHENES: Yeah, yes.

BD. MEM. LEWIS: But then, from there to the thing

you put into cheese, we don't quite know if there's like --

BD. MEM. DESCHENES: They're ancillaries, so I think that's part of, you know, they wouldn't likely be certified organic, they'd probably be made with organic. But it was a question that came up in subcommittee, so we thought it was worth asking.

BD. MEM. LEWIS: Yeah, that was fascinating stuff. Yeah, thank you.

BD. MEM. DESCHENES: Yeah.

Allison?

CHAIR JOHNSON: Yeah, building on that, just put a pin in research priorities for next year, let's add this to the Livestock list. Yeah, maybe someone could do it.

SECRETARY HATZIYANNIS: Any other comments or questions on the animal enzymes?

(No response.)

SECRETARY HATZIYANNIS: Thank you, Kathryn.

We can move on to our next substance, calcium sulfate - mined, with Amanda.

VICE CHAIR FELDER: All right. So calcium sulfate - mined, is on 205.605. This could be used for lots of things: yeast and food dough conditioner, firming agent, baking powder anti-caking agent. The key ingredient it is used in is traditional Chinese tofu making. And over the years that this has been reviewed at Sunset, it's been made

loud and clear, there are no substitutes for traditional tofu making for the substance.

This round, we asked are there other things outside of just traditional tofu that this is essential for? And we actually heard back. So outside of just tofu, it's essential for use in tapioca-based syrups and powders for snack bars and other products. And so again, it comes down to balancing texture and cohesive structure.

So it's nice to hear from the public that there's other things besides that that this is actually used for, not just what it might be used for, and that there are calcium salts, but those don't act in the same manner, and hence, why this is needed for that.

And I do think, potentially, knowing that there's other items, and knowing that this is used mostly for a firming agent and for texture, that there's potential innovation for new organic products that this may help in the future. And so if we restrict this with other annotations, then that restricts movement going forward as well.

Questions, comments?

(No response.)

SECRETARY HATZIYANNIS: Yeah, we're good. Thank you, Amanda.

And now we can move on to our next substance,

carrageenan. Back with Kathryn.

BD. MEM. DESCHENES: All right. 205.605(a), carrageenan. Carrageenan is a CB derived hydrocolloid that has been used for decades as a stabilizer and thickener in processed foods. From a use perspective, it's mostly relied upon for texture and stability in dairy products, beverages, dairy alternatives, and it provides this consistent mouthfeel and suspension that are important to keep the texture over shelf life. And it is similar to agar-agar in that it's derived from seaweed, so a vegan alternative to gelatin, specifically.

On this one, we received a lot of comments, some regarding the human health and environmental considerations, and differing interpretations of the underlying science. So we did get a new TR, and in that TR, there were some health effects that were noted, including digestive fate, toxicology, impurities, inflammation and ulceration, metabolic effects. And the comments echoed these concerns.

There's also a bit of history in terms of carrageenan with the NOSB. So in 2016, the Board voted 10-3 to remove and delist carrageenan, and then ultimately it was not removed from the list. So in that, the stakeholder feedback stated we need to relook at this very closely. Many stakeholders noted that they opposed relisting due to the health research, due to declining use, while others

supported relisting due to the characteristics of carrageenan that are only provided by in certain uses, including beer, dairy, plant-based alternatives, and animal protein products.

I'll turn it over for thoughts.

Allison.

CHAIR JOHNSON: Yeah, thank you, Kathryn. It's been great to have really deep handling and food science expertise on the Board this year. So we talked in subcommittee a lot about the functionality of this ingredient and, as you said, we have a lot of very strong opposition to keeping this material on the National List.

So in those situations, I always find myself thinking through this balance of one ingredient or processing aid, versus all of the synthetic inputs that would go into a conventional product if we stopped having certain products be available as organic because of the lack of a particular ingredient or functionality.

So I'm going to continue musing on that balance as we head into voting on this in the fall. But it's really helpful to get so much feedback from the stakeholders, and I appreciate everyone's engagement on this one.

BD. MEM. DESCHENES: Other comments?

Andrea.

SECRETARY HATZIYANNIS: Did we get any public

comments about the different types or forms or --

BD. MEM. DESCHENES: No, we didn't receive a lot of feedback there. I think it's something we can continue to engage with stakeholders on, but not a lot of feedback.

SECRETARY HATZIYANNIS: Yeah, because from my understanding of this ingredient, although there are other hydrocolloids, this provides a unique functionality that the others do not, and hence the need for it in the formulations.

BD. MEM. DESCHENES: Yeah, do you, from your perspective, have a use that you think carrageenan is like top-notch for?

SECRETARY HATZIYANNIS: It provides stabilization during -- in a wide variety of temperatures, and so it can withstand heat processing but also frozen temperatures. And I think that's one of its unique characteristics so that it can be utilized during, specifically, pasteurization but then also in frozen products as well, or chilled.

BD. MEM. DESCHENES: Thank you.

SECRETARY HATZIYANNIS: You're welcome.

BD. MEM. DESCHENES: Other thoughts?

(No response.)

BD. MEM. DESCHENES: I also, from the stakeholder perspective, appreciate all of the thoughtful commenting. So we'll continue to dig in and be deliberative on this one.

SECRETARY HATZIYANNIS: Any other comments on carrageenan?

(No response.)

SECRETARY HATZIYANNIS: I know there was a lot of public comments on this. Thank you, Kathryn, for reviewing all of them, shepherding the conversation.

The next material we have to review is mine, glucono delta-lactone. So this material is primarily used in the production of tofu, particularly silken tofu. And like the one we had discussed previous, it was one of the only materials that can produce the physical and sensory components found in that type of tofu. So it's served mainly as a coagulant, and it's also used in other applications as a curing or pickling agent, a leavening agent for pH control, and a sequestrant. So it's used in feta cheese in place of lactic acid bacteria, and other applications similar.

GDL is produced by crystallization from an aqueous source of gluconic acid, and there are a variety of ways in which the gluconic acid can be produced. The most common is called the Blom process, where it's produced by fermentation. Sodium hydroxide or calcium carbonate is added to the fermentation process to produce the salt, then it's evaporated and crystallized.

One thing to note about the GDL is that, in its

usage, it is 99% pure and has no ancillary substances present, so it's often sold in formulation with other additives to help it be applied.

We had many public comments on this, and they were split. A lot of them were referring back to the 2016 Technical Report that states there are many methods of gluconic acid synthesis other than bromine water because, we would like to note, that it is listed on the list but with an annotation that is the production by the oxidation of delta glucose with bromine water is prohibited. And our stakeholders were urging us to relook at the different types of chemical methods and maybe update this annotation in the future to include the other types of synthetics or removal of this to have all of it listed as synthetic.

So we can certainly take up that review and discussion in the subcommittee, but overwhelmingly there was support to relist this. There are limited use cases where it's used. But where it's used, it's very important for this application. There are no other materials that can be substituted easily.

So we did ask some stakeholder questions similar to the ones we've been asking about. Gluconic delta-lactone, how widespread is it used in organics, and are there any other types of applications that this is used in that we're missing, and are there any alternatives to the

GDL that have emerged in recent years that could be a replacement?

So I'm going to open it to the Board for any comments or questions on the GDL.

Nate.

BD. MEM. LEWIS: Yeah, did you get any feedback on that last question about silken tofu elsewhere that may be produced without it? It seems a little interesting.

SECRETARY HATZIYANNIS: No, we did not get a specific comment on that, but I would urge the stakeholders that if there are other methods to be producing silken tofu that don't use GDL, to please comment.

Any other questions or comments?

(No response.)

SECRETARY HATZIYANNIS: Okay. we can move on to the next substance, tartaric acid made from grape wine.

Go back to Allison.

CHAIR JOHNSON: Thank you.

All right. This is another non-synthetic on 605(a). There are a few sources of tartaric acid, but for organic purposes it's only allowed if it's made from grape wine, and it can also be produced synthetically, but the synthetic version was removed from the National List in 2013.

Tartaric acid is used for quite a few things in

food processing, including pH control, as a preservative, an emulsifier, a flavor, a stabilizer, anti-caking, and a firming agent, and it's used in a wide range of products. One major use is in baking, especially for specific types of rising. Let us give thanks for the snickerdoodle and hope there are more organic snickerdoodles in our future. And it's also used in winemaking for acidity.

Non-synthetic tartaric acid is made from winemaking waste, so it's the leftover pumice as well as grapestock, seeds, and vines. It seems to have pretty minimal health and environmental issues associated with it, and it is particular in its flavor and function capabilities so there don't seem to be adequate alternatives that could cover all of those uses.

It doesn't seem very feasible to significantly increase the supply of organic tartaric acid because, to qualify for an organic claim, it could only come from winemaking that did not use added sulfur dioxide or it would have to be extracted before the sulfur dioxide was added. And so because that category of organic wine remains quite small, we don't think it's likely that there would be a lot of organic tartaric acid coming on the market.

But we did ask stakeholders questions about that to dig into it a little bit more and see if there's anything that we're missing there. So we asked whether organic

tartaric acid is available in significant quantities, if tartrate salts could be removed before the addition of sulfur dioxide, or if there are other barriers that could be lowered.

We had a number of commenters saying that we should really consider both the pesticides used in non-organic production and look into the availability of organic options, which is what we're hoping to do here. We had one certifier who has quite a few members using it. I think they certify quite a few wineries, so it's likely that that's the source. They shared that their understanding is that the tartrate salts are formed during storage after fermentation is complete, so that would be after the addition of sulfur dioxide, and it wouldn't be possible to remove it before the sulfur dioxide addition.

There were a few certifiers who don't have clients using it, a number of comments that were generally supportive of relisting it as an option, and that's about all that we got.

Any questions or discussion?

(No response.)

SECRETARY HATZIYANNIS: All right. No questions. Thank you, Allison.

Next subject is cellulose, so I'll move back to Amanda.

VICE CHAIR FELDER: All right. So cellulose has a lovely annotation of for use in regenerative casings, powdered cellulose as an anti-caking agent, non-chlorine bleached, and a filtering aid. Microcrystalline cellulose is prohibited.

So under that restriction, this is mainly used in casings for sausages, hot dogs, mainly found in shredded cheese, also used for feta cheese to keep it crumbly, and filtering for juices, and we also heard from one certifier they also use it as a filtering aid for maple syrup and other oils as well.

So a lot of public comment about, you know, this is typically made from wood pulp, which is impactful for the environment because we're cutting down trees to make wood pulp to then add to food additives, but there seems to be an essentiality around cheese use specifically, and for anti-caking.

And while there are alternatives, and we had a commenter that said they're trialing organic potato starch and tapioca starch to see if that's a suitable alternative, I do know that a lot of those are coming from overseas and so there is sometimes a supply hiccup. I experienced this in my supply chain during COVID where that didn't become available, and usage of cellulose increased, and it's just not 100% comparable for all uses across the Board. So there

is some essentiality needed, but industry is still trying to find alternatives, which is always promising.

We had questions around ancillary use. We had some good comments of, you know, it sounds like the majority of cellulose that is being used doesn't have ancillary substances. There were a couple of feedback that there is, and they did disclose what those are, so we'll dig a little deeper in that in subcommittee for the fall, so whether or not that's something that we need to call out and address of ancillary substances or not. But it sounds like it's not -- it's one of those things where it's kind of already course corrected that I don't think we need to go down the annotation rabbit hole of clarifying what's already in use in industry. So yeah, I'll leave it at that.

If there's any questions or comments?

Yeah, Allison.

CHAIR JOHNSON: Just an observation about the importance of the availability of organic shredded cheese. I'm not typically a consumer of it myself, but I had an acquaintance eat -- a child eat shredded non-organic cheese that typically has natamycin added, and had a very severe reaction to it. So I'm always really grateful to see organic shredded cheese as an option on the shelf to know that that ingredient won't be in there.

So anything that keeps it in there and keeps it

safer for our consumers and our kids is, I think, really important.

VICE CHAIR FELDER: Yeah. Thank you.

I think that's it. I'll hand it back to you, Andrea.

SECRETARY HATZIYANNIS: Thanks, Amanda.

The next substance is calcium hypochlorite. We'll go back to Kathryn.

BD. MEM. DESCHENES: As Franklin has covered the chlorine materials twice, I'm not going to provide a lengthy overview. These are the same materials that are listed in the other scopes, and they are often used in similar ways, so for disinfecting and sanitizing, in this case, food contact surfaces, equipment, and facilities.

As Franklin also highlighted, there are some human health concerns with the uses of these materials, but the benefit and the need likely outweighs removal from the list. There are some alternatives, but we need tools in the toolbox for things like this, especially food safety, and there are also PMO, so dairy operations also have specific needs.

Comments were supportive of relisting mostly, and in this scope, and while there were a few oppositions noting the human health concerns, you know, with use of these, there's also severe respiratory and eye irritant issues.

But as I mentioned, I think the benefit outweighs the risk.

Questions?

SECRETARY HATZIYANNIS: Yeah, I think we've discussed these chlorine materials. I'm sorry, I should have introduced all four of them. So we talked about the calcium hypochlorite, chlorine dioxide, and hypochlorous acid, and sodium hypochlorite.

Any other questions?

(No response.)

SECRETARY HATZIYANNIS: Okay. Thank you, Kathryn.

And now we can move back to Amanda with potassium hydroxide.

VICE CHAIR FELDER: All right. So potassium hydroxide is 605(b). It has an annotation of prohibited for use in lye peeling of fruits and vegetables, except when used for peeling peaches.

So going through the history of this product and public comment, it seems pretty essential especially in frozen peach processing where mechanical methods just aren't sufficient. And so, typically, you could use steam as an alternative to this to peel peaches. For those of you who eat peaches, not everybody likes the skin.

And so when you're freezing, you don't want super high temperatures and then going into a flash freeze. So this seems to be, for that industry, definitely essential.

And so we had public comments of, you know, is it essential for things outside of that?

And so, should we add more limits and annotations? And I feel like that's now the theme is annotations, and now we have cautionary tales. But so, obviously, something for us to look into, and that's why we've asked what other processes is this used for and is it functional? And again, digging into for peach peeling, are the alternatives sufficient? And it seems like it's not.

There is use for potassium hydroxide as a boiler chemical, defoamer, egg wash, antimicrobial process for other products also. So we'd still like to hear back what other uses there are in practical use and not just our theoretical this may or may not be used. So I think we'll keep asking for that just because the more we know, the more we can evaluate its actual essentiality. But it does seem that the allowance for this, for lye peeling of peaches, is still essential.

All right. Comments, questions?

(No response.)

SECRETARY HATZIYANNIS: Thank you, Amanda.

We'll move on to our next substance, which is potassium lactate. Potassium lactate is also listed on the 205-605(b) list, and it's used as a antimicrobial agent and pH regulator, mainly in processed meats. And this

ingredient is used in combination with sodium lactate, which shows up later. So there is a lot of stakeholder questions asking if we need both of them on the list, but we hear from our stakeholders that both are being used, and they're used in conjunction with each other.

So potassium lactate is generally produced from natural fermentation and then reacted with potassium hydroxide, and lactic acid is produced from the fermentation of the natural food source like dextrose or sucrose or starch. This ingredient has been widely used in the meat industry for a long time, and there are other types of ingredients that can lower the pH, but none are as effective as the lactates are. And really it's used in the prevention and management of listeria for processed meat products in the deli.

There were not a lot of comments about this. It was mainly pro in use of relisting, but there were some con comments -- and they're worth noting -- that this ingredient is a synthetic chemical that's used for preservative. And there were some stakeholders that took exception that this is being allowed for use in organic meats because it is not allowed for use in natural meats per the USDA.

Any other questions about the potassium lactate?

(No response.)

SECRETARY HATZIYANNIS: Okay. We can move on to

our next substance, which is silicon dioxide, with Allison.

CHAIR JOHNSON: Thank you. And thanks, Andrea, for picking up when I failed to advance the slides.

All right. So silicon dioxide, this is an allowed synthetic on 605(b), permitted as a defoamer, and allowed for other uses when organic rice hulls are not commercially available. Continuing the conversation around annotations that are maybe not quite serving us.

So synthetic amorphous silica, SAS, is the most common version. Diatomaceous earth is another non-synthetic version that has a separate listing, and then crystalline silica is another non-synthetic version but it's not used in food. The SAS use includes as a flow agent, an anti-caking agent, a stabilizer, and a defoamer. There are two main processes for making it, a thermal process and a wet process, and both are synthetic.

There don't seem to be significant health problems with the SAS. Crystalline silica can cause lung problems when it's inhaled, but again, that version is not used in food. The mining for silica sand, which is a precursor to SAS, is pretty harmful to the environment, but the amount that's used for SAS is pretty small relative to other uses, so organic is probably not a major driver of that impact. And chlorine and carbon black can also be used in production, and they have their own environmental impacts

related to energy and petrochemicals. So those are our considerations.

The rice hulls annotation was added in response to a petition to remove silicon dioxide because there was indication that an alternative was available, and so this was kind of a compromise to say look at the organic rice hulls as an option before you use this material. However, public comments at the last Sunset Review indicated that that hasn't panned out, at least fully, as an alternative.

The petition had proposed that this was just a one-to-one substitution. But the form of rice hull has less-concentrated components than the pure silicon dioxide, and so there's a bulk issue and some functionality issues, apparently.

The NOSB's recommendation for the annotation was actually broader. It was requiring an assessment that there are no non-synthetic alternatives. And the rule was narrowed by the NOP to just the rice hulls alternative because that was the origin of this language, and the justification there was that it would be overly burdensome to have this big alternative search if you wanted to use this material. Previous commenters also suggested limiting the application of the annotation to just products that are labeled organic and not made with organic products.

There are some other grain hulls, flours, and

starches that are possible alternatives in addition to the organic rice hulls for certain functionalities, but they probably aren't a full replacement. And there has been some concern that SAS is an engineered nanomaterial. The TR said that there was limited information available to evaluate this, but a couple studies seem to indicate that there are probably very small particles in a SAS formulation, but they're probably not intentionally made that small to have a specific functionality. They're just very small.

So in our questions to stakeholders, we asked for more information about this nanomaterial concern. We asked about potential annotation changes, either to limit this just to SAS to clarify or to adjust that organic versus made with organic requirement for the organic rice hull search, and we also asked for more information about alternatives. A number of commenters pointed to that original recommendation from the NOSB about a broader search for alternatives, and asked us to revisit that.
chlorine and carbon black can also be used in production

There was a bit more information about the nanomaterials concern. Apparently in Europe, titanium dioxide was disallowed because of a nanoparticles concern and health issues, and so there's a potential analogy here, but we still maybe in need of more information about that.

It was noted specifically that the rice hulls are

not a suitable option for anti-caking in seasoning blends because of flow and mouthfeel concerns, and that calcium phosphate may be an alternative but that there are also concerns about phosphates in food, so there's a balancing there.

Several certifiers noted that they do have clients using this, and it sounds like in practice at least a number of certifiers are only applying this commercial availability search requirement for products labeled organic and not made with organic already, even though that's not specified. I think that is everything I wanted to highlight from the comments.

So it seems like this annotation is not quite working. It's either too broad or too narrow, maybe both at the same time. And so I think it's positive in that it signals that there are alternatives to this material that are organic, and that's where we want to be driving people. But the implementation of that is not working out as intended, and so I think it's worth giving some thought to whether we want to move toward tweaking this annotation. So we welcome more comments on that in the Fall, and we'll work through that in subcommittee.

SECRETARY HATZIYANNIS: Thank you, Allison.

Any other comments about silicon dioxide?

Kathryn?

BD. MEM. DESCHENES: I was just going to mention that as a defoamer it's also used at very, very low rates, so maybe looking at the annotation and just leaving that portion. But yeah, thank you for your work on that, Allison.

SECRETARY HATZIYANNIS: Okay. And that brings us to our last substance, sodium lactate. Sodium lactate goes hand-in-hand with the potassium lactate, and had very similar comments and questions from the stakeholders as it is a very similar if not the same usage in the industry. Sodium lactate is used also with meat products as an antimicrobial agent, and is produced in the same way as potassium lactate, through a natural fermentation with lactic acid, and then reacted with sodium hydroxide.

Sodium lactate is used for the same application, but potassium lactate is favored in applications where they're looking for low sodium, which has certainly become a trend, especially in processed meat products as they're very high in sodium, so it's an important tool to have both of these in the toolbox.

I don't have so many more comments to say about the sodium lactate than I did about the potassium lactate. We had very similar comments from the stakeholders about renewing this on the list because of its importance in maintaining the bacterial control for the processed meat

products.

Are there any questions or comments about the sodium lactate?

(No response.)

SECRETARY HATZIYANNIS: Okay. Well, that concludes the Handling Committee's Sunset Materials for 2028 with a lot of them. Thank you all the Handling Committee, for all the work you did on the materials.

CHAIR JOHNSON: Thanks, Andrea, for your leadership, and all the members for the hard work on these materials, including past members who contributed to what we presented today.

So that is the conclusion of our substantive agenda. We have some other business to finish up, and it is 11:45. So I would propose we take a 15 minute break and then come back together to wrap for about 45 minutes and then call it a day. Does that sound okay? All right. See you in 15. Thank you.

(Off the record from 11:45 a.m. to 12:00 p.m.)

CHAIR JOHNSON: All right. Welcome back, everyone. We are on to our final stage. We have some administrative items. First up is other business, which is exactly what it sounds like.

Is there some other business you would like to raise? Any lingering items, anything anyone wants to bring

forward to the Board at this point before we close up?

BD. MEM. LEWIS: Yes.

CHAIR JOHNSON: Nate.

BD. MEM. LEWIS: Yeah, I mentioned it a little bit when we were in the research priorities section, but I really would love to spend some time trying to develop a regular cadence for our meetings to get reports and interactions with other parts of the USDA. So I think it'd be fun to just kind of put together the list of folks that we know we want to hear from on a regular basis, and then just sort of build that into the ongoing meeting schedule. I think that those are really informative and really helpful, and I think I could imagine from other parts of the Agency helpful to hear, have a way to interface with the organic industry. So just want to flag that.

CHAIR JOHNSON: Do you think that's something we'd want to do in the Executive Committee meetings, or do you think that lives with a subcommittee? Maybe each subcommittee thinking about speakers we'd want to have, and bringing that to XCOM?

Yeah, I think, yeah, maybe the XCOM owns it but asks for advice from, you know, I can imagine Crops will want to hear from RMA, Risk Management Agency, and National Resource Conservation Service. Handling might want to hear from an other Agency, you know. Anyway, I don't need to

fill in the blanks yet, but let's have XCOM own it but get advice from the rest of the subcommittees.

CHAIR JOHNSON: Great. Yeah. Thank you.

Any other business anyone wants to raise?

(No response.)

CHAIR JOHNSON: All right. Next we're going to preview the work agenda moving forward, so we'll just go by committee and have each subcommittee Chair mention what's going to be on the horizon. So let's start with Crops just previewing what's coming up. Just read what's up there.

BD. MEM. QUARCOO: We have a petition to classify -- two petitions, actually. One to classify chitosan as natural, and then we have another petition from two different organizations to classify chitosan as synthetic and add it to the National List. And then we have some sunset substances that we'll be talking about.

CHAIR JOHNSON: Thank you.

And livestock?

BD. MEM. LEWIS: Yeah, we'll be working on development of a discussion document for integrating livestock into agroforestry crops, and completing the livestock sunset substances this fall.

CHAIR JOHNSON: Great.

Handling?

SECRETARY HATZIYANNIS: Thank you. In Handling we

had two new petitions come in, one for sea salt for use in cosmetics, and one being potassium polyaspartate for use in wine. And we also have a large list of the 2028 Handling sunset substances.

CHAIR JOHNSON: And it sounds like we may have some new petitions on the way as well that haven't made it on the list yet.

Materials?

SECRETARY HATZIYANNIS: And for Materials, we are going to continue our discussion on the excluded method of induced mutagenesis for proposal, and also continue to flesh out our 2027 research priorities.

CHAIR JOHNSON: Great.

And CACS?

BD. MEM. DESCHENES: For CACS, we're going to re-look at residue testing, and then continue our path on consistency in organic seed use.

CHAIR JOHNSON: And finally, PDS.

VICE CHAIR FELDER: While this says none, we are discussing how to -- it sounds like we do nothing. We are discussing accessibility and efficiency, as we discussed earlier today, for future Board members.

CHAIR JOHNSON: Thank you all for your leadership in continuing to move this work forward. I know it's been a lot with a two-thirds-capacity Board, and you all are doing

amazing work, so thank you.

This is just previewing the sunset substances that are on the horizon. I won't read them all, but you can see them here. You also see them posted in our meeting minutes online if you're following along. And there is our beautiful seal.

That takes us on to closing remarks. So this is just a chance, if you have anything you'd like to reflect on from the meeting, wrap us up, motivate us and everyone listening out there to keep doing the good work that you're all doing.

I'll open it up.

Andrea.

SECRETARY HATZIYANNIS: I just wanted to make one comment. This is my second year on the Board, but my first in-person meeting, and I found it extremely valuable to be in-person, to build those relationships with my fellow Board members and the members of the public who came to join us and just engage in meaningful dialogue and conversation. So I know we have some version of this meeting that is virtual, but I don't want to discount the importance of the face-to-face conversations, and being here with all of you has been great.

CHAIR JOHNSON: Javier?

BD. MEM. ZAMORA: Gracias. Yeah, I just, I'm

extremely happy and honored to be part of this with you guys. You guys are incredible individuals. I feel that when we meet in person, I feel that inclusivity, and that's what we need. This Board must have that, and I think keeping that in mind will likely be a Board that will have a lot of impact, like it does in our organic community. And so thanks again, and so happy to see you in person, and muchisimas gracias. Thanks, Alison.

CHAIR JOHNSON: We're really happy to have you back.

It's been great to all be together, and yeah, I think even with a slim down Board, I'm really happy with the work we've been doing this year. We're being honest about what we can take on, doing our best to move things forward, and also really taking the time to be deliberative and not overwhelm anyone, not drive anyone away. We want this process to keep going long into the future, and so I think that's top of mind for this year.

And I really, really want to underscore my appreciation for everyone's flexibility, the ability to predict the cadence of the meetings and the format of the meetings and the content of the meetings has been more challenging than usual, and everyone has handled it with such grace and commitment and flexibility. And that, I think, is emblematic of this community generally, and I'm

really grateful to get to work with all of you here.

Anyone else?

Dilip?

BD. MEM. NANDWANI: Well, this is the in-person meeting we were expecting in fall last year, and we had the reason we couldn't meet. And this is my fifth year in-person meeting. We are meeting in October, like in fall, not sure yet about virtual or in-person. So I take it that way, and I'll take this opportunity actually to just say my thank you to everyone. Thank you to the Board, excellent, excellent Board members. I'd like to thank stakeholders too.

I'm not going, I'm still here in October as I mentioned. But as I said, I'm in-person and like to -- you know, I met a lot of you in-person, and this is an honor, and this is a great privilege that I work with all of you, like work with National Organic Program.

Everyone is excellent, very friendly, and wherever I needed help, actually, you know, I got that. As I mentioned, we've been assigned a mentor when we start, and Mindy, she was very helpful, and I'm grateful for that, and whenever I needed help from stakeholders, talking to them.

Personally, I learned a lot working with the university as teaching organic ag for almost now 25 to 30 years, including sustainable ag and doing research extension

teaching. But this was such a unique experience in my career so far, that interacting with experts, interacting with stakeholders, with industry, and manufacturers, and our fellow Board members.

So thank you, NOP, for the opportunity, and I'll still have my remarks in Fall meeting, but in-person, I wanted to just say a few words. So thank you for the opportunity. Again, I appreciate it.

CHAIR JOHNSON: Thanks, Dilip.

Anyone else want to say anything in closing?

Cat.

BD. MEM. MCCLUSKEY: Yeah, thanks, Alison. I want to echo Andrea's comments of the importance and just the generative conversations and ability to be able to meet in-person. It's been really important as a new Board member, as well, in your same cohort.

And I also want to thank the public for hanging in there with us in all of the disruptions and kind of changes of time scales and things like that for these meetings. It's incredibly important to note, and we heard it in several comments this week, of we are all in it together. And I think that we are all, the Board as well as stakeholders, kind of aiming in the right direction. And I see a lot of cohesion in the community on a whole over my 20 years working in organic seed and organic community on a

whole. I just -- I feel really inspired and like we're in a really good place moving direction, even though there's, you know, disagreements and not everybody's going to get exactly 100% of what they want. But I have a close colleague who always says, like, in true democracy, nobody should get everything they want. Everybody should be a little bit disappointed. And I really see a lot of that, particularly this week, but in my time as a Board member. So thank you.

Kathryn.

BD. MEM. DESCHENES: It's so fun to be together with all of you. And Franklin and I were sitting together last night, and it's just so fun to have so many different expertise, and learn from Cat's seed adventures and, you know, it's just a lot of different people with great expertise. I encourage us to stay curious and to continue moving things forward. So I appreciate all of your time and generosity, also to NOP for time and generosity, but I'm looking forward to continuing this journey and learning as we go.

CHAIR JOHNSON: All right. Last call for final remarks.

Oh, Franklin, go ahead.

BD. MEM. QUARCOO: Yeah, I echo that. It is just nice meeting the new Board members in person. When you see somebody on Zoom, it's somebody behind a screen. But when

you meet in person, and then you actually get to connect it, and you find out a lot of things you will not find out in one hour, two hours meeting over Zoom. So it was great meeting them all and as a viz-a-viz. Yeah, thank you.

CHAIR JOHNSON: I'll always hear our former member Mindy's voice about this being the democracy in action. In talking with a lot of folks who served and participated in these processes in the past, there's a lot of, like, pretty severe trauma. It was nasty for a while. And I have not experienced any of that in my time on the Board. I think we've been very intentional in coming together, being respectful, staying curious, and creating an environment that invites people in, and that's essential if we want to continue to hear from people. So I encourage you all as I cycle off soon and a few of our other outgoing members just to keep that culture going in that direction. I think it's really been at the heart of the success of the Board over the last at least half a decade that I've been here and hopefully on into the future.

I think with that, I'll pass it over to Jenny.

DR. TUCKER: Okay. just a couple of comments here. First, I want to say a huge thank you to this Board. We acknowledge and appreciate the added work that you've had to take on with the five vacancies. The message from the community was very clear about wanting those appointments to

be made.

We'll certainly take that message back to the administration. So I just want to make sure everyone knows we heard it, we got it. We will continue to talk to the Administration about these roles and the importance of it. But in the meantime, I want to thank you for your extra effort.

I also want to thank the NOP Program team. They've really been nonstop since coming back from the shutdown last November. It's been a lot of stuff, and they're doing a great job. There continues to be just a tremendous diversity of work across NOP, and people have flexed really, really well into different roles. So I want to acknowledge that.

I know there's a lot of interest in the Fall meeting, what's going to happen, and some really good comments here. We agree with the importance of in-person connection, and I would like to make sure that we continue the practice of having in-person meetings. This is a long time to go without an in-person meeting. We'd like to continue in-person meetings.

We do think that can be achieved with one meeting per year in person and one virtual. And so I would like us to get into a more regular cadence that respects the benefits of the interpersonal interaction but also respects

the benefits of having a level playing field online.

Interesting for folks who are online right now, we've been hovering at about 20 people today. There are 70 online. And so, you know, a lot of people are voting with their feet, so to speak.

And it's expensive for folks to get here. And so I do think that if we can get into a cadence of back and forth, back and forth, between virtual and face-to-face, it might not always work out that way but we've been talking about this actually for a number of years. So this is not due to anything from the last year. It is something we've been talking about for a while.

So with that, I think we are planning to have the Fall meeting virtually. The beginning of the fiscal year is just always a very, very challenging time.

So we have not yet set dates for the Fall meeting. We will do that in collaboration with this group. I understand that the Fall meeting virtually and Spring meeting virtually, which is which, we might have to experiment a little bit depending on kind of how this goes. So we're open to learning, depending on kind of the mix on the Board and just bigger events.

So with that, so plan on meeting virtually for the Fall meeting. And again, big, huge thanks to the Board and the Program team. The collaboration is really clear, and

the resilience is really clear. So thank you very, very much, and safe travels to everybody. Thank you for being here.

And I think you can use your magic gavel now. I don't think you've used that. We packed it and everything. You've got to, you know, make the most of this. Allison, thank you. You did a beautiful job.

CHAIR JOHNSON: Thank you. Same to you, Jenny. And we appreciate the transparency around what to expect in the coming months, and I also hope we can stay in dialogue about it.

So with that, I get to say I hereby adjourn the spring 2026 National Organic Standards Board meeting.

(Whereupon, at 12:18 p.m., the meeting in the above-entitled matter was closed.)

CERTIFICATION

This is to certify that the attached proceeding before the:

NATIONAL ORGANIC STANDARDS BOARD

IN THE MATTER OF: SPRING 2026 NOSB BUSINESS MEETING DAY 3

PLACE: Embassy Suites by Hilton, Omaha, NE

DATE: May 14, 2026

was held according to the record, and that this is the original, complete, true and accurate transcript which has been compared to the recording accomplished at the hearing.

Elaine M. LaRosee

_____

Elaine M. LaRosee, CDLR

Official Reporter

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