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2	U.S. ENVIRONMENTAL PROTECTION AGENCY
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4	PESTICIDE PROGRAM DIALOGUE COMMITTEE MEETING
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7	
8	Wednesday, May 12, 2021
9	11:00 a.m.
10	DAY ONE
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EPA Pesticide Program Dialogue

5/12/2021

1	PESTICIDE PROGRAM D	IALOGUE COMMITTEE ROSTER
2	M	ay 2021
3	NAME	AFFILIATION
4	User/Grower Groups/ Farm	er Representatives
5	Amy Asmus	Weed Science Society of
6		America
7	Jim Fredericks	National Pest Management
8		Association
9	Mark Johnson	Golf Course Superintendents
10		Association of America
11	Patrick Johnson	National Cotton Council
12	Dominic LaJoie	National Potato Council
13	Lauren Lurkins	Illinois Farm Bureau
14	Tim Lust	National Sorghum Producers
15	Gary Prescher	National Corn Growers
16		Association
17	Caleb Ragland	National Soybean Association
18	Damon Reabe	National Agricultural
19		Aviation Association
20	Tim Tucker	American Beekeeping
21		Federation
22		American Honey Producers
23		Association
24	John Wise	IR-4 Project
25		

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1	NAME	AFFILIATION
2	Environmental/ Public Int	terest/ Animal Welfare Groups
3	Lori Ann Burd	Center for Biological
4		Diversity
5	Gina Hilton	PETA Science Consortium
6	David Shaw	Mississippi State University
7	Christina Stucker-Gassi	Northwest Center for
8		Alternatives to Pesticides
9	Edward Wakem	American Veterinary Medical
10		Association
11		
12	Farmworker Representative	es
13	Iris Figueroa	Farmworker Justice
14	Amy Liebman	Migrant Clinicians Network
15	Mily Treviño-Sauceda	Alianza Nacional de
16		Campesinas, Inc.
17		
18	Public Health Representat	cives
19	Joseph Grzywacz	Department of Family and
20		Child Sciences Florida State
21		University
22	Aaron Lloyd	Lee County Mosquito Control
23		District
24	Daniel Markowski	Vector Disease Control
25		International

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1	NAME	AFFILIATION
2	Chemical and Biopesticid	es Industry/Trade
3	Associations	
4	Manojit Basu	CropLife America
5	Steven Bennett	Household and Commercial
6		Products Association
7	Gary Halvorson	Council of Producers and
8		Distributors of
9		Agrotechnology
10	Komal Jain	Center for Biocide
11		Chemistries
12		American Chemistry Council
13	Karen Reardon	RISE, Responsible Industry
14		for a Sound Environment
15	Charlotte Sanson	ADAMA
16	Nina Wilson	Biological Products Industry
17		Alliance
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1	NAME	AFFILIATION
2	State/Local/Tribal Govern	nment
3	Ruben Arroyo	Riverside County
4		Department of Agriculture
5		and Measurements Standards
6	Carol Black	American Association of
7		Pesticide Safety Educators
8	Jasmine Brown	Tribal Pesticide Program
9		Council
10	Liza Fleeson Trossbach	Association of American
11		Pesticide Control Officials
12		
13	Federal Agencies	
14	Walter Alarcon	National Institute for
15		Occupational Safety and
16		Health Centers for Disease
17		Control and Prevention
18	Douglas Burkett	Armed Forces Pest Management
19		Board
20	Ed Messina (Chair)	Office of Pesticide Programs
21		Environmental Protection
22		Agency
23	Sheryl Kunickis	Office of Pest Management
24		Policy
25		US Department of Agriculture

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1	NAME	AFFILIATION
2	Charlotte Liang	Center for Food Safety and
3		Applied Nutrition
4		US Food and Drug
5		Administration
6	Cathy Tortorici	Endangered Species Act
7		Interagency Cooperation
8		Division
9		National Oceanic and
10		Atmospheric Agency
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1	PROCEEDINGS
2	DAY ONE - MAY 12, 2021
3	WELCOME AND OPENING REMARKS
4	MR. MESSINA: Well, welcome everyone and
5	good morning. We're here for our semi-annual spring
6	meeting of the Pesticide Program Dialogue Committee.
7	Thank you for joining us today. Stakeholders on the
8	PPDC and its working groups have provided great
9	information recommendations to EPA since 1995, and
10	will continue to do so during this meeting today and
11	tomorrow. So we really appreciate a lively
12	discussion, your input.
13	And a special shout-out to all of the
14	workgroup chairs, who have been doing a lot of work
15	in the background to make this meeting a success, a
16	lot of the prep work that went into that. I think
17	the agenda that you're going to see today, as we roll
18	through it, will really provide useful information
19	for PPDC members and eventually for EPA. So thank
20	you for your participation today and for all the
21	workgroup members.
22	We are recording this session. That's just
23	for transcript purposes. As you know, after we do
24	these events, we publish a transcript online where
25	folks can see exactly what was discussed at this

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- 1 public meeting. And so welcome to members of the
- 2 public who have also dialed in.
- 3 And a lot of work went into behind the
- 4 scenes, making this happen. We have a facilitator,
- 5 who I'm going to introduce. We have Shannon Jewell,
- 6 who you all know, who has been working behind the
- 7 scenes, and Carla and Darlene and lots of folks to
- 8 mention to make this meeting happen from the
- 9 technological standpoint, and all of the support that
- 10 they have given to the workgroup members.
- 11 So, I'm going to next walk us through the
- 12 agenda. I've got two membership announcements.
- 13 We're going to do some information, too, about
- 14 technological issues with how to operate this, how
- 15 things are going to run as well, when I turn it over
- 16 to our facilitator, Paul Anninos. And then we'll get
- 17 into some of our sessions.
- 18 So on the membership announcements, first,
- 19 I'd like to announce that Carol Black recently
- 20 retired from her position as a pesticide education
- 21 specialist at Washington State. So she is no longer
- 22 serving on the PPDC, representing the American
- 23 Association of Educators. We really appreciate her
- 24 service. For those of you who met Carol over the
- 25 years, she was an encyclopedia of knowledge regarding

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- 1 pesticide programs, and I got the honor to be with
- 2 her on a number of panels and education sessions.
- 3 And so we thank Carol for her service.
- 4 And Dan Kunkel has also retired from the
- 5 IR-4 Project. And we thanked him for his service at
- 6 the last PPDC and I'll thank him again for his work
- 7 on IR-4 for the many years. I got to go on some crop
- 8 tours with Dan, so I appreciate really his input and
- 9 expertise in the area of pesticide programs.
- 10 And as a result, I'm pleased to announce
- 11 that John Wise, the North Carolina -- North Central
- 12 Regional Director of IR-4, which is in North Carolina
- 13 now, and he's a Professor of Entomology at Michigan
- 14 State University, has joined PPDC to represent IR-4.
- 15 So thank you for your service.
- 16 So now we're going to take a look at the
- 17 agenda, and then I'll turn it over to Paul to take us
- 18 through some technical announcements.
- 19 So we're going to display the agenda so
- 20 folks can see what's next, and I'm going to switch
- 21 screens here. So we've got the welcoming remarks.
- 22 We're going to go around and do introductions of you,
- 23 PPDC members, and we're going to do an OPP update.
- 24 I'm going to talk a little bit about what OPP's been
- 25 doing recently, recent accomplishments, recent

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- 1 programmatic changes, things of interest to the group
- 2 and topics you've asked us to talk about as well.
- 3 After that, we've got a short lunch break.
- 4 You're welcome to stay online and keep logged in or
- 5 log off, but if you want to stay logged in, you're
- 6 welcome to do that over the lunch break.
- 7 From 1:30 to 2:30, we have a farmworker and
- 8 clinician training workgroup update from Mily Trevino
- 9 and Carolyn Schroder. Excuse me. Steve Schaible was
- 10 unexpectedly out of the office this week, so we're
- 11 just going to be relying on Mily and Carolyn to take
- 12 us through that.
- 13 Then we have the emerging agricultural
- 14 technologies presentation from Nick Tindall from the
- 15 American Equipment Manufacturers and Chad Biegler
- 16 from Raven. We, in the sub-workgroup on emerging
- 17 technologies, saw this presentation. We thought it
- 18 would be beneficial for the larger PPDC as part of
- 19 the emerging agricultural technologies workgroup
- 20 update that Mano Basu and myself are going to give
- 21 PPDC members to talk about the charge questions
- 22 there.
- Then we had invited PPDC members to provide
- 24 input to EPA and so we had some folks sign up to
- 25 present. And one of our first sessions there is Nina

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- 1 Wilson from BPIA and Keith Jones also from BPIA. So
- 2 we welcome those comments. And then we're going to
- 3 have public comments from 4:30 to 5:00, and then
- 4 we're going to adjourn.
- 5 Sorry, allergies just starting to kick in
- 6 this spring.
- 7 MS. JEWELL: Hey, Ed. May I
- 8 interject quickly?
- 9 MR. MESSINA: Sure.
- 10 MS. JEWELL: Carol Black has
- 11 joined us. I had gotten a message that Carol was
- 12 going to be on leave, so she has joined us. So
- 13 hopefully she enjoyed your very nice comments. She
- 14 is with us today for her last meeting.
- 15 MR. MESSINA: All right. Well, welcome,
- 16 Carol. Thanks for joining.
- Okay. And then so we'll talk to you about
- 18 how to take a mechanism for public comments, how to
- 19 provide your name so that we can recognize you for
- 20 the public comment section, which we always enjoy
- 21 from 4:30 to 5:00 today, and then we also have a
- 22 session tomorrow. And then at 5:00, we will wrap
- 23 things up for today's meeting.
- 24 And then on the next day -- waiting for the
- 25 next day to load. Here we go. Okay, great. So, on

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- 1 Day 2, we'll start at 11:00. We have an emerging
- 2 pathogen workgroup update, Komal Jain, Tajah
- 3 Blackburn will be leading that. So we really
- 4 appreciate that exciting session.
- 5 Pesticide resistance management workgroup
- 6 update David Shaw, Bill Chism, co-chairing that
- 7 workgroup. Again, a PPDC member presentation on
- 8 stakeholder interests. We're going to have Charlotte
- 9 Sanson from ADAMA and Mano Basu from CropLife talking
- 10 from 1:00 to 1:20.
- 11 We'll go on our lunch break. Michal
- 12 Freedhoff, the new -- well, she's the current
- 13 Principal Deputy Assistant Administrator. Her
- 14 confirmation hearing is happening as we speak. And
- 15 after that, if she's agreed to by the Senate, she
- 16 will be the Assistant Administrator for OCSPP. She's
- 17 going to provide some welcoming remarks. She would
- 18 have liked to have done it today at the beginning of
- 19 this session where we had originally scheduled, but
- 20 the Senate had other plans for her. So she's
- 21 currently testifying right now for her nomination.
- 22 So we'll get a chance to meet her tomorrow at 2:00.
- 23 And then PPDC member of presentations on
- 24 stakeholder interests, ongoing ESA consultation work.
- 25 Cathy Tortorici will talk about the larger agency and

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- 1 Federal Government response to ESA. I've got maybe
- 2 four or five slides in my presentation about ESA for
- 3 the OPP update, but really I wanted to save the bulk
- 4 of that discussion for Cathy's presentation from the
- 5 Federal Partnership Program there for ESA. And then
- 6 we have Lori Ann Burd who's going to provide the
- 7 Center for Biological Diversity's position and views
- 8 on ESA to advise EPA. So we welcome that
- 9 presentation as well.
- 10 We had taken risk communication off, so I
- 11 think maybe we've got the -- yeah, wrong -- different
- 12 agenda. Sorry if this isn't the most current. But
- 13 Casey Buell (phonetic) wasn't able to join us. She
- 14 was unexpectedly taken away, so there is an updated
- 15 agenda that has moved some things around. I think
- 16 we're going to end to earlier on Day 2, but we're
- 17 going to have a moving forward session and then
- 18 public comments, and the meeting adjourns. The
- 19 meeting will actually adjourn at 4:00. So we'll make
- 20 sure the current agenda is in the materials that we
- 21 can provide to folks because Casey -- last minute
- 22 change. So sorry, we didn't get the updated agenda
- 23 out or displayed as quickly as possible, but Casey
- 24 was unexpectedly pulled away from being able to
- 25 present.

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- But we've got, as you can see, I think a
- 2 really great impact agenda, really great input from
- 3 the PPDC members about this agenda. I think it's
- 4 different from a lot of prior agendas where there was
- 5 maybe a lot of talking from EPA, and I'm really happy
- 6 that we've sort of flipped it a little bit where
- 7 we've got presentations from the public, from PPDC
- 8 members to advise the agency on topics that this
- 9 group feels should be of interest to EPA. So this
- 10 agenda really reflects input from you and also the
- 11 establishment of the workgroups where these are
- 12 topics that PPDC members had presentations on and
- 13 then agreed to.
- 14 So really enjoy the collaboration. Looking
- 15 forward to these next two days. And, again, knowing
- 16 how busy everyone is, thank you so much for taking
- 17 some time out of your busy day to attend this
- 18 session.
- 19 So with that, I'll kick it over to Paul,
- 20 and he'll take us through the facilitation process.
- 21 So thank you, Paul.
- 22 MR. ANNINOS: Thanks very much, Ed. Thank
- 23 you. And good morning, everybody, good afternoon,
- 24 good evening, depending upon what part of the world
- 25 you're in. I'd like to join Ed, of course, in

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- 1 welcoming everyone who's participating and observing
- 2 today's PPDC meeting.
- 3 As you know, this committee is a formally
- 4 established federal advisory committee. It's open to
- 5 the public. We are happy today to convene this 39-
- 6 member group/committee. Also, very happy to welcome
- 7 the other working group members and members of the
- 8 public.
- 9 My name is Paul Anninos. I'm with Abt
- 10 Associates, and I will assist EPA today in
- 11 facilitating this meeting today and tomorrow. I'm
- joined by my colleague, Sarah Chadwick, who's behind
- 13 the scenes. Some of you have already met her in
- 14 preparation for today, and she's behind the scenes
- operating the virtual meeting platform that we're
- 16 using and is available today to help us manage any
- 17 technology issues that might pop up.
- 18 As you know, the working groups have been
- 19 established to focus on specific topics. The working
- 20 groups are comprised of both PPDC members and other
- 21 technical/industry/government experts, and the
- 22 working groups have certainly been hard at work since
- 23 the last meeting and are prepared to present the
- 24 status of their work to the full PPDC today and
- 25 tomorrow. And the intent today really, and tomorrow,

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- 1 is to get real direct feedback from this full
- 2 roster of PPDC members. It's a unique situation to
- 3 have everybody together like this, and so it's a
- 4 great opportunity for the working groups to get
- 5 direct feedback on their work to help them fine
- 6 tune their recommendations to EPA over the next few
- 7 months.
- Now just a little bit on the process. I
- 9 know that all of you have lived in a virtual meeting
- 10 environment for over a year now. I'm sure it's
- 11 become second nature, but we'll cover a couple of
- 12 things just to help it move smoothly -- help us move
- 13 smoothly through the agenda.
- 14 First, I want to make sure you know that
- 15 all the documents associated with today's meeting are
- 16 all available on the PPDC -- the EPA PPDC website.
- 17 There's a couple of ways you can get to it. I'm not
- 18 sure, I think Sarah can actually put a link to that
- 19 set of documents in your chat window on the right-
- 20 hand side. If you don't have access to that, you can
- 21 just Google, EPA PPDC. It's going to be the very top
- 22 search result more than likely. You click on that
- and then you'll end up at the homepage for PPDC. And
- 24 in the upper right-hand corner, you'll see a
- 25 reference to today's meeting, the May 12-13 meeting.

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- 1 You click on that live link and it will give you a
- 2 list of all the documents that will be -- all the
- 3 slide presentations, agenda, et cetera. So you have
- 4 access to those. Everybody has access to those.
- 5 You can also -- and, in fact, Shannon
- 6 Jewell's email address is also on that homepage, and
- 7 if you have issues downloading or grabbing these
- 8 documents, just shoot her an email and she'll be able
- 9 to help you. Okay?
- 10 Now a quick note to the PPDC members and
- 11 the presenters and the select working group members
- 12 that kind of are considered to be panelists for
- 13 today's meeting. Most of you have been oriented to
- 14 the platform. As a reminder, you -- the PPDC members
- 15 and the working group members have been added as
- 16 panelists in this meeting. This means you'll be able
- 17 to enter comments in the chat window, like you see
- 18 some of that already happening. It's in the lower
- 19 right-hand part of your screen. You hit the button
- 20 "chat." It will open a window and there you can
- 21 contribute.
- 22 And so members of the public can see the
- 23 chats, but they can't add to the chat. So it's like
- 24 a read-only model for members of the public that
- 25 don't have access to that panelist view. Remember to

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- 1 select everyone from the drop-down menu when you
- 2 submit a chat message. You have different options.
- 3 You can submit a chat message to an individual, to
- 4 the panelists, to everyone, so all the more reason
- 5 for you to be careful when you add chats because a
- 6 lot of people will see those. Okay?
- 7 You also have the ability, as panelists,
- 8 working group members and PPDC members to unmute
- 9 yourself in order to be heard. So keep that in mind.
- 10 After each presentation today, we try to
- 11 reserve some time for Q and A, and so this is a great
- 12 opportunity for the PPDC members to weigh in with
- 13 their thoughts on these presentations.
- If you want to pose a question during these
- 15 discussion segments, normally in a real meeting,
- 16 you'd have your tent card and you'd stand it up on
- 17 end and that would be a cue for the facilitator to
- 18 call on you in order. But in this situation, we're
- 19 just going to ask that you enter your first and last
- 20 name into the chat window. That will give us a sense
- 21 that you want to ask a question. We'll call on you
- 22 in the order that you do that. So we'll just work
- 23 through that and see how it goes. I'm pretty sure it
- 24 will be a manageable process.
- 25 And don't forget, in case you've logged in

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- 1 by phone instead of you're using your computer audio,
- 2 if you're using your phone audio, just be aware that
- 3 you might be double-muted, you might be muted both on
- 4 the Webex platform and on your phone. So you might
- 5 have to unmute twice in order to be heard.
- 6 And then a reminder to everyone, we realize
- 7 that many of you are joining this meeting from a home
- 8 environment, probably a work-from-home environment.
- 9 So we know there's distractions. We're just asking
- 10 you to be diligent in keeping your audio muted if
- 11 you're not speaking at the moment, and we may have to
- 12 provide some friendly reminders along the way on that
- 13 one.
- 14 And then let me turn it over to Sarah real
- 15 quick for some quick additional and very specific
- 16 instructions for you.
- 17 MS. CHADWICK: Great. Thanks, Paul.
- 18 So, as Paul mentioned, we know most of
- 19 you are already pretty familiar with the Webex
- 20 platform. We have just a few technology reminders
- 21 to go over for the PPDC members before we get
- 22 started. Paul already touched on a few of these,
- 23 but we just want to make sure that everyone is really
- 24 clear on the instructions and on how to use this
- 25 technology.

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- 1 So first, we recommend that you connect via
- 2 computer audio, using a headset. This option
- 3 typically works best and it's usually the default
- 4 option. PPDC members, you do have the ability to
- 5 mute and unmute yourself as Paul said. However, a
- 6 note to the public attendees that you are not able to
- 7 unmute yourself.
- 8 PPDC members, you may also use your video
- 9 if you wish, but you're not required to do so, and
- 10 you can turn that on at the bottom of your screen.
- 11 However, members of the public are not able to turn
- 12 on their video.
- 13 Next, some of you will be advancing slides
- 14 throughout the meeting today and tomorrow, and at
- 15 that time, I will make sure that you are the -- you
- 16 have the presenter role, so that you're able to
- 17 advance your slides using the menu on the left-hand
- 18 side of your screen or the page up and the page down
- 19 buttons on your keyboard. We do ask that you don't
- 20 move the slides until we've made you the presenter
- 21 role.
- Lastly, we want to ensure that everyone,
- 23 including other PPDC members and the public, are able
- 24 to see your chats. And so remember to select
- 25 everyone from the drop-down menu before submitting

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- 1 your chat message. And this ensures that everyone,
- 2 including the public, sees your message. And I'll
- 3 note, as Paul mentioned, that the public is able to
- 4 see the chat messages, but is not able to submit
- 5 them.
- 6 So with that, I will pass the mic back to
- 7 Paul.
- MR. ANNINOS: Thank you, Sarah. Thanks,
- 9 everybody. And I think we're ready to move to the
- 10 next agenda item, which is introducing the PPDC
- 11 members. And what Sarah has done already is now
- 12 flashed a slide with our PPDC members on there.
- 13 We're going to kind of go in order.
- I think it would be best, Shannon, if you'd
- 15 be willing to just make sure we step through the
- 16 introductions kind of in the right order. You'll
- 17 call on each person so that they know that up, and
- 18 you can kind of see when you're up based upon the
- 19 spelling of your last name, the first letter of your
- 20 last name. So it's an alphabetical last name
- 21 listing.
- Just identify yourself, your name, the
- 23 organization that you represent, the role -- your
- 24 role in that organization and your area of expertise,
- 25 and I think that's a good introductory comment for

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INTRODUCTIONS BY PPDC MEMBERS

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18

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- 2 MR. ALARCON: Good morning. This is Walter Alarcon. I am a medical epidemiologist. I work with 3 the CDC nine years in the SENSOR Pesticides Program. 4 And my expertise is in surveillance of acute 5 6 occupational pesticide poisonings. Thank you. 7 MR. ANNINOS: Thank you, Walter. Ruben? Is it -- well, it's possible that 8 9 either Ruben is on mute or he's not --10 MR. ARROYO: Hello? 11 MR. ANNINOS: Oh, there you go, there you 12 go. 13 MR. ARROYO: Sorry. Ruben Arroyo, 14 Riverside County Ag Commissioner. My main job is a 15 regulatory scheme with pesticide use enforcement out in California. 16 17 MR. ANNINOS: Thank you, Ruben.
- 20 Society of America. I also am owner/operator of
- 21 Asmus Farm Supply, and my expertise is I'm a
- 22 certified crop advisor. So I'm a crop advisor, a
- 23 farmer myself, and an ag retailer.

Amy?

Science

- MS. JEWELL: Thank you, Amy. Got it.
- 25 All right. Mano Basu?

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MS. ASMUS: I am Amy Asmus with the Weed

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- 1 MR. BASU: Good morning, everyone. Manojit
- 2 Basu. I'm the managing director of science policy at
- 3 CropLife America. We support the agro-chemical
- 4 industry and regulatory issues, including science
- 5 policy toxicology, human health, and environmental
- 6 toxicology. Thank you.
- 7 MS. JEWELL: Thank you, Mano.
- 8 Steve Bennett?
- 9 MR. BENNETT: Good morning. I'm Steve
- 10 Bennett with the Household and Commercial Products
- 11 Association, a trade association representing
- 12 companies in the conventional and antimicrobial space
- in the household and commercial space.
- MS. JEWELL: Thank you.
- 15 Jasmine Brown?
- 16 MS. BROWN: Good morning, everyone. I am
- 17 the vice chair -- or I am the acting chairman
- 18 actually of the Tribal Pesticide Program Council. My
- 19 expertise is I'm a FIFRA inspector, kind of a jack-
- 20 of-all-trades, and work with low-income communities
- 21 on their pesticide issues quite often.
- MS. JEWELL: Thank you, Jasmine.
- 23 Lori Anne Burd?
- MS. BURD: Hi, I'm Lori Anne Burd. I'm the
- 25 environmental health director at the Center for

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- 1 Biological Diversity. We are am endangered species
- 2 protection group, which means we work on pretty much
- 3 all issues. My expertise is, of course, endangered
- 4 species, pesticides, and what we call off-target
- 5 impacts to communities and others harmed by
- 6 pesticides. Thanks.
- 7 MS. JEWELL: Thanks.
- 8 Doug Burkett?
- 9 (No response.)
- 10 MS. JEWELL: All right. We'll come back to
- 11 Doug.
- MR. ANNINOS: He might be on mute, Shannon.
- 13 It's possible that -- sometimes people just forget to
- 14 come off of mute.
- MS. JEWELL: Yeah, I do see him. Yeah, I
- 16 see him in the attendees list. I don't see any sound
- 17 for him, so let's come back.
- 18 Iris Figueroa?
- 19 MS. FIGUEROA: Hi, good morning, everyone.
- 20 My name is Iris Figueroa and I'm with Farmworker
- 21 Justice. We're a national advocacy organization and
- 22 we serve farmworkers who both apply pesticides and
- 23 work and live in areas where pesticides are being
- 24 applied.
- 25 MS. JEWELL: Great. Thank you.

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1	Jim Fredericks?
2	MR. FREDERICKS: Hi, everyone, Jim
3	Fredericks. I'm a trained entomologist. I work as
4	the Vice President of Technical and Regulatory
5	Affairs with the National Pest Management
6	Association, which is a trade association that
7	represents the structural pest control industry. And
8	I appreciate being here today.
9	MS. JEWELL: Thank you.
10	Joe Grzywacz?
11	MR. GRZYWACZ: Hi, my name is Joe Grzywacz.
12	I'm a faculty member at Florida State University, and
13	I do public health research with individuals in rural
14	areas where pesticides are common.
15	THE WITNESS: Thank you.
16	Gary Halvorson?
17	(No response.)
18	MS. JEWELL: Let's come back to Gary.
19	Gina Hilton.
20	DR. HILTON: Good morning, everyone. My
21	name is Dr. Gina Hilton and I am a toxicologist
22	working for PETA, so that's the People for Ethical
23	Treatment of Animals. And I have been collaborating
24	on several initiatives to advance new approaches and
25	nonanimal methods for regulatory decision-making and

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- 1 chemical safety assessment.
- Yeah, and I just want to say thank you for
- 3 this opportunity to serve on this committee.
- 4 MS. JEWELL: Thank you.
- 5 Komal Jain?
- 6 MS. JAIN: Hello, everyone. I am Komal
- 7 Jain. I'm the Executive Director of the Center for
- 8 Biocide Chemistries, which is a trade association of
- 9 50 companies that either manufacture or formulate
- 10 antimicrobial products. Thanks for having me today.
- 11 MS. JEWELL: Thank you.
- 12 Mark Johnson?
- MR. M. JOHNSON: Good morning, everyone.
- 14 I'm Mark Johnson, the Associate Director of
- 15 Environmental Programs for the Golf Course
- 16 Superintendents Association of America, a
- 17 comprehensive environmental program and university
- 18 research for our more than 19,000 members in the golf
- 19 course industry, not only in the U.S. but around the
- 20 world. So pretty deeply engaged in the use of inputs
- 21 and management of the landscape. And it's a pleasure
- 22 to be serving on this committee again. Thank you
- 23 all.
- MS. JEWELL: Thank you.
- 25 Patrick Johnson?

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- 1 MR. P. JOHNSON: Good morning. This is
- 2 Patrick Johnson. I'm on the road working my way back
- 3 to my computer, so no video at the moment. But I'm a
- 4 farmer in Tunica, Mississippi. We grow cotton, rice,
- 5 corn, and soybeans on our farm. And I'm representing
- 6 the National Cotton Council on the committee. I'm
- 7 glad to be here and look forward to the meeting.
- 8 MS. JEWELL: Thank you.
- 9 Sheryl Kunickis?
- DR. KUNICKIS: Yes, I'm Sheryl Kunickis.
- 11 Under the delegations of authority at USDA, I
- 12 represent the Secretary of Agriculture on all things
- 13 FIFRA. Our office, the Office of Pest Management
- 14 Policy, represents the different agencies in USDA and
- 15 farmers' interests in agricultural pesticides.
- MS. JEWELL: Thank you.
- 17 Dominic LaJoie?
- 18 MR. LAJOIE: Hi, good morning, everyone.
- 19 I'm Dominic LaJoie. I'm a fourth generation potato
- 20 and small grains farmer from Northern Maine. I farm
- 21 with my nephews and my brother under the entity of
- 22 LaJoie Growers, LLC. And I'm the current president
- 23 of the National Potato Council, representing the NPC
- 24 on the committee. Thank you.
- MS. JEWELL: Thank you, Dominic.

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- 1 Charlotte Liang?
- MS. LIANG: Hi, good morning, everyone.
- 3 This is Charlotte Liang. I am with the U.S. Food and
- 4 Drug Administration, Office of Food Safety. I work
- 5 on policy issues related to pesticide residues in
- 6 food. Thank you.
- 7 MS. JEWELL: Thank you.
- 8 Amy Liebman?
- 9 MS. LIEBMAN: Hi there, this is Amy Liebman
- 10 from Migrant Clinicians Network. I head up MCN's
- 11 environmental and occupational health programming,
- 12 and I -- MCN is an organization that helps immigrants
- 13 and migrant workers, and we are working with both
- 14 that population, as well as the clinicians that serve
- 15 them.
- MS. JEWELL: Great. Thank you.
- 17 Aaron Lloyd?
- 18 (No response.)
- 19 MS. JEWELL: And we will come back to
- 20 Aaron.
- 21 Lauren Lurkins?
- MS. LURKINS: Hi, my name is Lauren
- 23 Lurkins. I am with Illinois Farm Bureau, a
- 24 representative on PPDC for American Farm Bureau
- 25 Federation. Here in Illinois, I work as the Director

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- of Environmental Policy on behalf of about 75,000
- 2 individual farmers on all things environmental
- 3 regulation, including the use of pesticides. Thank
- 4 you.
- 5 MS. JEWELL: Thank you.
- 6 Tim Lust?
- 7 MR. LUST: Good morning. I represent the
- 8 National Sorghum Producers, a trade association for
- 9 sorghum farmers throughout the United States, and
- involved on the pesticide side and worked a lot on
- 11 the sustainability side as well.
- MS. JEWELL: Thank you.
- 13 Dan Markowski?
- 14 MR. MARKOWSKI: Hello, this is Dan
- 15 Markowski. I'm with Vector Disease Control
- 16 International, here representing the American
- 17 Mosquito Control Association. With AMCA, my area of
- 18 expertise would be all things mosquito control,
- 19 aerial and ground applications. Thank you.
- 20 MS. JEWELL: Thank you, Dan.
- 21 Of course we know Ed, so we'll move on to
- 22 Gary Prescher.
- MR. PRESCHER: Yes, hi, I'm Gary Prescher,
- 24 and I represent the National Corn Growers
- 25 Association, serving on the Production Technology

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- 1 Access Action Team. I am a farmer and agronomist in
- 2 South Center, Minnesota.
- 3 MS. JEWELL: Thank you.
- 4 Caleb Ragland?
- 5 MR. RAGLAND: Good to be here this morning.
- 6 I'm Caleb Ragland. I'm a farmer in Central Kentucky.
- 7 I grow soybeans, corn, winter wheat, and pigs on our
- 8 ninth generation farm. I am a National Director for
- 9 the American Soybean Association and have served as
- 10 chair of the regulatory committee in the past and
- 11 currently serve on the governing committee. I'm glad
- 12 to be here with you all today.
- MS. JEWELL: Thank you, Caleb.
- 14 Damon Reabe?
- MR. REABE: Yeah, I'm here representing the
- 16 National Agricultural Aviation Association. I
- 17 operate two aerial application companies, operating
- 18 fixed-wing and rotary craft aircraft in Wisconsin,
- 19 and serve on the National Ag Aviation Association's
- 20 government relations committee as the chairman.
- MS. JEWELL: Thank you.
- 22 Karen Reardon?
- MS. REARDON: Good morning. I'm Karen
- 24 Reardon with the trade association RISE, Responsible
- 25 Industry for a Sound Environment. We represent the

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- 1 companies that supply pesticide and fertilizers that
- 2 are used by consumers and professionals for
- 3 nonagricultural uses. At RISE, I am the Vice
- 4 President of Public Affairs, where I'm focused on
- 5 communicating about pesticide use.
- 6 MS. JEWELL: Great. Thank you.
- 7 Charlotte Sanson?
- 8 MS. SANSON: Hi, I'm Charlotte Sanson. I'm
- 9 head of North America Regulatory Affairs for ADAMA,
- 10 and I represent the registrants of the Conventional
- 11 Crop Protection Industry. Thanks. Happy to be here.
- MS. JEWELL: Thank you.
- 13 David Shaw?
- 14 MR. SHAW: Good morning, everyone. I'm
- 15 David Shaw, and I am a weed scientist at Mississippi
- 16 State University. I'm also the past chair of the
- 17 Herbicide Resistance Education Committee for the Weed
- 18 Science Society of America, and that's a team of
- 19 folks that have been not only weed scientists, but
- 20 stakeholders and social scientists, working on
- 21 community-based solutions to resistance development
- 22 and management.
- MS. JEWELL: Thank you.
- 24 Christina Stucker-Gassi?
- 25 MS. STUCKER-GASSI: Hello, everyone. My

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- 1 name's Christina Stucker-Gassi. I'm a program
- 2 manager at the Northwest Center for Alternatives to
- 3 Pesticides, where we educate, advocate, and research
- 4 alternatives to chemicals and primarily pesticides
- 5 that pose a threat to healthy water and wildlife,
- 6 healthy people in communities and healthy food and
- 7 farms. Glad to be here with you all.
- 8 MS. JEWELL: Thank you.
- 9 Cathy Tortorici?
- 10 [Audio issue.]
- 11 MS. JEWELL: Cathy, I think we're having
- 12 some problem with your audio.
- Paul, are you hearing the audio in the same
- 14 way? It sounds a little bit off.
- 15 MR. ANNINOS: Yeah, the audio is like at
- 16 hyperspeed, almost sounds like a chipmunk. So,
- 17 Cathy, I don't know what is creating that dynamic.
- 18 You might want to go on -- it's like the audio is
- 19 (inaudible) up and then it's catching up by speeding
- 20 up and so -- I'm not sure. Maybe logging off and
- 21 logging back in is a possibility. Why don't we try
- 22 that, Cathy, and see how that -- if that fixes it.
- MS. JEWELL: Yeah, we'll loop back.
- Okay. Mily Trevino-Sauceda?
- 25 MS. TREVINO-SAUCEDA: Hi, Mily Trevino-

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- 1 Sauceda, and I am the Executive Director and
- 2 cofounder of Alianza Nacional de Campesinas, which is
- 3 an alliance [audio issue].
- 4 MS. JEWELL: Thank you.
- 5 Liza Fleeson Trossbach?
- 6 MS. FLEESON TROSSBACH: Good morning. I'm
- 7 Liza Fleeson Trossbach, and I represent the
- 8 Association of American Pesticide Control Officials,
- 9 or AAPCO. I currently serve as the president elect
- 10 of AAPCO. We are a professional association
- 11 representing pesticide regulatory officials in the 50
- 12 states and territories. I am also the principal
- 13 pesticide control official for the Virginia
- 14 Department of Agriculture and Consumer Services.
- 15 Thank you.
- MS. JEWELL: Thank you.
- 17 Tim Tucker?
- 18 MR. TUCKER: Good morning, everyone. Are
- 19 you getting a feedback?
- MR. ANNINOS: Yes.
- MS. JEWELL: We are.
- 22 MR. ANNINOS: You might -- are you on your
- 23 phone and computer audio?
- MR. TUCKER: I've turned off the computer.
- MR. ANNINOS: Okay.

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- 1 MR. TUCKER: Okay. Good morning, everyone.
- 2 Thank you for the opportunity to be here. No, it's
- 3 not working still.
- 4 I'm here representing the beekeeping
- 5 industry, specifically the American Beekeeping
- 6 Federation and the American Honey Producers. Sorry
- 7 about that.
- 8 MS. JEWELL: Thank you.
- 9 Tim, either, depending on which one you
- 10 want to use, muting that -- your auditory intake on
- 11 that device.
- 12 Ed Wakem?
- 13 MR. WAKEM: Good morning, everyone. I am a
- 14 veterinarian. My career has involved clinical
- 15 medicine, diagnostic services, and public health.
- 16 I'm currently employed as a veterinary services
- 17 manager by Ceva Animal Health, a manufacturer of
- 18 veterinary biologics, pharmaceuticals, and
- 19 pesticides. I'm here today as a volunteer leader
- 20 representing the American Veterinary Medical
- 21 Association. Thank you.
- MS. JEWELL: Thank you.
- Nina Wilson?
- MS. WILSON: Good morning, everybody. My
- 25 name is Nina Wilson. I work for Gowan Company. And

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- 1 I'm here representing the Biological Products
- 2 Industry Alliance, or BPIA. I'm originally a plant
- 3 physiologist, but my expertise is in biological
- 4 products, specifically biochemicals and their use and
- 5 their registration. And thank you to EPA for putting
- 6 this on, and I look forward to the refreshed format.
- 7 MS. JEWELL: Thank you.
- 8 John Wise?
- 9 MR. WISE: Good morning, everybody. I'm
- 10 John Wise. I'm a professor of entomology at Michigan
- 11 State University. I have an extension appointment
- 12 where I work with fruit farmers in our state. I also
- 13 conduct research on pesticides, performance
- 14 attributes, plant penetrate of attributes, and
- 15 alternative delivery systems for both conventional
- 16 pesticides and biopesticides. As Ed mentioned, I'm a
- 17 regional director for IR-4, which, of course, helps
- 18 to bring registration of biopesticides and reduce
- 19 risks of pesticides for specialty crop growers. Glad
- 20 to be here. Thank you.
- 21 MS. JEWELL: Thank you, John.
- 22 Carol Black, would you introduce yourself
- 23 to the group, please?
- MS. BLACK: I will. Thank you very much
- 25 for my swan song appearance. [Audio issue]

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- 1 University in the pesticide resources and education
- 2 [audio issue]. [Audio issue] as participants today.
- 3 So the program is in extremely good hands. And I am
- 4 representing the American Association of Pesticide
- 5 Safety Educators on the PPDC. And I will go and put
- 6 a chat, they're having their annual applicator
- 7 certification meeting, the PACT 2020 at the Sheraton
- 8 in Denver, and that's going to actually have many
- 9 stakeholders, including the ag worker protection --
- 10 I think Amy Liebman, you've probably been working on
- 11 that conference -- as well as applicator
- 12 certification.
- So it's been a pleasure working with many
- of you and collaborating with you over the years.
- 15 Thank you.
- MS. JEWELL: Thank you.
- Okay, let's try Doug Burkett again.
- MR. BURKETT: Oh, good morning, everybody.
- 19 Hopefully now [audio issue].
- MS. JEWELL: Good morning.
- 21 MR. BURKETT: If not, I'll put my
- 22 introduction into the chat. I'm Doug Burkett. I'm
- 23 representing the Office of the Secretary of Defense,
- 24 and I'm with a small office called the Armed Forces
- 25 Pest Management Board. There, we have policy and

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- 1 guidance for all things pest management and
- 2 pesticides throughout the military services. Thank
- 3 you.
- 4 MS. JEWELL: Thank you.
- Gary Halvorson? I'm not sure he is with
- 6 us. So I think we're going to skip Gary.
- Gary, if you are out there, maybe you can
- 8 put your introduction in the chat.
- 9 Aaron Lloyd?
- 10 (No response.)
- 11 MS. JEWELL: I don't think also -- maybe
- 12 Aaron isn't with us yet.
- 13 Cathy Tortorici, let's see if your audio is
- 14 any better.
- 15 MS. TORTORICI: How do I sound now?
- MS. JEWELL: Normal and good.
- MS. TORTORICI: Yeah, sorry for that folks.
- 18 I periodically have the chipmunk thing happen when I
- 19 log in. So I apologize for that.
- 20 I'm Cathy Tortorici, in nonchipmunk mode.
- 21 I'm a Division Chief with the Office of Protected
- 22 Resources at the National Marine Fisheries Service,
- 23 our headquarters office here in Maryland. And my
- 24 staff and I work with the Environmental Protection
- 25 Agency, along with Fish and Wildlife and USDA on

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- 1 biological opinion development under the Endangered
- 2 Species Act Section 7, looking at the effects of
- 3 listed species and impacts to them potentially on
- 4 pesticides.
- 5 So thank you all. And I hope that you hear
- 6 me tomorrow because I'm giving a presentation and I
- 7 would really like that to work out. Thank you all so
- 8 much.
- 9 MS. JEWELL: Thank you, Cathy.
- 10 Okay. With that. I'll turn it back to
- 11 Paul. Thank you all so much for being here.
- MR. ANNINOS: Yes, Shannon, thanks for
- 13 getting us through that long list. And thanks,
- 14 everybody, for your introductions.
- Just a quick heads-up, if you get feedback
- 16 from us that we're having audio problems, sometimes
- 17 if you turn off your video, it can conserve a little
- 18 bit of bandwidth on your end and it might help the
- 19 audio.
- 20 But, Cathy, you're coming through loud and
- 21 clear now. So we definitely fixed that issue.
- 22 And then there were a couple, I think
- 23 Carol, in your introductory remarks, Carol Black, you
- 24 were a little bit -- it was a little bit staccato.
- 25 So I would make -- we'll just keep an eye on that.

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- 1 And then maybe coming off of video would help on
- 2 that. So just keep that in mind.
- And, Mily, same with you. I think we had a
- 4 little bit of trouble, Mily, with your audio. So
- 5 just keep that in mind that turning your video off
- 6 could help a little bit.
- 7 Okay. Let's go ahead and move on. We're
- 8 right on time. I just can't even believe that. It's
- 9 11:45 Eastern time. We are ready for the next
- 10 segment of the agenda. So I'm going to turn this
- 11 back over to Ed. This portion of the agenda is where
- 12 he's giving updates on the Office of Pesticide
- 13 Programs' recent activities and accomplishments.
- So, Ed, it's all yours. And I think you
- 15 need to wait until Sarah gives you the presenter
- 16 role. And she'll tell you when that is.
- 17 MR. MESSINA: Okay, thanks. Thanks, Paul.

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- 1 OPP UPDATES: RECENT ACTIVITIES AND ACCOMPLISHMENTS
- 2 MR. MESSINA: And great introductions. As
- 3 you can see, we have an incredibly diverse group of
- 4 people, highly professional, just respected in their
- 5 individual fields, and we are so honored to have you
- 6 on our PPDC. So thank you again for your time, and I
- 7 look forward to great discussions.
- 8 So I was asked to give a talk. Some of the
- 9 topics folks wanted to hear about were agency
- 10 resources, what about the move, what's COVID response
- 11 look like, registration review decisions,
- 12 registration decisions, particularly some of the ones
- 13 that have been in the news. So that's what this
- 14 presentation is about. It's sort of a flyover of the
- 15 different things that folks wanted to know about.
- 16 So on to sort of organization. As folks
- 17 know, on March 11th in 2021, of this year, obviously,
- 18 Secretary Reagan, Michael Reagan was sworn in as the
- 19 16th EPA Administrator. And then my boss, Michal
- 20 Freedhoff, was nominated, as we discussed, to be the
- 21 Assistant Administrator for the Office of Chemical
- 22 Safety and Pollution Prevention, for which Office of
- 23 Pesticide Programs is an office within, and her
- 24 hearing is today. And I'll get to introduce her and
- 25 we'll get to hear from her tomorrow.

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- 1 In terms of OPP, folks remember in October,
- 2 we did go through a reorganization. Two divisions
- 3 were spun off into a separate office. Those two
- 4 divisions were generally the communications part of
- 5 the office and the IT part of the office and the
- 6 human resources part of the office.
- 7 So with that, we have a new organizational
- 8 structure. We received from another office the
- 9 Endocrine Disruptor Screening Program for which there
- 10 has been a lot of activity, which I won't go into
- 11 today, but you'll start seeing some output from that
- 12 organization being part of OPP and how to integrate
- 13 the EDSP reviews into our registration review
- 14 decisions and our registration decisions. So we're
- 15 putting a plan together. We've been working on that
- 16 since October. And it's been great to have that
- 17 group of folks now associated with OPP as part of
- 18 that reorganization.
- 19 On the right you can see the science
- 20 divisions, Human Health, Environmental Fate and
- 21 Biological and Economic Analysis Divisions doing the
- 22 human health risk assessments, environmental fate and
- 23 then the benefits analysis. And the folks there have
- 24 been there for a while. There's small additions
- 25 within EFED. We're welcoming Rose Kyprianou to the

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- 1 role of Acting Deputy Director. That happened a
- 2 couple weeks ago. And the other folks I think you're
- 3 very familiar with, Dana Vogel as the Division
- 4 Director for HED, Jan Matuszko, Acting Director for
- 5 EFED. She's been in that role for some time. And
- 6 then Biological and Economic analysis Division,
- 7 Kimberly Nesci is the permanent Director.
- 8 And then on the left, the Antimicrobials
- 9 Division, Anita Pease is the Director. New addition
- 10 there is Lisa Christ, who is now the Associate
- 11 Director.
- 12 In the Biopesticides and Pollution
- 13 Prevention Division, Billy Smith has been the Acting
- 14 Director, and in the Registration Division, Marietta
- 15 Echeverria is the Acting Director, a recent addition,
- 16 Catherine Aubee as the Associate Director there.
- 17 And then in the Pesticide Reevaluation
- 18 Division, Elissa Reaves as the Director, and then
- 19 somewhat of a new addition is Tim Kiely as the Acting
- 20 Deputy Director.
- 21 So folks have been moving around, but
- 22 generally for the seven divisions that are now part
- 23 of OPP, we are fairly stable. I should mention,
- 24 also, I couldn't get anything done without my deputy
- 25 directors and Arnold Layne, who's the Deputy Director

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- 1 for Management, and then Mike Goodis, the Acting
- 2 Deputy Director for Programs, who was in the
- 3 Registration Division and has moved up since Rick
- 4 Keigwin is now the Acting DAA for OCSPP and as I
- 5 moved into the acting director role.
- 6 So we have had some talk of the move to
- 7 Federal Triangle. Obviously, the pandemic created
- 8 some delay in our ability to move. So we haven't
- 9 been doing much, but now that folks are getting
- 10 vaccinated, now that COVID is starting to wind down,
- 11 we've actually been letting folks come into the
- 12 office at their own volition, voluntarily, to kind of
- 13 check out their offices, see what they look like
- 14 after a year, pack up things and get ready for a
- 15 move, which is slated to happen in September through
- 16 October of 2021.
- 17 A number of things need to happen before
- 18 we're able to move into Federal Triangle. So you
- 19 can see our current office building on the top and
- 20 then on the bottom is the Federal Triangle space
- 21 where we will be moving. And a lot of folks within
- 22 that building at Federal Triangle need to move
- 23 around to make space for us. So that will take some
- 24 time to make sure that folks are able to move and
- 25 make space.

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- 1 And then we'll -- we have about -- I think
- 2 there's about 5,000 people moving to make room for
- 3 about 1,000 people that are moving from OPP and also
- 4 OLEM. So it's quite a move, a lot of work to happen
- 5 over the summer. It is going to continue and we're
- 6 just starting to make some strides there.
- 7 In terms of hiring, we started FY 2020 with
- 8 631 staff on board. We had been really under our FTE
- 9 ceiling for quite some time and had been trying to
- 10 hire up. Through attrition and just normal
- 11 retirements, we were hiring and then folks would
- 12 retire and we were sort of staying in a status quo.
- 13 But we actually, as we were moving through last year
- in FY 2020, we reached 675, which was pretty close to
- our ceiling, but not our ceiling. And then the reorg
- 16 happened and we lost about 100 or so folks.
- 17 So our level at the start of FY 2021, to
- 18 reflect the reorg, was 594 and our current ceiling
- 19 with fees and EPM is 611, which we are just right at
- 20 about. We're maybe a little bit over. But through
- 21 attrition, through hiring -- you know, people that
- 22 are going to be leaving throughout the year, we'll
- 23 probably be right at that 611, which is good news.
- 24 We're finally -- we have finally hired up to what our
- 25 capacity allows us.

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- 1 From a historical perspective, this chart
- 2 shows kind of what normalized numbers would look like
- 3 post reorg. So you can see that at our highest in
- 4 2005, or at least from the beginning of PRIA, we were
- 5 at about 900. Folks remember back in the '90s, we
- 6 were actually at 1,200. So we're doing a lot of the
- 7 work we had been doing with new things coming
- 8 onboard, new technologies, biotechnologies with, you
- 9 know, about half the resources that the Office
- 10 originally had. So we are literally doing the more
- 11 with less.
- 12 And you can see that small uptick in 2018
- 13 to 2020, where we were able to access the outstanding
- 14 balance that had occurred because the agency had not
- 15 provided the one-to-one requirement for spending to
- 16 withdraw the fees. So we had a bit of a build-up in
- 17 those fees and we're finally able to access those
- 18 fees because that requirement went away in the most
- 19 recent PRIA approval. And so we've been accessing
- 20 those fees. We want to not hire up so quickly that
- 21 we need to then run out of fees. So it is a glide
- 22 path.
- 23 And, again, you can see in terms of the 611
- 24 to the 620-ish range, depending on how fungible our
- 25 ceiling is, we're right at about kind of where we

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- 1 want to be in ceiling and we'll probably stay there
- 2 barring any increase in EPM funds or any changes in
- 3 PRIA 5, should that come to be in the future. So
- 4 that's kind of where we are, just showing the trend
- 5 lines of kind of doing more with less.
- 6 And then I had this chart put together,
- 7 too, to say, okay, well, what do the overall
- 8 submissions look like for OPP. In any given year, we
- 9 get anywhere from 20,000 to 15,000 to maybe, you
- 10 know, 13,000 submissions from new active ingredients,
- 11 the label changes, the new uses, it runs the gamut.
- 12 And a part of that is PRIA actions; a part of that is
- 13 non-PRIA actions. 2021 is an incomplete year. So
- 14 we'll see where we go from there.
- And you can see 2020, the scale is pretty
- 16 huge, but there was an uptick in 2020, a lot of that
- 17 due to COVID, a lot of that to new technologies, but
- 18 we continue to receive a pretty substantial workload,
- 19 and you overlay that with sort of the declining
- 20 resources that have occurred, you know, at least
- 21 since 2004, and you can see we're continuing to do
- 22 more with less. I think 2010 was kind of a banner
- 23 year, lots of submissions that year. But we're kind
- of leveled off at around the 13,000.
- 25 And then PRIA completions have been

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- 1 increasing over time since the advent of PRIA. This
- 2 is from 2004. Last year, in a telework environment,
- 3 we did more than we did -- we did 300 more than we
- 4 did in FY-19. And we'll see where we are this year
- 5 at the end of 2021, but we're continuing to receive
- 6 more PRIA actions. I think this chart reflects that,
- 7 over time, more actions had been moved into the PRIA
- 8 category, but at least in the last couple of years,
- 9 you can see we're continuing to do more and more PRIA
- 10 actions over time.
- 11 And then part of that was, obviously, the
- 12 agency's front and center COVID response for
- 13 providing disinfectants to combat SARS-CoV-2, the
- 14 virus that causes COVID-19. We continue to update
- our List N. We have 550 products on List N; 140 of
- 16 those were tested specifically against the SARS-CoV-2
- 17 virus. We processed 340 expedited List N
- 18 submissions. Approximately a third didn't make the
- 19 front-end screening process. We had a lot of new
- 20 entrants into this space, but, you know, we worked
- 21 with them. We tried to get a lot of folks and a lot
- 22 of new technologies as part of this, but we had to do
- 23 a lot of up-front work with folks who were submitting
- 24 applications.
- 25 Over 200 Congressional inquiries, we were

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- 1 getting a Congressional inquiry a day in some weeks.
- 2 We had about 150 -- 185 pre-submission meetings with
- 3 folks and then responded to about 120 enforcement
- 4 inquiries. So the COVID workload really stepped up
- 5 and created a workload requirement in the
- 6 Antimicrobials Division. We moved resources from
- 7 other divisions to help with that workload. And so
- 8 you'll see there was a little bit of a backlog in
- 9 some of the other work that's happening that we're
- 10 still trying to wind through. But COVID certainly
- 11 was creating some of that pressure.
- 12 This is our List N website. You can see in
- 13 terms of the inquiries that the agency was getting,
- 14 at a high, we had 416,000 page hits a day when we
- 15 relaunched List N. It came down to about 50,000.
- 16 And now, you know, towards the end, it's sort of
- 17 trailing off.
- This was our List N app. At the highest,
- 19 we had about 13,000 folks looking on their phone for
- 20 products, maybe while they were in the store
- 21 searching. So this just gives you a level of kind of
- 22 the interest and the calls that were coming in. I
- 23 think we got six times the number of calls. We had
- 24 a, you know, maybe a 50 percent increase in the
- 25 submissions to the Antimicrobials Division.

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- 1 This was our expedited PRIA submissions
- 2 over time. We finally -- so the gray is the total
- 3 number of actions pending and then the gold there was
- 4 total completed actions. So we kept completing,
- 5 completing, completing, but we were
- 6 getting more submissions than we could complete. We
- 7 finally reached a point back in October of actually
- 8 being able to get more completions than we had
- 9 received. So we're continuing to kind of bend the
- 10 curve on reducing the number of pending actions, but
- 11 you can see the expedited PRIA List N submissions
- 12 were pretty significant.
- This is a scatter plot, which is pretty
- 14 cool. It shows how we were beating the PRIA
- 15 timelines for the COVID submissions. So the green
- 16 line represents meeting the PRIA date. The blue line
- is one month earlier, and then this bottom line is
- 18 two months earlier. And really at the height of
- 19 COVID, we were able, for this cluster here, to beat
- 20 the PRIA timelines by two months and sometimes
- 21 sooner, depending on the different types of actions,
- 22 you know, amendments or new data.
- 23 And now we're operating right at about the
- 24 PRIA due date, which is, you know, pretty good, but
- 25 -- and it's kind of where we want to be. But really

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- 1 in the early stages of the pandemic, we were really
- 2 beating our deadlines and devoting a lot of resources
- 3 to meeting that.
- 4 We also developed novel test methods for
- 5 residual efficacy. So as part of the regular
- 6 disinfectant process, we really wanted to look at
- 7 surfaces that could maintain disinfection properties.
- 8 So we put out protocols for how industry could go
- 9 about proving that they had a surface that would
- 10 create a long-lasting claim. So we had a copper
- 11 submission, had a Section 3 copper announcement. We
- 12 had some section 18s, most recently, in April for
- 13 BIAXIM, which is a new residual surface coating for
- 14 use in Delta Airline planes and facilities within the
- 15 states of Georgia, Utah, and Minnesota. So that's
- our most recent Section 18 for surface coating.
- 17 We've also been working on air treatments.
- 18 So we know that COVID is largely a respiratory
- 19 transmission in keeping with CDC guidelines. So what
- 20 are some novel air treatment technologies that are
- 21 out there? So we approved a Section 18 for emergency
- 22 use for Georgia and Tennessee for a product called
- 23 Grignard Pure, which was capable of killing 98
- 24 percent of the airborne SARS-CoV-2 that was in the
- 25 air, so by trained professionals to apply it with

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- 1 optical readers to determine whether the right level
- 2 of product was in the air.
- 3 We're continuing to focus on the air
- 4 treatment, and we're also -- with the recent CDC
- 5 guidance on examining the fact that surface
- 6 contamination is a considered low transmission way of
- 7 getting SARS-CoV-2 and the fact that, you know,
- 8 vaccines are rolling out, people are getting
- 9 vaccinated, so we're no longer prioritizing public
- 10 health emergency requests for new products that
- 11 address surface transmission, but we are continuing
- 12 to work on products and expedite products that
- 13 address the air contamination for SARS-CoV-2.
- 14 And we are continuing -- we have a number
- of products in the pipeline, and effective April
- 16 28th, we're no longer expediting the review of the
- 17 emerging viral pathogen claims, review of new
- 18 products in amendments. So we're sort of finally
- 19 sort of winding down appropriately the EPA's response
- 20 to SARS-CoV-2, given where we are in the pandemic and
- 21 given all the work that has been done. So good news
- 22 there.
- 23 All right, so other program updates. As
- 24 folks know, we have a requirement to review existing
- 25 pesticides on a schedule of every 15 years. Our

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- 1 deadline of October 2022 is fast approaching. The
- 2 good news is we've done 92 percent of the work. So
- 3 we've issued 665 draft risk assessments so far we've
- 4 completed. As part of that, there's 580 proposed
- 5 interim decisions that we've issued and then about
- 6 514 final or interim decisions completed that remain
- 7 for FY 2022 October to complete.
- 8 So we're continuing to do that work, put
- 9 out every quarter, you know, about 20 or so draft
- 10 risk assessments, proposed interim decisions and
- 11 interim decisions.
- 12 This shows sort of a timeline of kind of
- 13 our individual work. This is not cumulative. This
- 14 is a per year basis so you can see things have been
- 15 ramping up and, on average, we're putting out about
- 16 100 in a year draft risk assessments and about 100
- 17 registration decisions. So -- but you can do the
- 18 math. We're trying to meet that deadline. It's
- 19 going to be tight.
- 20 A lot of factors are potentially going to
- 21 contribute to the agency missing some, in part
- 22 because there's data call-ins and information that we
- 23 need to review, special cases, lots of novel science,
- 24 but we are striving to continue to do a lot of work
- 25 in registration review.

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- 1 Some particular ones that came out in case
- 2 you missed them, but for pentachlorophenol, in March,
- 3 we issued the proposed interim decision to cancel the
- 4 registration of pentachlorophenol, the heavy-duty
- 5 wood preservative used primarily in utility poles.
- 6 After completing the risk assessment, we determined
- 7 that pentachlorophenol posed significant human health
- 8 risks to workers when we did that registration
- 9 review. And the public comment period closed in May
- 10 and so we're evaluating those comments as part of the
- 11 interim decision that we issued in March for the
- 12 proposed cancellation of that pesticide.
- 13 Glyphosate, also in the news in early
- 14 February, we issued the interim decision. We also
- 15 concluded there were no risks of concern for human
- 16 health. We're glad to say it was used in accordance
- 17 with the current label.
- In November, we released the draft
- 19 biological evaluation as part of our ESA obligations
- 20 for glyphosate for public review and comment. The
- 21 comment period closed in March of this year. And
- then in November of 2021, we expect to release the
- 23 final BE for glyphosate and initiate consultation by
- 24 the U.S. Fish and Wildlife Service and National
- 25 Marine Fisheries Service if warranted after we do the

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- 1 BE and -- the final BE and provide that to the
- 2 Services. So that's where we are on glyphosate.
- 3 Chlorpyrifos, recently in the news, we have
- 4 been extending the comment period. We have been
- 5 reviewing the SAP advice, incorporating that science.
- 6 It was also in litigation and, recently, the court
- 7 ordered EPA either modify or cancel the registrations
- 8 for associated food uses for chlorpyrifos. And at
- 9 this time, we're digesting the decision,
- 10 understanding how to proceed to be responsive to the
- 11 Court's order. The deadline for us is about August
- 12 time frame for us to either modify or cancel the
- 13 registration, consistent with either keeping or
- 14 evoking tolerances on the food use piece for
- 15 chlorpyrifos. So that's where the current agency
- 16 process is on chlorpyrifos.
- Neonicotinoids, another chemical that's of
- 18 concern and of interest to this group, in February,
- 19 we published our proposed interim decision for the
- 20 neonicotinoids, acetamiprid, clothianidin,
- 21 dinotefuran, imidaclorprid, and others. We're
- 22 proposing new measures to reduce potential ecological
- 23 risks, particularly to pollinators. We were also
- 24 working with industry on developing and implementing
- 25 stewardship and best management practices.

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- And then we received approximately 200,000
- 2 comments on the proposed interim decisions, and after
- 3 reviewing public input, we are anticipating issuing
- 4 the interim decision in 2021. So that's where we are
- 5 on the neonicotinoids. Stay tuned for some more
- 6 activity on that.
- 7 And then on rodenticides, the draft risk
- 8 assessments for rodenticides were completed in 2020.
- 9 The next step in the registration review process
- 10 includes public comment on the DRA, followed by a
- 11 proposed interim decision in the spring of 2021. So
- 12 you'll see some activity there. And then the interim
- 13 decision is scheduled for late 2021. So you should
- 14 be seeing some new activity on the rodenticides
- 15 coming soon as part of the draft risk assessment that
- 16 was completed.
- 17 Additional actions, we released for public
- 18 comment the proposed interim decision for
- 19 aminopyralid and the puridine herbicides to control
- 20 broadleaf weeds and woody brush. So these are new
- 21 actions that -- registration review updates.
- 22 And then we released the interim decision
- 23 for irgarol, which also finalized the cancellation of
- 24 that as an active ingredient in antifoulant paint in
- 25 order to preserve America's diverse aquatic

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- 1 ecosystems. So sort of two cancellations that
- 2 occurred as part of recent registration review
- 3 decisions.
- 4 We've also been adding new tools to the
- 5 toolbox for growers. We understand the pest
- 6 pressures that growers meet and tried to respond to
- 7 this, those working with industry. So we proposed
- 8 registration for pesticide products containing new
- 9 active ingredients for trifludimoxazin, a tool that
- 10 manages resistant weeds.
- We proposed registrations for a new broad
- 12 spectrum fungicide active ingredient, for fluindapyr
- 13 for foliar agricultural and non-agricultural uses.
- 14 We registered new active ingredients for
- 15 picarbutrazox, which represents a new tool for
- 16 managing resistance to fungi or fungi.
- 17 Issued proposed decision to conditionally
- 18 register the first residential outdoor use of the
- 19 insecticides, cyclaniliprole and flonicamid -- I
- 20 think I pronounced that one okay -- on roses,
- 21 flowers, shrubs and tress. And then we released the
- 22 final pesticide test guidelines for fire ants and
- 23 invertebrate pests of pets.
- So we've been pretty active in the new
- 25 active ingredient space as well.

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- 1 Pet collars have been in the news recently.
- 2 I know Congress is investigating this as well. There
- 3 were a number of reports of pet incidents, also pet
- 4 deaths associated with certain pet collars, the
- 5 Seresto pet collars. We've reached out to the
- 6 companies, requested information from the registrants
- 7 to understand the nature of these incidents. We do
- 8 get incident reporting rolled up at a pretty high
- 9 level. And the question is, you know, are these
- 10 number of incidents above the statistically
- 11 significant incidences that you would see normally
- 12 for a product that has, you know, nine or ten million
- 13 collars out there. They were. It is, you know,
- 14 pretty high. It was about 70,000 incidents. And
- 15 we're analyzing the data to understand where are
- 16 these incidents occurring.
- 17 Some of them range from the mild, like skin
- 18 rash, but there were a couple of 100 deaths
- 19 associated with pets. And we know that our pets are
- 20 precious to us and any number of those pet incidences
- 21 are heart wrenching. As a pet owner myself, I would
- 22 be devastated. So we're definitely taking a serious
- 23 look at the incidents that are occurring with these
- 24 pet collars to take a renewed look at that.
- 25 PFAS and pesticide containers, in

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- 1 September, based on some good citizen science from
- 2 PEER up in Massachusetts, PFAS compounds were found
- 3 in a pesticide product that was used for mosquito
- 4 control in Massachusetts. We did a lot of research
- 5 over the holidays. Folks from the lab actually were
- 6 there over the holiday break researching where the
- 7 PFAS was coming from. We were able to narrow down
- 8 that it was coming from fluorinated containers.
- 9 And so in March, we also -- we put out
- 10 information again in December and then in March about
- 11 the research we had done for that one product, and
- 12 then another product came in as well that we're
- 13 continuing to do research on to determine where PFAS
- 14 is coming. Obviously, we are asking industry to be
- 15 good stewards and examine their supply chains to
- 16 remove any PFAS. We're working with the larger
- implementation plan for PFAS, sort of, risk
- 18 assessment.
- 19 It's an interesting area in terms of what
- 20 level is safe. We don't really have that
- 21 information. We know there are risks. We know that
- 22 certain PFAS chemicals are what are called forever
- 23 chemicals. They last in the environment for a long
- 24 time, and as a result, they make their way into
- 25 drinking water supply. So we want to make sure that

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- 1 any pesticide products don't contain PFAS chemicals
- 2 and we've been working with industry to examine the
- 3 supply chain and remove them where we find them.
- 4 We've examined all the active ingredients
- 5 and all of the inert ingredients for which pesticide
- 6 products contain and there are no sort of PFAS
- 7 chemicals that are part of what we've historically
- 8 believed to be PFAS, the GenX, if you will, PFAS long
- 9 chains. There is some discussion about what is a
- 10 PFAS, and as that definition changes, we're going to
- 11 continue to understand and examine chemicals that are
- in our approval chain to determine whether there are
- 13 any PFAS, and then also try to get a handle on the
- 14 risk assessment that is contained in each of those
- 15 chemicals.
- 16 Obviously, the longer chains are, you know,
- 17 particularly problematic than the short chains. But
- 18 we're continuing to collect data working on potential
- 19 impacts and then working on products that are
- 20 identified as having PFAS chemicals in them and
- 21 running down the container issues as well, working
- 22 with our federal partners as well.
- 23 So Dicamba, again, a product that growers
- 24 are keen on. I've been to the fields in Georgia.
- 25 I've seen nine-foot tall pig weed in the field. I

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- 1 understand how that impact can really present unique
- 2 challenges for growers in soy, in cotton, and so we
- 3 approved the new registration for Dicamba, the new
- 4 label that went out that allowed over-the-top
- 5 applications of Dicamba.
- 6 We had additional mitigation that was put
- 7 in place, drift production agents, bigger buffers.
- 8 So we feel like this new label is going to move the
- 9 needle on reducing the incidents that we've seen.
- 10 And in some states, the incidents are zero. So
- 11 Georgia, Tennessee, for example, those incidents --
- 12 really they haven't seen any incidents of Dicamba or
- 13 no reported incidents with Dicamba for over-the-top
- 14 application. So how can we learn from those states?
- We did receive 24(c) requests from Georgia
- 16 and North Carolina and Tennessee to expand the
- 17 allowed use of Dicamba from our label. We denied
- 18 those requests in part because we are defending this
- 19 label in litigation. We're in three separate
- 20 jurisdictions right now defending the label. We're
- 21 also defending it on both sides. So the -- I know
- 22 that some of the soy growers feel like the
- 23 restrictions are too burdensome, the NGOs feel like
- 24 it's not enough. And so as an agency, we are
- 25 defending our decision to allow over-the-top

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- 1 application of Dicamba.
- 2 And as such, we are not approving any
- 3 additional or changes to that label in order to
- 4 preserve it for the growers of this country, because
- 5 when the court struck down the Dicamba over-the-top
- 6 application early on, it went away for everyone in
- 7 all states. It didn't matter what state you were in,
- 8 Dicamba over-the-top was canceled. And we had to
- 9 take steps to provide the sell through, which we did,
- 10 and then had to take some time to review the new
- 11 submission that occurred and approve it. And so as a
- 12 result, we denied Georgia, North Carolina, and
- 13 Tennessee's request for expanded use of Dicamba.
- 14 We want to see how the current growing
- 15 season goes with the new drip reduction agents as
- 16 well, where we expect to have and see a substantial
- 17 reduction and elimination of incidents. And we're
- 18 hoping that to be the case given the new technologies
- 19 that are out there and the new stewardship programs
- 20 that companies are putting in place. So that's where
- 21 we are on Dicamba.
- 22 Endangered Species, we're going to hear
- 23 from Ms. Tortorici tomorrow, so I don't want to steal
- 24 a lot of her thunder. She's going to talk about the
- 25 Government's response to ESA, which has been a lot

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- 1 recently. We're proud of the work. We're continuing
- 2 to work on ESA. We're looking forward to hearing
- 3 from Lori Anne Burd as well. We've been working with
- 4 CropLife on different approaches for how we can do
- 5 ESA and mirror ESA applications under FIFRA.
- 6 So when we register pesticides, we have the
- 7 responsibility under ESA to protect federally listed
- 8 species. There's Section 7(a)(2) where final actions
- 9 need to be reviewed and any jeopardy decisions need
- 10 to be made that will adversely modify our designated
- 11 critical habitat for species or impact critical
- 12 habitat and species. So there's plenty of work to be
- done under ESA as part of our analysis.
- We have made some recent progress in
- 15 protecting listed species. We continue to register
- 16 new pesticides that are less risky. The targeted
- 17 pesticides, while we're canceling existing
- 18 technologies that don't meet human health and
- 19 environmental risks, we continue to improve the
- 20 scientific analysis. We released the Revised Method
- 21 recently, which incorporates robust science and
- 22 analysis. We've been engaging with the Services.
- 23 In March, we released the BEs for carbaryl
- 24 and methomyl. We're scheduled to release final BEs
- 25 for atrazine, simazine, propazine, and glyphosate,

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- 1 clothianidin, imidaclorprid, and a number of other
- 2 products. And then in April 2021, EPA released the
- 3 Fish and Wildlife Services Draft nationwide Malathion
- 4 Biological Opinion for public comment. So Fish and
- 5 Wildlife Service completed their bi-op. And then in
- 6 September 2020, we created a website that provides
- 7 information and resources to pesticide users on
- 8 listed species and best practices to reduce pesticide
- 9 exposure.
- 10 There's more work to come, so stay tuned.
- 11 There are continued challenges. While we've made
- 12 progress, we know that we can do better. We
- 13 understand, you know, the time-consuming process for
- 14 completing a biological evaluation and how that
- 15 potentially impacts the ability to have early
- 16 mitigations. So we're working on ways where we can
- 17 have early mitigation with industry. So historically
- 18 protections for endangered species haven't been put
- 19 in place until the Services complete their biological
- 20 opinion and, obviously, these difficulties result in
- 21 legal vulnerabilities as well as lack of protection.
- 22 So we're looking at ways we can change that.
- 23 So we've made a lot of progress on the
- 24 analysis. We're looking to pivot with an eye towards
- 25 ways that we can begin to identify and implement

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- 1 protections or listed species earlier. We're
- 2 intending to focus our efforts on working with our
- 3 stakeholders, identifying mitigation protections in
- 4 the short term and not waiting for completion of the
- 5 entire process, and then we're looking forward to
- 6 working with stakeholders to realize the shared goal
- 7 really of protecting vulnerable species in a manner
- 8 that's both effective and practical and implementable
- 9 for the tools that growers need to combat pets
- 10 pressures and also maintaining protections for
- 11 endangered species.
- 12 So it's been a process that's gone on for
- 13 20, 30 years. We're going to continue to work on
- 14 solving it, but it really needs a partnership to
- 15 solve it. And we really need to continue to think
- 16 creatively and be proud of the work that we've
- 17 accomplished, but also continue to do better in this
- 18 area.
- 19 Certification plan overview, we've modified
- 20 certification plans. The modified certification
- 21 plans from the states were due in March. We've had
- 22 successful submissions from all the states and tribes
- 23 and federal agencies, so that was great. We are
- 24 reviewing those plans now with the regions. The
- 25 existing plans remain in effect until March of 2022,

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- or when the plans are approved, whichever's earlier.
- 2 So the certification and training plans from the
- 3 various states that have been submitted, thank you to
- 4 all the states for all that work and to the regions
- 5 for continuing to approve them and work with
- 6 headquarters on improving them. It's a lot of work.
- 7 This is our implementation timeline, and
- 8 we're looking again at 2022 for full plan
- 9 implementation. And we are -- we're pretty good in
- 10 terms of the reviews. Right now, I think we --
- 11 within the agency, we're maybe 50 to 70 percent along
- 12 the path of completing some of our reviews. So
- 13 that's good news, but, you know, a decent heavy lift
- 14 from all regions, all states to get those plans
- 15 approved. So that's on our list.
- 16 And so some upcoming dates are May 1st,
- 17 2021, and I think we were about 70 percent of our
- 18 goal there. So we're -- within a month or so, with
- 19 plans rolling in and regional reviews completed, I
- 20 think we're going to be pretty close to meeting our
- 21 goal.
- 22 And then we have the Federal Register
- 23 notice and tribal consultation process for plan
- 24 applicator certification in tribal lands and Indian
- 25 country.

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1 All right. AEZ Rule, so this is a rule of 2 interest to folks. I think we're going to talk about it at our workgroup meetings, external as well, in 3 terms of what's happening on AEZ role. But, right 4 now, we are in litigation so we've got -- the 2015 5 WPS standards remain in effect with no changes from 6 7 the current rule being implemented. We published the final rule in 2020. And then at the bottom here, the 8 9 preliminary injunction is in effect until June 18, 10 2021. So we're currently in litigation. We're currently working with the parties to understand what 11 12 the agency will do going forward with regard to AEZ. But just wanted a reminder that we're continuing with 13 that litigation in those discussions with the 14 15 petitioners and it's currently stayed as a result. Some other odds and ends that folks were 16 interested in, respirator protection statements. We 17 issued a respirator protection statement in June of 18 19 It was a temporary guidance during the public 20 health emergency. We just issued a new annual fit 21 test delay expiring in 2021, of September. So in the 2.2 absence of compliant options for respirators, because 23 as you're aware, within the pandemic, there was a shortage of respirators. You know, a lot of the 2.4 masks were being taken for COVID. So we provided 25

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- 1 some flexibilities consistent with OSHA's guidance
- 2 for how workers could use respirator protection, and
- 3 we modeled that to address the agricultural worker
- 4 shortage for worker exposure.
- 5 And in addition, in our focus on reducing
- 6 exposures to workers, we actually have been
- 7 evaluating closed systems as an opportunity to reduce
- 8 work exposure. Here's a picture of sort of the
- 9 manual open pour loading of pesticides, which you can
- 10 imagine creates a greater opportunity for exposure to
- 11 those workers. So there are other technologies that
- 12 can come into place. So we generally go with the PPE
- 13 to protect workers from those open exposure
- 14 scenarios, but we can do better.
- So there is new technology that are closed
- 16 loading systems, which are an alternative to the PPE
- that a worker would need to wear and a potential
- 18 option for keeping valuable tools on the market,
- 19 right? So if we have a worker risk profile that's
- 20 very high, this technology, the closed loading
- 21 system, can minimize any exposure to that worker and
- 22 we can retain those technologies, because they are
- 23 made safer through the application of this
- 24 technology.
- 25 So these are examples of sort of your

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- 1 interlocking system, automatic flushing, sort of the
- 2 coupling agents that occur where the pesticide agent
- 3 is in this closed system and never comes in contact
- 4 to the worker. So obviously an area that, with our
- 5 stakeholder in our community, we want to continue to
- 6 encourage.
- 7 So we reviewed and we're continuing to
- 8 begin the review of the new worker exposure
- 9 monitoring data to confirm a significant exposure
- 10 reduction when using closed loading technology, and
- 11 we've got some workgroup members on there if you're
- 12 interested in talking about it further. Matt
- 13 Crowley, Nancy Fitz, Emily Schmid, Moana Appleyard,
- 14 Carolyn Schroeder, Matt Lloyd, and Jeff Dawson were
- instrumental in moving the needle forward in this
- 16 area and we really wanted to give them a shout-out
- 17 and provide you guys with some information on some
- 18 really great work that's happening with no PPE
- 19 regarding protecting workers.
- We had some risk communication
- 21 transparency. We had put that on the agenda.
- 22 Unfortunately, Casey Buell was unexpectedly taken
- 23 away and not able to present, but we will definitely
- 24 put that on for a future topic. I understand that's
- 25 a topic that the PPDC members are interested in.

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- 1 This is just kind of a brief slide on what
- 2 we do for risk communication and transparency. One
- 3 example, in our COVID public health emergency was
- 4 infographics that we put out on how to safely apply
- 5 disinfectants, when were disinfectants needed, when
- 6 were they not, what is an effective surface
- 7 disinfectant? A lot of the times when you're using
- 8 your disinfection, you got to look at the label
- 9 because a lot of cases people spray and then they
- 10 immediately wipe. That's not the proper way to use
- 11 that technology. You've got to look at the time that
- 12 the surface needs to remain wet, in some cases, it's
- 13 30 seconds, and in some cases, it's 10 minutes. So
- 14 make sure you're reading the label directions and you
- 15 are using the appropriate PPE if it's mentioned. You
- 16 are keeping it out of reach of children.
- 17 So there was lots of risk communication on
- 18 EPA's website that occurred regarding SARS-CoV-2.
- 19 And we continue, through our NPIC center, which we
- 20 were going to have a whole presentation on, talk
- 21 about how EPA communicates risk and how risk can be
- 22 communicated.
- 23 And then stakeholder engagement, obviously,
- 24 all the collaboration that we've been doing with our
- 25 FIFRA Scientific Advisory Panel, this program,

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- 1 Pesticide Program Dialogue Committee, pesticide
- 2 industry, environmental groups, governments,
- 3 agencies, international organizations and foreign
- 4 partners, and then all the issue-specific technical
- 5 experts, the academics that we consult, the weed
- 6 scientists that we are able to address, the state and
- 7 local agencies.
- 8 It takes a village to make sure that as a
- 9 government executive agency we are doing our best to
- 10 provide safe and effective pesticides to our growers
- and to consumers and to the public who need these
- 12 technologies, and, of course, to the public who
- 13 provides us lots of comments and inputs on any and
- 14 all the things that we put out there for public
- 15 comment.
- In each stage of the process, transparency
- 17 is our motto, scientific integrity, putting out the
- 18 draft risk assessments for public comments, putting
- 19 out the PIDs for public comment and really addressing
- 20 those comments.
- 21 And then, finally, putting us right on time
- 22 with time for a couple of questions, these guys are
- 23 coming to town. Cicadas are coming back. And we're
- 24 going to do some outreach on this, in part, because
- 25 we've been getting some questions about, hey, what

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- 1 pesticides are good for reducing cicadas and seeing
- 2 some advertisements for pesticides on cicadas. And
- 3 my response is don't need it, don't use it.
- 4 These cicadas are, you know, Eastern United
- 5 States, so those in the West don't know what we're
- 6 talking about. This is the beautiful bug that I'm
- 7 talking about, red eyes, emerges from the ground
- 8 after 17 years. There are annual cicadas. There's
- 9 13-year cicadas. These are the 17-year cicadas.
- 10 They're the Brood X, which are starting to come out.
- 11 It's been a little cold, but they're going to come
- 12 out in force. A couple billion of them are going to
- 13 come through the ground and be active for about six
- 14 to eight weeks while they try to find a mate and then
- 15 produce eggs that go underground and start the
- 16 process all over again for another 17 years. It's
- 17 quite a magical event.
- 18 But they are incredibly harmless. They are
- 19 an amazing food supply for the environment. They
- 20 create an abundance of -- you know, source of food
- 21 for every walk of life on the Eastern Seaboard. So
- 22 we don't want to apply pesticides on them. If you
- 23 do, you're doing nothing. There's another billion of
- 24 them coming behind the one you sprayed. In fact, if
- 25 you spray them and then they're as a food source, as

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- 1 I mentioned, you're spreading the contamination if
- 2 your pet gets a hold of them and now you've sprayed
- 3 the pesticide on the cicada
- 4 So we're going to be doing -- you'll see
- 5 some communication, some coms, around the beneficial
- 6 part of these cicadas and really just leave them
- 7 alone, let them go about their business and don't
- 8 really need to apply pesticides, because we have been
- 9 getting questions around that and we felt the need to
- 10 amplify the message that these are -- these are not
- 11 necessarily pests, right? They're just going about
- 12 their day. They do crimp some of the leaves, right;
- 13 it's called flagging -- on the trees, but the trees
- 14 will be fine. If you've got small shrubs that you're
- 15 worried about, you can sort of net them. So we've
- 16 got some techniques. If you really want to protect
- 17 shrubbery that you're worried about for these
- 18 cicadas, then we've got some opportunities for you to
- 19 do and use other than pesticide.
- 20 So I wanted to have a brief mention of
- 21 that. So stay tuned some for some videos and some
- 22 PSA announcements and websites that talk about the
- 23 cicada, which is coming. And that is my last slide
- 24 and with that we'll take any questions. We've got a
- 25 lunch break, which we're eating into. Maybe we'll

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- 1 take about five or ten minutes to answer questions
- 2 and let you guys go on lunch. So thanks for your
- 3 time. Thanks for listening and thanks for the
- 4 suggested topics.
- 5 Amy has a question.
- 6 MS. LIEBMAN: Can I just ask it? Would
- 7 that be okay if I just --
- 8 MR. MESSINA: Yeah, go ahead.
- 9 MS. LIEBMAN: Okay, good. Well, first of
- 10 all, thank you so much. That was really helpful and
- 11 it sounds like you guys have been super, super busy.
- 12 But, first, I wanted to give you just a big hats off
- in following the science around the transmission of
- 14 COVID-19, recognizing that it's more airborne and
- 15 that we have very limited documented cases of it
- 16 being transmitted on surfaces. So hats off on the
- 17 quick response to the emerging science on that.
- 18 I'm curious, though, on your respiratory
- 19 protection guidance and the extension of the guidance
- 20 that you put out in June 2020, why you're not
- 21 following the science on that. There is no longer
- 22 any shortage of personal protective equipment around
- 23 the N-95s. California actually just put out guidance
- 24 regarding that, that there's no longer a shortage.
- 25 So I don't understand why the EPA is continuing that

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- 1 guidance and, you know, falling down on the job in
- 2 terms of protecting our handlers.
- MR. MESSINA: Yes, thanks, let me make sure
- 4 I'm off mute. Yeah, well, I would use different terms
- 5 than "falling down on the job." I think we have --
- 6 we did some research to understand and talk with our
- 7 stakeholders. There is still a shortage out there,
- 8 in particular, for the ag workers. That was
- 9 information provided to us. If you have different
- information, we need to reconsider that. I'm happy
- 11 to have that conversation. I would say let's talk to
- 12 Carolyn Schroeder about that.
- The other thing is it's not sort of a
- 14 blanket waiver of, you know, respiratory PPE. It's
- 15 not a waiver from those requirements at all. The fit
- 16 test delay was needed because, you know, folks hadn't
- 17 been vaccinated yet. They're just starting to get
- 18 vaccinated. It's not a time where you want to go in
- 19 and be in close contact with a doctor. If you can,
- 20 you should do it, but if you can't, this memo allows
- 21 that flexibility in order for you to kind of continue
- 22 to wear that PPE.
- 23 The other thing is there's sort of a
- 24 hierarchy of when you go to reusing a mask, right?
- 25 So it's not -- again, we're not waving the PPE

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- 1 requirement. It's can you reuse the mask, how old
- 2 can it be, and making sure you understand those
- 3 protocols.
- 4 So when you read the letter, we did our
- 5 best to really follow the OSHA guidance, which talks
- 6 about a hierarchy of what do you do if it's not
- 7 available, what do you do if -- you know, okay,
- 8 continue to reuse the masks, look for other masks,
- 9 continue to protect yourself. But if you can't find
- 10 that tier 1/level 1 respirator, then there are other
- 11 options out there.
- 12 And then the fit test is really the only
- 13 thing that got delayed and that's just to let folks
- 14 -- it had expired, so right now we would be saying,
- 15 you have to go -- tomorrow, you have to go get your
- 16 fit test and we didn't want to say that because there
- 17 are folks that still haven't gotten their second
- 18 vaccine or haven't been fully vaccinated. So we just
- 19 wanted to give folks a little bit more time to go in
- 20 and do get that fit test. Do make sure that that
- 21 respirator is fitting for your work. And this will
- 22 definitely expire as conditions change and we're
- 23 going to let it continue to expire.
- MS. LIEBMAN: So, and I'll follow up with
- 25 Carolyn on this one, but just to clarify, the way

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- 1 that I read the email blast that EPA sent out was
- 2 that you were delaying the fit test until a certain
- 3 date, but that the temporary guidance issued in June
- 4 of 2020 remain in effect. Is that -- am I reading
- 5 that incorrectly?
- 6 MS. SCHROEDER: And I am on the line if
- 7 that helps, Ed.
- 8 MR. MESSINA: Yeah, go ahead. Sure. Chime
- 9 in, please.
- 10 MS. SCHROEDER: Does that help? Okay. Hi,
- 11 Amy. This is Carolyn Schroeder. You are reading it
- 12 correctly. The memo itself does not have an
- 13 expiration on. It's for the duration of the
- 14 pandemic. And we are staying in close contact with
- 15 OSHA, keeping it aligned with what we're hearing.
- 16 Across the nation, there are still shortages and
- 17 service disruptions being reported. And then this is
- 18 an EPA memo and the states themselves would be basing
- 19 their own enforcement discretion on a very strict --
- 20 following the conditions and a case-by-case basis.
- 21 So, as Ed said, just to reinforce, it's not
- 22 a waiver of the PPE requirements or the WPS or any of
- 23 the label requirements. So it would be making a
- 24 decision based on the geographical, like whatever the
- 25 conditions are, which does vary quite a bit, and we

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- 1 are following what we're still hearing.
- 2 As far as the fit test part, there was --
- 3 one of the options is the annual test and it was a de
- 4 facto type of expiration where it said if you had had
- 5 your initial fit test and you're now getting your
- 6 annual fit tests and you had it in 2019 season, then
- 7 you may be able to delay -- if you follow these
- 8 conditions, you may be able to delay the fit test --
- 9 the annual fit test requirement. You still have to
- 10 get your medical evaluations. You still have had to
- 11 have your initial fit test. You still have to have
- 12 your annual training on it.
- 13 There's certain information that has to be
- 14 passed to the applicator, the handler, and also
- 15 making sure that if you did have any physiological
- 16 conditions, that would normally trigger a new fit
- 17 test and that would still have to take place. So
- 18 this was more about service disruptions, as Ed
- 19 mentioned, to protect against COVID in areas where
- 20 those services are not available.
- 21 However, that -- because we said it was in
- 22 2019, in 2020 then, it expired then at the end of
- 23 2020. And, therefore, we were still getting reports
- 24 that there were certain areas in the nation where
- 25 those fit tests were not available and, therefore, we

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- 1 extended it through September of this year to allow a
- 2 further extension on that annual fit test into 2021.
- 3 And then we're looking and still gauging when to
- 4 sunset the -- all of it, and we'd like to do that as
- 5 well, as soon as possible, as those conditions are
- 6 changing.
- 7 And you're right, things are starting to
- 8 look up. Those service disruptions and also the
- 9 shortages for those N-95s is starting to change and
- 10 that's really good news. It's just not universal
- 11 yet. And the pandemic is still going on and the
- 12 rollout of the vaccines is still taking place.
- I hope that answered your question, and I
- 14 know we're going to discuss this as well further this
- 15 week and happy to talk more offline as well.
- 16 MS. LIEBMAN: Great. Thank you so much. I
- 17 do want to follow up with both of you on this.
- MS. SCHROEDER: Sure.
- 19 MS. LIEBMAN: And I also sent you some of
- 20 the guidance that California has issued. And just a
- 21 reminder that your original memo that you issued in
- 22 June 2020, in addition to the delay of the fit test,
- 23 there are other concerning components of it in terms
- 24 of reuse of respirators. So there are other issues
- 25 that we're concerned about, about keeping this

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- 1 guidance going. So we'll talk about it later this
- 2 week and thank you for responding to my question.
- MS. SCHROEDER: Sure. Thank you, Amy.
- 4 MR. MESSINA: Thank you, Amy.
- I have one more question.
- 6 MR. ANNINOS: Yeah, any other questions?
- 7 Oh, Charlotte Sanson has a question.
- 8 MR. MESSINA: Okay, Charlotte.
- 9 MS. SANSON: Yes, hi, thank you. Thanks,
- 10 Ed, for the comprehensive overview.
- 11 This may be just a very simple question,
- 12 but relative to the upcoming office move later this
- 13 year, there's concerns with potential delays, which
- 14 could occur on work being done on PRIA and non-PRIA
- 15 actions and many of which have already been
- 16 backlogged. So, you know, we're wondering what steps
- 17 OPP is taking to minimize disruptions with workflow
- in preparation for the move, because it's not just
- 19 people, but obviously technology and other
- 20 considerations as well with moving such a large
- 21 organization. Thanks.
- MR. MESSINA: Yeah, great question. You
- 23 know, to be honest, it could impact work. There are
- 24 other things also impacting work. But, as you know,
- 25 as an organization, we've really been trying to look

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- 1 for efficiencies using lean processes. We've been
- 2 trying to update our technology so that we can do
- 3 everything remotely, right? And as you can see from
- 4 our metrics, we've actually been doing a lot
- 5 remotely. And just the amount of work that's come in
- 6 has been pretty impressive.
- 7 It could be that as people move -- I mean,
- 8 I haven't been in my office. This Friday's going to
- 9 be the first time that I go visit my office as part
- 10 of the cohort that was selected to go in because the
- 11 building's been closed. And I'm going in this Friday
- 12 for the first time in a long time. I'm going to see
- 13 what my M&M jar looks like that I left in March and
- 14 start packing up. But that's going to be like one
- 15 day, hopefully, you know, a small amount. And then
- 16 movers are going to come and take all those boxes and
- 17 move them to my next office.
- 18 So folks may not really be in the office
- 19 much anyway, right? There's sort of two separate
- 20 things happening. One is the move; the other is when
- 21 are we going to sort of have the building be open at
- 22 full capacity and having people come into work. So
- 23 the move itself will be -- the impact on the employee
- 24 is going to be packing up their office, maybe they're
- 25 not even in their office, we're able to do everything

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- 1 remotely, and then unpacking their office. And,
- 2 hopefully, in the background, everything is taken
- 3 care of.
- 4 The technology, we're all able to sort of
- 5 use our laptops in any WiFi connection. So the
- 6 physical move should have less of an impact. Our
- 7 phones are transferred to -- mine is transferred, you
- 8 know, to a different phone that I can answer here.
- 9 So the technological improvements we have should not
- 10 have that big of an impact on the employee as part of
- 11 the move. We're hoping for as minimal disruption as
- 12 possible, but it is going to be an impact.
- So hopefully, that answers your question,
- 14 Charlotte. We're trying to take steps to minimize
- it, but, yes, you're right, it potentially is going
- 16 to impact it. And we're trying to make it happen not
- in September, which is kind of the end of the quarter
- 18 where everyone is trying to get everything done, but
- 19 have it be maybe closer to October, at the beginning
- 20 of the fiscal year.
- MS. SANSON: Yeah, yeah, it does. Thanks.
- 22 MR. ANNINOS: We don't see anyone else in
- 23 the chat box asking to speak, but we can just ask if
- 24 anybody wants -- has as an additional question for
- 25 Ed.

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- 1 MR. MESSINA: I'll be here all week, too.
- 2 MR. ANNINOS: Yep.
- 3 MR. MESSINA: So why don't we cut to lunch
- 4 and then we're going to pick up with our agenda and I
- 5 don't know, maybe we'll display the current updated
- 6 agenda, which is in the link on the PPDC website
- 7 that's now up there. So you'll see the Day 2 change,
- 8 which has us -- it has us ending at 4:00 p.m. to
- 9 change the fact that Casey Buell was not able to meet
- 10 with us.
- 11 But we're going to pick up with our
- 12 farmworker and clinician training workgroup update
- 13 from Mily and Carolyn at 1:30 to 2:30. And then
- 14 we'll go into our emerging technology sessions.
- 15 We'll have Nina Wilson from BPIA and Keith Jones from
- 16 BPIA talk to us. And then we'll have time for public
- 17 comments. So if you want to make a public comment,
- 18 please follow the instructions that Paul gave. And
- 19 we'll see everyone at 1:30.
- 20 Over to you, Paul.
- MR. ANNINOS: Thank you, Ed.
- Just a couple of things. One, we're going
- 23 to recommend that you don't log out of the meeting,
- 24 that you go ahead and stay logged in. Just put
- 25 yourself on mute and shut off your video until you

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Т	rejoin the group. And then we're going to convene at
2	1:30, but I'm asking the workgroup presenters for the
3	farmworker and clinician training workgroup to log in
4	a little bit early, about 10 minutes early if you
5	could, just to make sure we can do an audio check and
6	make sure the slides are set up properly.
7	And then to all the rest of you, you know,
8	joining at 1:28, be sure that we're ready to go by
9	1:30, so 1:30 Eastern time. I know we're in many
10	different time zones here. So I think we're ready.
11	Enjoy your lunch. Your lunch can actually continue
12	into the next segment if you turn off your, let's
13	say, your audio and video. But we'll see you at 1:30
14	and we'll see that the workgroup presenters from
15	farmworkers and clinician workgroup joining about 10
16	minutes early, 1:20, 1:25. Okay? Thank you very
17	much, everybody.
18	(Lunch break.)
19	
20	
21	
22	
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24	
25	

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- 1 FARMWORKER AND CLINICIAN TRAINING WORKGROUP UPDATE
- 2 MR. ANNINOS: Well, I hope everybody did
- 3 get a chance to take a deep breath during lunch and
- 4 maybe grab something to eat. And we're getting ready
- 5 to start the afternoon session and we're going to
- 6 move into our first workgroup presentation, the
- 7 Farmworker and Clinician Training Workgroup.
- 8 And I'm going to turn this -- the co-chairs
- 9 for this workgroup are Mily Trevino-Sauceda from the
- 10 Alianza Nacional de Campesinas. Also, from EPA, we
- 11 have both Carolyn Schroeder and Steve Schaible as co-
- 12 chairs. And I'll just turn it over to whoever is
- 13 first on the agenda for this presentation.
- 14 MS. TREVINO-SAUCEDA: Okay, that must be
- 15 me. This is Mily Trevino-Sauceda.
- MR. ANNINOS: Okay.
- MS. TREVINO-SAUCEDA: And I'm going to --
- 18 is that fine? I'm going to have to take off my video
- 19 so that I won't have my voice chopped. Thank you.
- 20 Yes, thank you. We have had -- we're
- 21 representing the Farmworker and Clinicians Training
- 22 Workgroup. It's under, of course, the Pesticide
- 23 Program Dialogue Committee meeting. And can we go to
- 24 the next slide, please?
- 25 And the people that are part of this group,

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- 1 as you can see all the people that are participating,
- 2 and, of course, Steve and Carolyn with myself are co-
- 3 chairs of this group and workgroup, and the rest of
- 4 the people have been very, very effective in terms of
- 5 sharing their expertise and giving us some feedback
- 6 and providing a lot of recommendations.
- 7 So can we continue? Thank you. Next
- 8 slide, yes.
- 9 And the Farmworker and Clinician Training
- 10 Workgroup has been a meeting within the last, you
- 11 know, the last, like, around six months. And we have
- 12 had, you know, like, a series of meetings, and aside
- 13 from the monthly workgroup meetings, there has been a
- 14 subgroup that has been meeting -- was able to meet
- 15 twice before this call just to make sure we were
- 16 prepared to do our presentation, and we're eager to
- 17 continue doing this kind of work because we are very,
- 18 very interested. We represent -- most of the people,
- 19 if not all, are very much interested in making sure
- 20 that farmworkers and clinicians have the appropriate
- 21 training.
- 22 And so we're going to do our best between
- 23 -- throughout all this time and between now and
- 24 October to give a full presentation of how everything
- 25 -- what are going to be our recommendations.

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1 Thank you. Can you go next? 2 Thank you. The charge questions that we have are about 3 4 how should EPA go about addressing new reporting requirements specified in PRIA 4 for PRIA set-asides 5 for farmworker protection activities. And there were 6 7 several. And aside from that, there was a lot of conversations around that, but these are the specific 8 9 charge questions. 10 How should EPA evaluate appropriateness and 11 effectiveness of farmworker protection activities? 12 And I'm just going to read the questions and then 13 we're going to give an explanation that's going to be further. And let me just read the questions and then 14 15 I'm going to say who else is also going to 16 participate. I should have done that at the 17 beginning. Sorry about that. The next question is, how should EPA engage 18 stakeholders in decisions to fund such farmworker 19 protection activities. That's -- for us, that is 20 21 very, very important. How should stakeholders be 2.2 engaged? And how and when should EPA reach out to 23 stakeholders, including farmworker community-based 2.4

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organizations in their development of analysis on

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appropriateness and effectiveness of such activities? 1 2 Next. And what has been happening is that because 3 4 there has been -- we have a background, and this is part of what Amy is going to help us provide. We 5 actually, within the group, from the farmworker 6 7 membership, we have suggested that there be a specific workgroup focusing on farmworkers and Worker 8 9 Protection Standards because we have seen that there 10 is some lack of that. And if there is some work around that, there still needs some, you know, 11 12 feedback and recommendations. And the same thing, we felt that it was 13 important that clinicians also be added to the 14 15 conversation about the workgroup because we feel that 16 they do play a critical role in the Worker Protection Standard. And it's more related -- it's related in 17 many ways, but one of the reasons why personally some 18 19 of us feel our clinicians should be involved is 20 because many more times many clinicians are not 21 prepared to deal with farmworkers' exposures to 2.2 pesticides in the workplace and they many more times 23 are -- because they're not prepared, they're not given the right kind of diagnosis or recommendations 24

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in terms of what should follow next.

25

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- 1 Next.
- 2 And, right now, I'm going to ask Amy to
- 3 help and I know that Jeannie will have some support
- 4 here and maybe the other companeras also will join
- 5 Iris and Patsy, that were also part of this
- 6 conversation. So you're more than welcome to add if
- 7 between Amy and I we were not able to provide
- 8 everything that we talked about. Yeah.
- 9 So, Amy, can you help us in terms of
- 10 starting with the Worker Protections Standard, how it
- 11 protects and the two types of employees.
- 12 MS. LIEBMAN: Great. Thank you so much,
- 13 Mily, and thank you to Carolyn and Steve and Mily for
- 14 co-chairing this, as well as to all of our colleagues
- on this workgroup for helping us with it.
- 16 We thought it would be really helpful just
- 17 to give a little bit of context and background,
- 18 because this workgroup, we're really focusing a lot
- on the Worker Protection Standard. So we wanted to
- 20 just underscore who are we talking about when we talk
- 21 about the types of workers that are protected under
- 22 this standard.
- 23 So first, we have our pesticide handlers,
- 24 and the pesticide handlers are employees or workers
- 25 who mix, load, and apply agricultural pesticides.

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- 1 They also can clean or repair pesticide application
- 2 equipment, and they also take part and assist in the
- 3 application of pesticides. And then we also have
- 4 agricultural workers and we often call the
- 5 agricultural workers farmworkers as well, those who
- 6 perform tasks related to growing and harvesting
- 7 plants on farms or in greenhouses, nurseries or
- 8 forests. And these two explanations are taken
- 9 directly from the EPA and its own explanation on the
- 10 Worker Protection Standard.
- 11 Let's go to the next slide.
- 12 So this group is dealing with farmworkers
- 13 and clinician training and so we want them to sort of
- 14 also underscore why is it that we would involve
- 15 clinicians in our focus for this workgroup. And
- 16 clinicians or health care providers -- and our
- 17 definition of the clinician is broad, it is from the
- 18 specialist physician to anyone that's providing
- 19 health care to workers. And so sometimes that might
- 20 include an outreach worker or a community health
- 21 worker, it includes nurses and nurse practitioners,
- 22 PAs, physician's assistants and nurse practitioners.
- 23 And so -- and where are they located?
- 24 They're located in a number of health care delivery
- 25 sites, health centers, community health centers with

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- 1 clinics, emergency departments, and hospitals. They
- 2 are in urgent care centers and they're also in health
- 3 departments. And in some cases, they're actually in
- 4 private practice.
- 5 And so where within the WPS are clinicians
- 6 involved? Clinicians play a very important role in
- 7 terms of the medical evaluation for fit testing.
- 8 There's actually a -- sort of a screening that's done
- 9 when you're going through the fit testing, and if
- 10 there are certain answers that come out positive in
- 11 that screening, then workers actually see a health
- 12 care provider for that fit testing, although -- for
- 13 parts of that fit testing for the medical evaluation,
- 14 although those who do fit testing actually don't have
- 15 to be a clinician.
- And then, most importantly, are that
- 17 clinicians are going to be on the front lines of
- 18 dealing with pesticide poisonings, either with a
- 19 worker that's coming to them and they need to know
- 20 how to actually treat the worker, but they also need
- 21 to know how to treat the worker in an acute
- 22 situation, but they also need to know how to manage
- 23 that pesticide poisoning and prevent it. So in
- 24 addition to coming to a clinician with an acute
- 25 exposure, clinicians play a really important role in

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- 1 also helping to prevent, and that includes reporting
- 2 to the EPA and reporting to the various surveillance
- 3 systems that are helpful in understanding what is
- 4 happening once pesticides are registered and put in
- 5 use.
- 6 And so it's incredibly important that we
- 7 train clinicians to recognize and manage pesticide
- 8 poisonings. And that's why we feel that they are an
- 9 important player in looking at the type of education
- 10 that's offered from the funds used from PRIA.
- 11 And just on a little side note, a long time
- 12 ago, Migrant Clinicians Network was part of a
- 13 cooperative agreement with EPA where we train
- 14 clinicians, and almost to a tee, every health center
- 15 that we went to where we talked to clinicians about
- 16 managing and recognizing pesticide poisoning, half of
- 17 them did not understand what the reporting
- 18 requirements were in their state and even that they
- 19 were required to report pesticide poisoning.
- Next slide.
- 21 So the questions that our workgroup is
- 22 addressing, we're looking at PRIA-funded educational
- 23 materials are not necessarily optimized for
- 24 farmworker audiences and should they be. The most
- 25 recent PRIA funding announcement referenced: Workers

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- 1 exposed to residue agricultural or nonagricultural;
- 2 pesticide handlers; and supervisors, trainers,
- 3 regulators, labor contractors, and consultants.
- 4 Next slide.
- 5 And then we are asking what are the
- 6 outcomes related to the PRIA-funded activities that
- 7 EPA should track. And some of our ideas include the
- 8 following: A change in knowledge or knowledge
- 9 improvement after using educational materials;
- 10 enhanced capability of partners and stakeholders to
- 11 be able to implement various pesticide safety
- 12 programming and pesticide safety activities.
- 13 Ideally, we would want to see fewer incidents
- 14 impacting human health and communities, fewer
- 15 exposure incidents, fewer documented impacts.
- 16 We want to look at fewer environmental
- 17 incidents that are impacting the environment, such as
- 18 bee kills, and we want to see what educational
- 19 materials are created, distributed, and used, and
- 20 then we are also sort of open to other ideas.
- 21 But that was one of the brainstorms that we began
- 22 addressing in our workgroup.
- Next slide, please.
- In looking at what outcomes related to
- 25 PRIA-funded activities the EPA should track, in

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- 1 addition to our ideas, we also brainstormed about
- 2 possible challenges and those challenges include, you
- 3 know, the funding to provide and perform the best
- 4 ways to assess knowledge and to evaluate various
- 5 efforts. So is there going to be funding for surveys
- 6 or are we going to do semi-structured interviews and
- 7 focus groups. And there have been -- you know, EPA
- 8 has been lucky in that there have been some NIEHS-
- 9 funded studies that help look at this. But, by and
- 10 large, there's not funding that comes out of the EPA
- 11 to fund deep evaluation or -- and should that funding
- 12 be part of what comes out of EPA.
- 13 Funding to monitor the health and
- 14 environmental impacts with more accuracy. And then
- 15 it was noted that there's a Paperwork Reduction Act
- 16 that requires anyone that's receiving grant funding
- 17 from the Government to perform an information
- 18 collection request that requires several additional
- 19 layers of approval, which seems like it requires more
- 20 paperwork -- that's why I'm laughing -- before asking
- 21 any survey style questions. So that would be
- 22 something that we would need to address. And, of
- 23 course, we're open to sort of considering potential
- 24 other challenges.
- Next slide, please.

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- So for future discussion, we're going to be
- 2 looking at what are the existing resources and data
- 3 and tools for quantifying the outcomes and who are
- 4 the stakeholders that can help us understand the
- 5 appropriateness and effectiveness of the PRIA-funded
- 6 activities, who are the stakeholders to include, what
- 7 voices need to be at the table, and how should EPA go
- 8 about addressing new reporting requirements specified
- 9 in PRIA 4 for PRIA set-aside funds for worker
- 10 protection activities.
- 11 Next slide.
- 12 And now we'd like to open it up to any
- 13 questions. But before we open it up to the general
- 14 PPDC, we are opening up to our members of our
- workgroup, if they wanted to add anything, Mily.
- 16 MR. ANNINOS: Mily, you might be on mute.
- 17 MS. TREVINO-SAUCEDA: I'm good, thank you.
- 18 Sorry.
- 19 MS. LIEBMAN: Okay.
- 20 MR. ANNINOS: Amy, to answer your question,
- 21 yes, if you have workgroup members that would like
- 22 to, you know, maybe tag on -- tag along on any of the
- 23 slides or comments that you've made, this would be a
- 24 great time to do that.
- 25 Of course, for everybody's sake, as we

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- 1 know, we're -- our primary audience here, of course,
- 2 is the PPDC members. This is their opportunity to
- 3 provide feedback on specific -- in this case, for
- 4 example, Sarah, if you were to back up to the slide
- 5 before this where Amy had briefed out two or three
- 6 areas of future discussion, we could leave that slide
- 7 up there. That might prompt some PPDC members. But
- 8 this is a chance for other workgroup members and PPDC
- 9 members to ask questions, make comments, and add some
- 10 color commentary to what this workgroup charge was.
- 11 MS. ECONOMOS: Hi, this is Jeannie from the
- 12 Farm Workers Association of Florida in Apopka. I'm
- 13 the health and safety project coordinator. I did
- 14 watch the presentation earlier today and thank you
- 15 very much. That was really informative. I know
- 16 there was talk about the dog collars and the
- 17 pesticide in the dog collars.
- And I just want to say I don't know how
- 19 many people on the PPDC are really aware of just how
- 20 much farmworkers are at risk from pesticide exposure
- 21 and how important it is to make sure that we're
- 22 really doing a really good job of education,
- 23 training, and protection for the workers, because
- 24 there's not only short-term effects, but there's
- 25 long-term chronic and generational effects of

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- 1 pesticide exposure. So that's why I think it's
- 2 really important that we really put a lot of emphasis
- 3 on this because it's a public health issue that are
- 4 -- it's really affecting a lot of people in our
- 5 communities.
- I also want to say that, as Amy mentioned,
- 7 we used to do trainings with healthcare providers in
- 8 the State of Florida and the vast majority of
- 9 farmworker clinics where we did trainings had no idea
- 10 that they had to report pesticide-related illnesses
- 11 to the state to be recorded, and that's a real
- 12 problem. Not only did they not know about the
- 13 reporting requirements, but they did not have any
- 14 idea of what even to ask for or even to look for.
- 15 They weren't even aware of what the signs and
- 16 symptoms of pesticide poisoning are.
- 17 There's a real huge, gigantic knowledge gap
- 18 among clinicians and healthcare providers that treat
- 19 farmworkers in terms of what signs and symptoms to
- 20 look for, especially since some of the symptoms are
- 21 similar to other symptoms, like flu and a cold and,
- 22 you know, even pregnancy. So there really needs to
- 23 be a real emphasis on a national scale to emphasize
- 24 healthcare providers.
- 25 So I think that this discussion is really

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- 1 important and this group is really important to help
- 2 advance that, because it is families and individuals,
- 3 and our communities are being affected by it.
- 4 So I just wanted to thank everybody for
- 5 this opportunity, and I hope everybody will seriously
- 6 think about these questions and see what we can do
- 7 together to improve healthcare for farmworkers and
- 8 health and safety for farmworkers. Thanks.
- 9 MS. TREVINO-SAUCEDA: Gracias, Jeannie.
- 10 And we actually needed to make sure that Jeannie
- 11 would participate with our group because -- I'm going
- 12 to -- in case my voice doesn't sound good -- because of all
- 13 the experience -- experiences that people have gone
- 14 through and the cases that they have had to deal
- 15 with. And there have been many, many in Florida.
- In California, there have been many cases
- 17 where -- you know, how can we help and there's a lot
- 18 of information that organizations have that are doing
- 19 the work in their communities, but don't have the
- 20 resources to follow through or to help, or a company
- 21 or advocate for workers, or accompany them, so that
- 22 workers can feel the trust with any kind of agency or
- 23 even clinic.
- 24 So for the reasons that Jeannie was talking
- 25 about, there's -- I mean, Alianza Nacional de

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- 1 Campesinas represents many more organizations that
- 2 are going through and sharing the same kind of
- 3 information. And we just had -- which Migrant
- 4 Clinicians Network and Farmworker Justice were also
- 5 part of, we just had a national convening of
- 6 farmworker women sharing their stories during the
- 7 time and in terms of sharing their stories about the
- 8 pesticide experiences that they have had and the
- 9 symptoms and, aside from that, the impacts it has
- 10 cause to their lives and their reproductive system.
- 11 And so it's -- so there's many, many, many issues
- 12 that are -- that are there and probably there's --
- 13 there needs to be a lot more attention to that.
- 14 And so the questions that are here are
- 15 very, very general, but there's a lot of information
- that we can be adding between now and October.
- 17 Thank you. I don't know if other people
- 18 might have questions or want to add additional
- 19 information. Thank you.
- 20 MR. ANNINOS: Yes, thank you, Mily.
- 21 And, Jeannie, thank you for your comments.
- 22 If you -- if anybody on this call opens
- 23 their chat window in the lower right-hand by clicking
- 24 the word "chat," you'll see that people are lining up
- 25 now for -- they're following instructions, which is

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- 1 to place their name into the chat window, which, for
- 2 example, Jasmine Brown has done that. We have two
- 3 PPDC members that have kind of, sort of, so to speak,
- 4 signed up to ask a question.
- 5 So we'll start with Jasmine and then we'll
- 6 move to Iris.
- 7 MS. BROWN: Thank you, Paul.
- 8 My first question, one of the questions
- 9 that I would like the workgroup to look into or work
- 10 on was that in our area, in Region 8, hospitals and
- 11 health care clinics are not required to enter
- 12 chemical exposure as a code. So when people do come
- in with a pesticide illness, it's only captured in
- 14 the doctor's notes. So when we go to our clinics or
- 15 to our hospitals and we say how many exposure cases
- 16 have you had this year related to pesticide illness,
- 17 they can't query that. And we're not asking for
- 18 confidential information, like names or anything like
- 19 that, just a general number. So if that -- I think
- 20 with this effort, this emphasis on training
- 21 clinicians and healthcare workers, maybe extend that
- 22 to local hospitals as well.
- 23 And then I just wanted to say thanks for
- 24 bringing up the lifetime exposures and the chronic
- 25 exposures. That tends to be more -- we see some of

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- 1 that. People aren't aware necessarily that they've
- 2 had generational or lifetime exposures. Maybe our
- 3 nine-time farmer could speak a little bit to that.
- 4 But they have been exposed on the daily typically for
- 5 generations. And so keeping their own family safe as
- 6 well as the workers on their establishment safe, you
- 7 know, I'm sure is one of their priorities.
- Those are my only comments. Thank you.
- 9 MS. LIEBMAN: Can I respond to Jasmine just
- 10 a little bit?
- 11 MR. ANNINOS: Sure, Amy.
- 12 MS. LIEBMAN: So first of all, Jasmine,
- 13 thank you so much for those really important
- 14 comments. And one of the things that is really
- 15 important when we look at clinician training is that
- 16 we aren't just doing training where, okay, here are
- 17 the signs and symptoms of pesticide poisoning and
- 18 this is what you need to know, but we're really
- 19 taking a look at a deeper level and looking at the
- 20 clinical systems that surround that clinician who is
- 21 making various decisions.
- 22 So there is the actual training needs of
- 23 the clinician who's having that encounter with the
- 24 patient, but then what are the systems in place where
- 25 they can report, where they can get resources to help

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- 1 the patient, where they know exactly what to do, and
- 2 that's an important piece. And that training does
- 3 need to take place as we talked about in our
- 4 definition of the clinician and where they're located
- 5 in very different types of health care settings from
- 6 the community health center to the urgent care
- 7 centers to the emergency departments in hospitals, as
- 8 well as clinics with health departments and private
- 9 practice.
- 10 So I think those are really important
- 11 things that you brought up, and I think that that's
- 12 something to think about when we want to look at the
- 13 impact of training of clinicians.
- 14 MR. ANNINOS: Great. Thank you. Amy,
- 15 thanks for that follow-up comment.
- 16 Let's move to Iris. Iris, you had signed
- 17 up for -- you logged your name in, so it's your turn.
- 18 MS. FIGUEROA: All right, thanks. And, hi,
- 19 I'm Iris Figueroa. I am from Farmworker Justice, and
- 20 I'm a part of the workgroup. And I just wanted to
- 21 give a little bit more context and also regarding
- 22 timing, I think it's really important that this
- 23 workgroup is doing the work it is right now.
- 24 As you all know, and as we've discussed in
- 25 previous PPDC meetings, there was a pretty

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- 1 significant revision of the WTS in the last couple of
- 2 years. And so there's a lot of new provisions that
- 3 we think have the capacity to significantly reduce
- 4 exposure. But, of course, if people are not aware of
- 5 those provisions, then we're not going to get very
- 6 far. And that's part of why the focus on training is
- 7 so important.
- 8 And in terms of PRIA, there was some talk
- 9 earlier about, you know, some of the improvements in
- 10 PRIA 4, and one of the improvements is calling for
- 11 reporting and more specific indicators for how the
- 12 funding for training activities is used. So we want
- 13 to make sure -- you know, it's great that we have
- 14 funding for these activities, but we want to make
- 15 sure that they're actually achieving their objectives
- 16 and that people are walking away from these materials
- 17 and from these trainings actually having a better
- 18 understanding and that that translates into real-life
- 19 behavior change.
- 20 And so one area, that first question there
- 21 about existing resources for quantifying outcomes,
- 22 that's one area that we could really use folks'
- 23 expertise. If you work on other issues related to
- 24 pesticides or even beyond pesticides where you have
- 25 evaluation tools that you've used that have been

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- 1 helpful, we would love to hear about that because we
- 2 would love to have a more systematic way of being
- 3 able to analyze not just these funds and these
- 4 activities, but any future work in this area.
- 5 MR. ANNINOS: Excellent. Iris, thank you
- 6 very much.
- 7 And I think, if I'm interpreting the chat
- 8 window properly, I think Jeannie had a quick follow-
- 9 up comment, and then we're going to move to Amy
- 10 Asmus. Or did I misunderstand?
- 11 MS. ECONOMOS: No, I was just having
- 12 trouble getting unmute, I'm sorry.
- MR. ANNINOS: That's okay.
- 14 MS. ECONOMOS: I just want to make a quick
- 15 comment there. We don't have a study on it in
- 16 Florida, but, anecdotally, we see farmworkers all the
- 17 time. We have five offices in the state. We are a
- 18 grassroots group. Most of our staff are farmworkers
- 19 or former farmworkers. And I just wanted to make a
- 20 comment that, again, maybe not a lot of people are
- 21 aware of this, but we see, anecdotally, lots of
- 22 farmworkers who have children with learning
- 23 disabilities, developmental disorders, ADHD,
- 24 respiratory illnesses, and things like that. And we
- 25 don't have funding to do a full study on effects of

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- 1 children, but it seems to be quite higher than
- 2 normal.
- 3 So that's why I think it's really extremely
- 4 important that we take this very seriously and make
- 5 sure that we're doing all that we can with these
- 6 training tools and reducing pesticide exposure,
- 7 because it really is affecting the next generation.
- 8 So I just really -- the work of this
- 9 workgroup and our recommendations to the PPDC are
- 10 extremely important, because we see the real-world
- 11 consequences of these acute, chronic and long-term
- 12 exposures. Thanks.
- 13 MR. ANNINOS: Thank you, Jeannie. Thanks.
- 14 And, Amy, I can turn it over to you now.
- MS. ASMUS: I guess my question basically
- 16 is who are the stakeholders that you are looking at
- 17 to partner with to get this information out there.
- 18 As a retailer, we run safety programs and part of our
- 19 safety programs are mock emergency trials, where we
- 20 bring in the local hazmat teams, we bring in the
- 21 local fire departments, we have the local hospitals
- 22 on standby and actually send the mock victims to the
- 23 hospital so they can have some hands-on training on
- 24 how to decontaminate the person and handle the
- 25 exposure. And while this is just for an emergency

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- 1 acute exposure, we do our best, because although ${\tt I'm}$
- 2 in Iowa, I'm not in California or Florida, we don't
- 3 deal with a lot of migrant farmworker population, so
- 4 the farmworker population that we seek to protect is
- 5 our friends and our community members.
- 6 So how are you reaching out to that network
- 7 that's already in communication with the local
- 8 clinicians and the farmworkers to help with their
- 9 safety programs to provide this training to the
- 10 communities?
- MS. TREVINO-SAUCEDA: Amy, you want to
- 12 start and then --
- 13 MS. LIEBMAN: I'm not sure if that's a
- 14 question for the group or for EPA.
- MS. ASMUS: It's just a question. We have
- 16 a network of people that are willing to help on this
- 17 and I think a lot of times were vilified more than
- 18 seen as a partner and a stakeholder in this. And so
- 19 I just want to put that out there that, you know, we
- 20 are stakeholders and who are the other stakeholders
- 21 outside of the normal groups that provide the
- 22 training, whether it's the EPA or whether it's the
- 23 farmworker associations. Who are the other
- 24 stakeholders you're looking at for help with this?
- 25 MR. ANNINOS: Great, thank you. Thank you.

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- 1 Mily, were you getting ready to say
- 2 something or --
- 3 MS. TREVINO-SAUCEDA: Well, just to follow
- 4 up real quick -- and I'm going to stop my video right
- 5 now. Sorry. For us, this is why we're asking, we're
- 6 putting up the question this way, Amy. Throughout --
- 7 and it's very good information. Thank you for
- 8 sharing. At the same time, we -- this is where we
- 9 get -- we are in many of the areas where the
- 10 farmworkers are, we have had a lot of anxiety because
- 11 there hasn't been that much support for doing those
- 12 connections with stakeholders. When we're talking
- 13 about having enough resources, there isn't. And
- 14 maybe the clinicians, also, or the groups also don't
- 15 have that. But at the same time, I mean, this is
- 16 very good. We're taking in the information. Thank
- 17 you.
- MS. LIEBMAN: And I just wanted to follow
- 19 up to Amy's comment and question and -- first of all,
- 20 thank you. I think it's a great question and I think
- 21 that what you do sounds really important. And so I
- 22 would, at some point, throw this back to the EPA,
- 23 because they do have a set of funds that they have
- that is used for clinician training. And so I think
- 25 the EPA believes that clinician training is important

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- 1 because they know that they're putting registered
- 2 pesticides on the market and sometimes not using the
- 3 precautionary methods in terms of being concerned
- 4 about what's on the market. They're very dependent
- on the opposite, on what happens once the pesticide
- 6 gets to the market.
- 7 And so, therefore, clinicians play a super
- 8 important role and EPA has acknowledged that and has
- 9 some funding. So I would sort of ask the EPA a
- 10 question in terms of what are they doing to help with
- 11 clinician funding. And that's one of the pieces that
- 12 this workgroup hopefully will address, but it is a
- 13 question that we have a similar question for you in
- 14 terms of what the EPA's role is in doing this.
- MS. TREVINO-SAUCEDA: Thank you, Amy.
- 16 MR. ANNINOS: I'm not sure, Amy, if you
- 17 were expecting a response from the EPA contingent
- 18 immediately right now, but if we could maybe just
- 19 hold that for a moment. Yeah, that's an open
- 20 question. I'll consider it an open question and
- 21 we've got a -- I'm not sure if I'm going to pronounce
- 22 Joe's name properly, but I think it's Joe Grzywacz is
- 23 up for a question and then Jasmine Brown also wants
- 24 to follow up.
- 25 MR. GRZYWACZ: Thanks so much. And,

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- 1 actually, no, I don't have a question. I just
- 2 realized that I've been using the chat
- 3 inappropriately. To answer some of the questions
- 4 that this group has put forward, I think it's
- 5 going to be really essential that there be some
- 6 reaching out to the major developers of electronic
- 7 medical record systems. Right? Because if you
- 8 want to really be able to train physicians, the key
- 9 part is training them in the content, but then what
- 10 do they do with the information. And the vast
- 11 majority of sort of differential diagnosis kinds of
- 12 stuff is oftentimes folded into the electronic
- 13 medical record.
- 14 And so, I think an essential existing
- 15 resource or tool that needs to be brought into the
- 16 equation is being able to connect, either by mandate
- 17 or partnership or otherwise, sort of expectations for
- 18 creating the tools for clinicians to actually record
- 19 and document what it is that they're finding, rather
- 20 than putting it in their notes.
- 21 Unfortunately, there's only a handful of
- 22 companies that are out there. Now, how willing they
- 23 are to play with us, that's an entirely different
- 24 question. But I do think that that involvement of
- 25 medical informatics, in some way, shape, or form, is

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- 1 an essential part to achieving your goal.
- MS. LIEBMAN: Joe, thank you so much for
- 3 that comment. You know, at one point, EPA was very
- 4 supportive of a broad approach to clinician training
- 5 because essentially like we suggested that sort of
- 6 the electronic health records are teaching to the
- 7 task. If it's not on the electronic health records,
- 8 it's not going to get asked. And so we did do some
- 9 pilots with that with health centers and that was
- 10 supported with EPA as part of the clinician training.
- 11 But it's really a much broader and deeper issue that
- 12 we need help with from EPA and others. But there
- 13 have been some interesting pilots with that.
- MR. GRZYWACZ: Well, and obviously it's
- 15 just one part of the broader challenge that goes
- 16 along with occupational safety and health
- 17 (inaudible). And this is just a specific element of
- 18 that. You know, I just know from my ten years in
- 19 academic medicine, training doctors to be doctors --
- 20 and maybe there's some other doctors on the line --
- 21 but without those aids to facilitate clinicians, you
- 22 know, training clearly is valuable, but training
- 23 supported by infrastructure is going to be much more
- 24 valuable.
- MR. ANNINOS: Thank you, Joe.

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1	And, Jasmine, did you want to come back on?
2	MS. BROWN: Yes. So last year or the year
3	before, I did FIFRA inspections at a lot of hospitals
4	and they were very their administration was very
5	eager to learn about disinfectants, to learn about
6	pesticides that they're using in between patients for
7	various reasons, for mainly cleaning their
8	facilities. But they weren't aware that things
9	labeled for hospitals or otherwise were even
10	pesticides. So the one comment I have received from
11	almost every hospital I inspected was that they do
12	receive a lot of blood pathogen type training, but
13	they were willing to receive pesticide training.
14	And so I know we are if any training
15	comes out of PRIA, we definitely for farmworkers
16	and non-ag exposed workers, we would definitely share
17	that with them. But I wanted to also say the Tribal
18	Pesticide Program Council is a huge technical
19	resource, and I think this would be a great area for
20	them to also be included as a stakeholder on. They
21	do have a little bit of funding where if people want
22	to or if they're part of the TPPC or whatever,
23	they can attend some of Amy's trainings or other
24	trainings. And, you know, so I just wanted to let
25	folks know that.

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- 1 MR. ANNINOS: Thank you, Jasmine, thank
- 2 you.
- 3 Let me just quickly confirm that everybody
- 4 understands, you know, how to get their name into
- 5 that chat window. I think folks are getting the hang
- 6 of it. And you just open the chat window, you see a
- 7 drop-down list and there's many choices on the job
- 8 down list. But if you scroll to the bottom of that
- 9 list, you'll see a choice called everyone. And if
- 10 you just set it at that, every time you put a comment
- 11 in the chat, we'll all see it. And that includes
- 12 your name. If you want to have a -- if you want to
- 13 make a comment.
- So again, still open to workgroup members,
- 15 working group members, participants, and PPDC members
- 16 for questions, comments for this team that's
- 17 presented to you just now.
- MS. LIEBMAN: And, Paul, just in response
- 19 to Jasmine's point, I think there's -- and then Amy's
- 20 point as well, I think there's a lot of -- and Joe's
- 21 point -- there's a lot of suggestions in terms of
- 22 what would need to go into a clinician training and
- 23 what kinds of clinicians and stakeholders need to be
- 24 reached and what is some of the content of that
- 25 training and what are the systems surrounding that

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- 1 training. So those are some things that I think that
- 2 the workgroup is well equipped to help the EPA and
- 3 help the Office of Pesticide Programs with
- 4 recommendations for -- that are coming out of that.
- 5 So I think that your comments, all of you,
- 6 are super helpful, and we can look to really
- 7 strengthen sort of that clinician component of
- 8 training activities related to the PRIA.
- 9 MR. ANNINOS: Great. Thank you.
- 10 There's a little bit of a lull in the
- 11 action here. I don't mind a little bit of dead air.
- 12 It's okay. People are consuming a lot of information
- 13 here and it's okay to have some quiet spells as
- 14 people are thinking about how they could help this
- 15 team continue their work over the next few months.
- 16 And feel free, anybody, you know, Mily, Amy, anybody
- 17 -- go ahead, Mily. I see your hand up. That's an
- 18 effective measure right there.
- 19 MS. TREVINO-SAUCEDA: Thank you, thank you.
- 20 I'm bad with technology so I have to -- anyway, I
- 21 learned that I need to stop the video in order not to
- 22 get disconnected or whatever, so you can hear me
- 23 clearly.
- 24 You know, there's been a lot -- lots of
- 25 conversations that I have had with Steve and Carolyn,

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- 1 and they've been very, very responsive to this, and
- 2 things that Jeannie, Amy, Iris, and Patsy know how
- 3 important it is that when we talk about training,
- 4 even with clinicians, but when we talk about -- right
- 5 now, I'm going to focus on farmworkers.
- 6 When we talk about training or any kind of
- 7 material or any kind of, you know, any kind of
- 8 information that's going to be provided to
- 9 farmworkers, we are keeping in mind that it's so, so
- 10 important to work within the cultural contexts of who
- 11 you're trying to provide either the training or the
- 12 information, what kind of -- you know, how can you
- 13 connect with people that -- because we have many,
- 14 many farmworkers that are indigenous and might talk a
- 15 little Spanish that means that they will not know how
- 16 to read Spanish if we are doing it in Spanish.
- Or when we're giving presentations, how is
- 18 it that we're going to make sure that they will get
- 19 the full information and it's clear? We all know
- 20 whomever has -- I mean, I was born here in the United
- 21 States, but my family was a migrant farmworker and my
- 22 parents were immigrants and that meant that we also
- 23 had to go and live in Mexico and then come back, et
- 24 cetera.
- 25 But every time, if it was a culture shock

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- 1 for me, so I can only imagine how much of a culture
- 2 shock it is for people that are coming to a new
- 3 country that they have no idea whatsoever how the
- 4 community works, how the systems work, the government
- 5 works, and because we have had a very, very -- and
- 6 this is coming Alianza, you know, as an Alianza
- 7 representative -- we have felt all along -- and some
- 8 of us, you know, that are here within this group, but
- 9 I'm going to talk about myself, might feel the same
- 10 way -- but we have felt that there's a very ill
- 11 sentiment about farmworkers and it has been,
- 12 especially in the last years, been discouraging
- 13 workers to really, you know, come up front and say
- 14 anything about what's going on.
- And building the trust is not just by
- 16 talking not only their language, but working with
- 17 them in a way it's going to be within their culture,
- 18 when they're -- their cultural context. If we don't
- 19 work that way, I mean, we can have all sorts of very
- 20 well intended material, all sorts of, well, very
- 21 intended trainings, but if those trainings -- and in
- 22 this case, also, if clinicians are not -- they could
- 23 be trained on the subject, but if they're not trained
- 24 on how to also connect the right way with our
- 25 communities, it's very, very hard to really serve a

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- 1 very responsive purpose.
- 2 And so for us, even as working within the
- 3 last 30 years organizing and working with farmworkers
- 4 directly and coming from these -- from these
- 5 communities because, as I said, I'm a farmworker, I
- 6 consider myself a farmworker still. I still have
- 7 relatives working as farmworkers, laborers for many,
- 8 many big corporations, agricultural corporations, and
- 9 we still see the issues, we still see the problems.
- 10 And when I'm talking about this, it's how, throughout
- 11 the 30 years of organizing and working with
- 12 farmworkers, it has been very, very hard to -- for us
- 13 to think that even if we do a training in their
- 14 language, in their -- you know, using images, using
- 15 theatrical skits, vignettes or whatsoever so that we
- 16 can communicate.
- We have to adapt whatever kind of training
- 18 within the cultural context of whatever other second
- 19 or third or fifth community that we have to go and
- 20 provide training, and this is something that we have
- 21 to see and be willing to invest.
- 22 So the charge questions to EPA will be
- 23 around that when we're talking about, you know, the
- 24 organizations are resources. The organizations that
- 25 are community-based have a lot to offer, have a lot

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- 1 to provide, but they're not seen as that because we
- 2 work within a culture that's very foreign to many
- 3 programs that have been built with systems that are
- 4 not geared to provide the responsiveness necessary to
- 5 our communities. And that is a very, very strong
- 6 disservice and these are the reasons why we will keep
- 7 working very, very hard, making sure and hearing
- 8 feedback from the rest of the PPDC members because we
- 9 want to hear everybody.
- 10 At the same time, we want to be listened to
- 11 because we know where we're coming from. We know who
- 12 -- you know, we have the experience, we have people
- 13 that have been working -- like Jeannie was talking
- 14 about, within the 15 different organizations that we
- 15 represent, everybody has farmworker women,
- 16 farmworkers -- you know, male farmworkers that are
- 17 working as organizers, trying to make sure that
- 18 people have a voice and trying to make sure they
- 19 engage them. But if workers are going to be engaged,
- 20 they have -- it has to be in a way, as I said, within
- 21 the cultural context. And there's a lot of
- 22 conversations that we need to have, but we're here to
- 23 also listen.
- 24 But I just wanted to bring this
- 25 conversation forward so that people will know where

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- 1 we're coming from. And we're going to try to
- 2 include, as much as we can, farmworkers during the
- 3 next months to make sure that we will be more
- 4 responsive.
- 5 Thank you.
- 6 MR. ANNINOS: Thank you, Mily. Thank you
- 7 very much.
- 8 Steve Schaible wanted to weigh in on the
- 9 EPA perspective in response to Amy's comments earlier
- 10 and also Joe Grzywacz is also in the queue for a
- 11 question or a comment.
- So, Steve, are you still there and unmute?
- 13 MR. SCHAIBLE: I am unmuted. Can you hear
- 14 me?
- MR. ANNINOS: Yep.
- MR. SCHAIBLE: Yeah, so I just want to take
- 17 a little bit of time to respond to Amy's question. I
- 18 want to leave as much time as possible for the PPDC
- 19 members to give us their thoughts.
- 20 So the PRIA reporting language, the PIRA 4
- 21 reporting language, is not specific as to who the
- 22 stakeholders are. I think when we, this workgroup,
- 23 was created, we have a really broad spectrum of the
- 24 different stakeholders that EPA feels should be
- 25 represented. But, as far as PRIA 4 reporting

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- 1 requirements, it indicates that EPA needs to do its
- 2 own assessment of the effectiveness and
- 3 appropriateness of the activities that are being
- 4 funded by those PRIA funds. But EPA is also
- 5 providing a summary of those analyses by
- 6 stakeholders. So it can be any stakeholder who wants
- 7 to be providing that information back to EPA.
- 8 With that, I think I also -- Carolyn, we
- 9 were sort of chatting offline. I want to give her a
- 10 chance to tag in as well.
- 11 MS. SCHROEDER: Hi, Steve, this is -- to
- 12 everyone, this is Carolyn Schroeder. I totally agree
- 13 with everything that Steve just said. And I just
- 14 wanted to add, even as part of the workgroup and
- 15 invite the workgroup to mention, in some of their
- 16 early discussions, there was some additional
- 17 identification of stakeholders. I know in forming
- 18 the workgroup, we -- you know, looking at the roster,
- 19 there is a broad -- there are the farmworker
- 20 organizations represented, but in addition to that,
- 21 there is extension services and state departments of
- 22 agriculture and grantees and some industry as well.
- 23 And so it's worth checking out the roster there.
- 24 That's not comprehensive, and that has been
- 25 -- that has been identified as well. And the

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- 1 interest of getting some expertise from some
- 2 additional stakeholders, including the farmworkers
- 3 themselves that aren't represented on the group
- 4 directly -- are represented, but aren't on the
- 5 workgroup directly necessarily, and as well as public
- 6 health educators that might be able to help and
- 7 researchers and the clinicians themselves and other
- 8 healthcare providers.
- 9 So just wanted to mention that I think it
- is a good recognition that the stakeholder groups are
- 11 beyond who's here today. But I think there is a
- 12 pretty good representation and acknowledgment that
- 13 much can be done with the stakeholders that are on
- 14 the -- that are in the workgroup now and reaching out
- 15 to expertise where their gaps are identified to get
- 16 additional input. I think that's all I had to say.
- 17 MR. SCHAIBLE: Actually, can I add one more
- 18 thing?
- MS. SCHROEDER: Sure.
- 20 MR. SCHAIBLE: Yeah. So I think overall in
- 21 terms of are you a stakeholder or not, I think what
- 22 EPA is hoping to get back from the PPDC are
- 23 recommendations on how we can better understand the
- 24 outcomes of the training that we're funding. So
- 25 that's the overall objective. And I think Mily, you

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- 1 know, very much hit on a lot of those elements. To
- 2 what extent are we -- are the training materials
- 3 effective within cultural context? You know, what is
- 4 the understanding and what are the changes in
- 5 behaviors and how can we measure those?
- 6 MR. ANNINOS: Great.
- Mily, very briefly, because we also have, I
- 8 think, a couple more comments, and we only have five
- 9 minutes left.
- MS. TREVINO-SAUCEDA: Yes.
- MR. ANNINOS: So go ahead.
- 12 MS. TREVINO-SAUCEDA: And this -- and this
- 13 -- thank you. And this has to do -- thank you,
- 14 Steve, and thank you, Carolyn.
- This also has to do with, for example,
- 16 today. Are we -- and this is a way of -- and I've
- 17 been having the conversation with Steve and Carolyn
- 18 about are we providing this in different languages?
- 19 This -- it's a public meeting. If so, I'm very happy
- 20 to hear that. If not, then let's start working with
- 21 it. Because then English-only people will be the
- 22 only ones that will have the voice right now. So
- 23 let's be very, you know, open in terms of -- not just
- 24 prepare for people, but also engage them, and they
- 25 could -- they could have -- be here asking all sorts

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- 1 of questions. But if they were not, you know, going
- 2 to be supported in that way, then people are not
- 3 going to be able to talk or anything like that.
- 4 Thank you.
- 5 MR. ANNINOS: Great, Mily. Thank you very
- 6 much.
- 7 And I think Joe just deferred and I think
- 8 -- so we're skipping over Joe at his request and
- 9 going to Jeannie. I'm assuming it's Jeannie
- 10 Economos.
- Jeannie, are you available or unmuted?
- 12 MS. ECONOMOS: Yes. Just one quick comment
- 13 and Mily kind of hit on it. I think it's really
- 14 important -- one of the reasons for this workgroup,
- 15 and really singling out farmworkers as a group, is
- 16 that it's a big three-dimensional problem. We're
- 17 talking about pesticides here, but farmworkers are
- 18 real three-dimensional people that are dealing with
- 19 issues of immigration, sexual harassment in the
- 20 workplace, intimidation, even labor trafficking.
- 21 So it's -- and, of course, EPA and this
- 22 workgroup aren't going to solve all those problems,
- 23 but it's really important that this workgroup
- 24 understand the compounding factors affecting
- 25 farmworkers so that we're looking at this in a

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- 1 holistic approach and doing what -- cultural context
- 2 is important, but cultural context in terms of
- 3 looking at the three-dimensional problem of
- 4 farmworkers, which includes the right way to do
- 5 outreach, et cetera.
- 6 So I just -- I think it's really important
- 7 for people to come to this work with that deeper
- 8 understanding of the compounding factors affecting
- 9 the people that are harvesting our food.
- 10 Thanks.
- 11 MR. ANNINOS: Thank you, Jeannie.
- 12 We have two minutes left in this segment
- 13 before we transition to the next workgroup. So maybe
- 14 there's time for one quick follow-up comment or
- 15 question or remark. This has been a great
- 16 discussion.
- Oh, Mily, you're speaking, but you're not
- 18 on -- you're muted.
- 19 MS. TREVINO-SAUCEDA: No, I don't want to
- 20 talk because I'll be long and we're not allowed
- 21 Amy, I don't know about you.
- MS. LIEBMAN: Well, I just wanted to say
- 23 that some of the questions that this workgroup is
- 24 grappling with -- the questions that we are grappling
- 25 with are hard and there's a lot of context and

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- 1 concern involved in everything that we're looking at
- 2 and, you know, we're doing our due diligence. But I
- 3 do agree with Carolyn that we do have a wide variety
- 4 of stakeholders that are part of this group, and I
- 5 look forward to our next meeting with the full PPDC
- 6 and our continuation of the workgroup where we
- 7 grapple some of these questions that we're looking
- 8 at. And the input today has been really helpful and
- 9 important. So thank you.
- 10 MR. ANNINOS: Yes. So, you know, I would
- 11 like to thank this workgroup for all the work they've
- 12 done leading up to this. And the presentation was
- 13 fantastic. The interaction we had, I feel like we
- 14 had enough time to get some questions in there. So
- 15 that was excellent. That was the whole point. And
- 16 so a great job to all of you. And thanks to the PPDC
- 17 members and workgroup members that added color
- 18 commentary to our conversation.
- 19 Obviously, a lot of passion around this
- 20 topic and a very important topic and so very glad
- 21 we're focused on that.

2.2

23

2.4

25

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- 1 EMERGING AGRICULTURAL TECHNOLOGIES PRESENTATION
- 2 MR. ANNINOS: I think we're ready -- it is
- 3 exactly 2:30. I'm not sure how this is happening,
- 4 but it's exactly 2:30 Eastern time, and we're ready
- 5 to make this transition to the next two
- 6 presentations, both relating to emerging agricultural
- 7 technologies. We're starting this two-segment piece
- 8 with a 30-minute segment on emerging agricultural
- 9 technologies.
- 10 I'm going to turn this over to Nick Tindall
- of AEM and Chad Biegler from Raven Industries to
- 12 manage this 30-minute segment of our agenda. And I
- 13 believe that there will be some time for Q&A on this
- 14 as well. So I'll turn it over to both Nick and Chad.
- MR. TINDALL: All right, great. Thank you
- 16 very much. I also want to recognize Scott Shearer
- 17 from Ohio State and Dan Martin from USDA, who will be
- 18 kind of taking care of the third part of this
- 19 presentation, where we have it divided up between
- 20 just a real brief ag equipment 101. Then Chad from
- 21 Raven, who is the chair of AEM's sprayer leadership
- 22 group will touch on current technology, and then Dan
- 23 and Scott will run us through some emerging
- 24 technologies.
- 25 I do want to adjust the disclaimer. The AG

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- 1 101 portion I'm about to breeze through in one minute
- 2 is extremely basic. I don't mean to offend anybody.
- 3 I just want to make sure that when we say tractor and
- 4 combine, we're all talking about the same and right
- 5 things because I have seen some presentations in the
- 6 past where people have got a picture of a combine up
- 7 there and it's listed as a tractor or, you know, back
- 8 in the corn fugitive, dust days, you know, people
- 9 would have a video of a plow going through a field
- 10 and say, look at all the dust that planter's
- 11 creating, and, well, you know, that's a plow, it's
- 12 going to create a lot more dust and it's not a
- 13 planter.
- 14 So just in the interest of making sure
- 15 everyone's on the same page, I'm going to just do a
- 16 real brief 101.
- Next slide, please.
- Just pictures of tractors, you know, pretty
- 19 basic. It's the most common piece of agricultural
- 20 equipment you'll see and -- just an idea of what
- 21 you're all looking at here, various horsepowers. So
- 22 they can be very small to monsters.
- Next slide.
- 24 Combines, the most distinguishing factor
- 25 here is the header. You know, the draper header is

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- 1 the wheel. That's what you're going to use for corn.
- 2 I mean, sorry, wheat and soybeans. The sort of one
- 3 that looks like it as teeth is what you're going to
- 4 do for corn. And also it's got the auger on top to
- 5 unload the grain.
- 6 Next slide.
- 7 The pull-type sprayers, this is with the
- 8 kind of sprayer that's going to be behind the
- 9 tractor, instead of a self-propelled one. That is
- 10 coming up next.
- 11 You can go to the next slide.
- 12 And then the self-propelled one where it
- 13 has the cab in front of the spraying unit. That's
- 14 the biggest distinguishing feature.
- 15 Next slide.
- 16 Tillage, this is what you're going to use
- 17 to work up the soil. They're going to be fairly flat
- 18 and lower to the ground when they're in position and
- 19 they have, you know, some sort of tool that's going
- 20 into the soil.
- 21 Next slide.
- 22 And then the planters, the biggest
- 23 distinguishing mark between them and the tillage
- 24 equipment is either the series of hopper boxes on
- 25 each row unit where you put the seed, or one big --

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- 1 what is very common these days and very popular is
- 2 the giant bulk hopper in the middle where you're
- 3 putting a whole lot of seed.
- 4 Next slide.
- 5 Oh, and let me hand it off to Chad from
- 6 Raven to go through current technology.
- 7 MR. BIEGLER: Thank you, Nick. Can
- 8 everybody hear me?
- 9 MR. TINDALL: I can hear you.
- MR. ANNINOS: Yes.
- 11 MR. BIEGLER: Okay, all right. Just making
- 12 sure. This is a new application. I'm used to Teams.
- 13 So I just want to make sure everything's coming
- 14 through.
- 15 All right. As Nick said, my name is Chad
- 16 Biegler. I am part of the AEM sprayer application
- 17 group. There's a few others that represent a lot of
- 18 the OEMs that you've probably heard or even seen on
- 19 the previous slides. And we comprise a group. We
- 20 come together on a regular cadence and talk through a
- 21 lot of our changes in the industry.
- Today, I really only have a couple slides
- 23 to really just talk basically around high level, some
- 24 different items as we see as precision ag technology.
- 25 Feel free to throw different questions in the chat.

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- 1 And I'm going to just try to breeze through these
- 2 real quick, high level, so you can have a snapshot,
- 3 and then open it up certainly for questions or a Q&A
- 4 type of section.
- 5 So with that, let me kick off my the first
- 6 slide. Really what we have here is we do have
- 7 operations that initially -- on the page, I have two
- 8 different things, GPS guidance or also known as GFSS,
- 9 as more of the global landscape, and the boundary
- 10 mapping. So GPS or GFSS goes more to the global
- 11 operation, is really one of what's my machine's
- 12 position, where am I at in the field?
- And why that's important is, as we start
- 14 charting out what's going to happen in that field,
- 15 we're going to put a boundary to it or what is my
- 16 outer perimeter in which I want to operate in that
- 17 field. I might also then place inner boundaries,
- 18 such as waterways, piles of (inaudible), landmarks,
- or even areas that I don't necessarily want to go and
- 20 apply such products. So we can create a boundary on
- 21 the outside, on the inside, and GPS is going to tell
- 22 me where my position is relative to the rotation of
- 23 the earth, (inaudible) position on the earth.
- As you can also imagine with GPS, we can
- 25 also provide corrections and get that to a very, very

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- 1 repeatable accurate type of position in the field.
- 2 With today's technology, we're talking sub-inch, or
- 3 as we like to talk to the metric system, repeatable
- 4 under ten centimeters. When I talk repeatable,
- 5 there's a couple different ways that we (inaudible)
- 6 that. One is it has to pass. So I'll use the
- 7 example if I'm going from -- if I'm traveling from
- 8 south to north and I turn around my (inaudible) and I
- 9 come north to south and then south to north and I
- 10 continue working through that field.
- 11 We look at the variation from my pass to
- 12 pass as I went one direction to the other, as I keep
- 13 driving through that field. With today's higher
- 14 correction accuracy, you can actually see sub-inch
- 15 type repeatability as you work the way through the
- 16 field. We also measure it for year to year. And as
- 17 we know, the Earth rotates, satellites move, but the
- 18 land does not necessarily (inaudible) relative to say
- 19 that fence post or to that (inaudible) mark, so we
- 20 also measure from known landmarks or reference points
- 21 how much our GPS position locates between each year.
- 22 We call that year over year type of repeatability.
- With RTK, so a more technologically
- 24 advanced type of correction offerings, we are also
- 25 seeing that sub-inch type repeatability year over

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- 1 year.
- Now, we do offer, throughout the industry,
- 3 a lot of different ways to scale that. Some are
- 4 maybe not as repeatable as that. We could be talking
- 5 a foot or greater type a distance between
- 6 repeatability between operations.
- 7 GPS guidance -- and I'm going to talk about
- 8 it here in the next slide -- also starts setting a
- 9 lot of the machine functionality, so not only
- 10 position and being able to report where I'm at and
- 11 capturing a lot of reporting, but also helping us
- 12 steer and drive through that field.
- So I don't know the person's name advancing
- 14 the slides, but if you wouldn't mind advancing our
- 15 slides, please. Thank you.
- 16 So the next slide really starts getting
- 17 into more of our smart guidance or the industry term
- 18 around "auto steer." We talked about GPS in the
- 19 previous slide. GPS is our basis. We do have a
- 20 couple of different ways that we can actually guide
- 21 yourself through the field, one being more of a
- 22 manual guidance where we'll provide a light mark or
- 23 lines. The operator would manually steer to that.
- Or, as one of the advancements today, we've got
- 25 (inaudible) to an auto steer. That's either a

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- 1 mechanical drive. That's kind of shown in the upper
- 2 left-hand corner. Or a steer by wire, or we're also
- 3 seeing a lot of a steer by a vision or a camera,
- 4 starting to emerge as a new technology in the field.
- 5 Auto steering, a type of auto steering is
- 6 very, very highly adopted today. I would say 90
- 7 percent or greater. People can scale that though,
- 8 and so we might be talking some manual, a lot of auto
- 9 steer, and then some people start to get more towards
- 10 a visual type of auto steer. Visual being more
- 11 towards a post-emergence, whereas your auto steer,
- 12 mechanical or electrical by wire, can be more like
- 13 pre-emerged and/or post-emerged, depending on the
- 14 type of the application.
- The other picture shown on here from an
- 16 operations standpoint (inaudible) where we start
- 17 talking about sections, we start talking about
- 18 different zones. So it's building upon my GPS, it's
- 19 building upon by driving the machine, I now can also
- 20 start commanding or directing what areas I need to
- 21 spray or need to apply product. And because I know
- 22 where I've previously traveled, if my boom or my
- 23 width -- my coverage width starts overlapping, you
- 24 will start being able to set off -- shut off those
- 25 individual sections. And if, I talked about earlier,

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- 1 I have an internal boundary or represented this
- 2 picture a no spray zone, I can certainly start using
- 3 the system to automatically determine how it should
- 4 spray or not spray in those said zones.
- 5 The reason that we need to start talking
- 6 about that pretty in depth is around not duplicating
- 7 spray or overapplying, but also we need to start
- 8 talking about just environmental factors, assisting
- 9 with erosion, providing a spray buffer or on a clean
- 10 buffer between fields as a potential drift could take
- 11 a chemical over to a different area that we don't
- 12 intend for. So we might plan a couple different
- 13 buffer zones.
- 14 Next slide, please.
- 15 So another advancement from the machine
- 16 standpoint is what we consider boom height control.
- 17 So the picture I want to take a little bit here is,
- 18 if you start looking at our sprayers today, 80-foot,
- 19 90-foot, 120-foot are a standard for a boom width.
- 20 However, you're starting to see even greater
- 21 distances up to say 160 and 180 feet. And as you
- 22 start thinking about that (inaudible) of that machine
- 23 if it's going across on a very, very flat field, your
- 24 boom is going to stay on target. As that machine
- 25 starts moving and adjusting, one degree of rotation

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- 1 in that machine could actually affect the outer tip
- 2 by several feet. Obviously, it's a math equation
- 3 there.
- 4 But we start looking at when we start
- 5 talking about compliance, it's not necessarily I just
- 6 want my boom level. It's I want it held within a
- 7 certain distance from my crop or from the ground.
- 8 And really you're trying to look at, you know,
- 9 ensuring that we're overlapping our spray. Usually
- 10 our nozzles on that boom are on a phase, meaning that
- 11 my one, two and three nozzles, if I use those as
- 12 numbers, one and three will go off at the same time
- 13 and two and four would go off the same time but out
- of phase, so 180 degrees out of phase.
- 15 As I keep my bloom height consistently
- 16 flat, I received the appropriate overlapping of my
- 17 nozzle spacing to ensure that I have the right rate
- 18 that's being applied to that crop. I'm also ensuring
- 19 that I'm not damaging the crop or damaging the boom.
- 20 I start getting to a little bit more aggressive
- 21 (inaudible).
- The other picture shown on this slide
- 23 starts going back into rate control. So you can see
- 24 on that chart there you actually have a depiction of
- 25 what I consider a variable rate application now that

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- 1 is predetermined to where you can see 30 percent was
- 2 applied at an 80 percent, 90 percent, 100 percent
- 3 rate. And this could have been determined by an
- 4 agronomist, by somebody that's working out in the
- 5 field and putting in that restriction or putting in
- 6 that order to understand what or how we need to apply
- 7 that field.
- 8 It could potentially be that there's a
- 9 buffer or that there's additional (inaudible)
- 10 pressure in the center of the field, maybe around the
- 11 edges, or vice versa. So this is something that
- 12 allows us to monitor without adjusting the pressure,
- 13 without adjusting the rates. The system
- 14 automatically will adjust the rate as that order is
- 15 prescribed.
- Next slide, please.
- 17 So continue to build out, I mentioned
- 18 section control a little bit earlier as well. And
- 19 you can kind of see from the picture up at the top of
- 20 a tractor 3-point mounted sprayer that is driving
- 21 down an irrigation ditch. And you can see that the
- 22 entire right-hand side of the boom is off; the left-
- 23 hand side is all on. What we have as a technology in
- 24 there is what we consider either virtual sections or
- 25 physical sections that we can shut off different

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- 1 spray nozzles. Those nozzles (inaudible) we call a
- 2 section could be a bank of nozzles or it could
- 3 actually be down to the individual nozzle.
- 4 Primarily, today, we're starting to see
- 5 people gravitating towards the individual nozzle
- 6 shut-off, especially paired with higher correction
- 7 levels of GPS, where we can get down to very minute
- 8 accuracy or granularity to understand when I get
- 9 closer to that waterway or when I get closer to that
- 10 ditch or, i.e., a no spray zone, I start shutting off
- 11 an individual nozzle versus shutting off a bank that
- 12 might be a couple feet. I can now control that down
- 13 per nozzle.
- 14 And maybe to talk a little bit of the
- 15 nozzle that I've mentioned a couple of times,
- 16 sometimes we have spacing of 10 inches apart,
- 17 sometimes it's 15, sometimes it's 20, and, obviously,
- 18 the counterparts to a metric system as well for
- 19 those.
- 20 Section control has been around for quite a
- 21 few years. The advancements have really been driving
- 22 it down to the individual nozzle. The big benefit
- 23 for that is saving chemical and ensuring that you're
- 24 shutting off in areas of what I consider a no-spray
- 25 zone.

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- Pulse width modulation is another new advancement in technology that's really taken off
- 3 within the last five years to where it's -- I would
- 4 almost consider it a lot more standard adoption
- 5 today. But that ensures consistent droplet size
- 6 across a wide speed range. So when I talk about
- 7 that, is you would normally set the rate, set your
- 8 pressure, and you would start driving and you would
- 9 also determine what your tip size is, you know, to
- 10 reach the ranges you determine down there. Plus,
- 11 also what your rate of application (inaudible) label
- 12 compliance.
- So with that being said, PWM allows us to
- 14 have [audio issue] talk to a couple of those
- 15 benefits, just high level. We can certainly dive
- 16 into them. But the reason that we talked that it
- 17 provides us a benefit is it will pulse -- PWM stands
- 18 for pulse width modulation. It pulses to 10 times a
- 19 second, 15 times a second, 20, all the way up to 30
- 20 times, depending on which OEM or which technology
- 21 you're using. In that open and close of that pulse,
- 22 we can adjust the duty cycle or how much our product
- 23 is sprayed during each of those iterations.
- What it allows us to do is say if I speed
- 25 up or slow down as I'm going a little bit up a hill

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- 1 or down a hill, or I get to a wetter spot and have to
- 2 slow down, I don't have to worry about overapplying
- 3 my product. I don't have to worry about putting
- 4 excessive product down. Or if I'm speeding up, I
- 5 don't have to worry about trying to adjust my
- 6 pressure or my rate to get the appropriate chemical
- 7 applied (inaudible) on the field.
- 8 Also, when you start thinking about turning
- 9 or going around a center pivot or a type of contour,
- 10 you start thinking about that boom being 80, 90, 120
- 11 feet wide. Your inner tip and your outer tip would
- 12 still be spraying at the same rate, same amount of
- 13 product, even though your force or how fast that tip
- 14 is moving is going to be changing, such as if I look
- 15 at my inner boom, if I was making a slight turn, I'd
- 16 be overapplying my outer section or my outer nozzle
- 17 would be underapplying. So this allows, on the fly,
- 18 to adjust without you actually adjusting your
- 19 (inaudible), your rate, your pressure, or even
- 20 individually shutting off nozzles.
- 21 And the last thing on this slide is on
- 22 direct injection. So really direct injection is
- 23 allowing us to put the right product down in the
- 24 right place in the right time. And people are using
- 25 direct injection as either a supplemental add-on,

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- 1 meaning that it's a full concentrate of the chemical
- 2 and you have only water as your carrier in your tank,
- 3 or we've also seen people adding the concentrate into
- 4 the injection tank and then with the chemical product
- 5 once it's already in the tank, using it as an
- 6 additional enhancement or additional rate or a flow
- 7 that would (inaudible).
- 8 With direct injection, it is injected into
- 9 the boom. There is a diffuser then that mixes it at
- 10 the appropriate rate that would be set on (inaudible)
- 11 or on the module. It does also allow for much faster
- 12 loading and a much safer cleaning or clean-out
- 13 process.
- 14 As you think about some of the farmers or
- 15 big retailers that use our products, they will switch
- 16 between crop varieties, they'll switch between
- 17 fields, they might switch between chemicals. And
- 18 there is a process, as I think most of us on the call
- 19 are aware, of cleaning out what's in the tank and
- 20 ensuring that there's no cross-contamination. And so
- 21 not putting that into the full system (inaudible)
- 22 tank, it reduces the amount of water or chemical that
- 23 needs to be flushed through the system in order to
- 24 switch over to their next project.
- Next slide, please.

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- 1 So this slide just talks a little bit about
- 2 the modules. So on a previous slide, we had talked
- 3 about PWM. That was more with the actual nozzle
- 4 itself, of the newer technology, and more down to
- 5 individual nozzle. There is also a couple different
- 6 ways that we provide availability for more flow, for
- 7 less accuracy as well. And with PWM, because it is
- 8 pulsing, when you start getting your thicker
- 9 chemicals or higher rates, a lot of times you just
- 10 mostly want the nozzle to be open or even at a couple
- 11 different nozzles in order to have the rate that
- 12 you're intending for.
- 13 So the two things that we call out on here
- is an on/off nozzle, and really exactly as it
- 15 describes, the nozzle opens, it's a free flow of
- 16 product, depending on the pressure of the rate and
- 17 your pump on your machine. And then we also do have
- 18 options for stacked or tiered nozzles. Stacked or
- 19 tiered nozzles, indicating that I might have nozzle A
- 20 and nozzle B next to each other. They may turn on at
- 21 the same time, they may turn on in phase, or they
- 22 might use it as a ramp up.
- 23 A lot of times, the tiered nozzle, we have
- 24 actually seen people combining a PWM nozzle and an
- 25 on/off nozzle, and really that allows that machine to

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- 1 be that much more versatile or even hit some higher
- 2 rates. And as they're speeding up, they use PWM once
- 3 they get a certain rate and they just open the
- 4 nozzles and they close the PWM nozzles.
- 5 So really it comes down to what the use
- 6 case is or the type of application. A lot of our
- 7 manufacturers, especially from North America, have
- 8 different configurations, different nozzles,
- 9 different tips that can be selected to help support
- 10 the use case now.
- 11 Next slide, please. And I think there's
- one more slide after this and then let's get to Q&A.
- 13 All right. So targeted spray technology,
- 14 this is what I would consider a very new and emerging
- 15 type of technology. A couple of things to maybe
- 16 describe on this is the biggest benefit right now
- 17 people are talking about is the reduction of chemical
- 18 use. And there's a strong, strong number that's put
- 19 on that slide of up to 90 percent that we are seeing
- 20 as a reduction of chemical usage.
- 21 And a lot of the use cases we've started to
- 22 see in this is instances where they're just trying to
- 23 target a certain weed in say a reemerged type of
- 24 application, so what we would consider the weed on
- 25 ground type of application. And in a conventional

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- 1 application, you would actually go out and we would
- 2 call it more of a blind spray where all nozzles are
- 3 on and you spray that consistent rate all the way
- 4 across the field. This allows us to turn off the
- 5 nozzle at the time of detecting that weed in a
- 6 certain region or area and they only apply the
- 7 product at that time.
- A lot of companies are investing in this.
- 9 There's been a few new products that have been
- 10 introduced within the last really six to nine months.
- 11 There are a couple next-generation products. We do
- 12 expect a lot of movement in this market. My personal
- 13 experience has been a lot more with seeing the use
- 14 cases in Australia, and the reason I say that if some
- of the areas have had extreme drought and they did
- 16 not want to go out and just conventionally spray
- 17 their entire fields, but they want to conserve
- 18 moisture. So they would drive out there and use the
- 19 targeted spray application. And they're seeing a
- 20 huge savings in the chemical that was applied.
- 21 You start talking about ROI as maybe the
- 22 number one indicator, but close behind it is really
- 23 the environmental savings as well. Think of all the
- 24 additional chemical that's not being put into the
- 25 field, that potentially drifted away. It's

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- 1 definitely something that we're going to see a lot of
- 2 traction in. And I look forward to working with that
- 3 system.
- We do use, on that system, at least a
- 5 couple of systems out today, optics. So they are
- 6 noncontact. (Inaudible) more of a vision or camera.
- 7 It's looking at different zones and it's locally
- 8 processing on that machine. So one of the
- 9 technologies or one of the opportunities for
- 10 improvement we see today is around the speed in which
- 11 we can actually apply product. And it has slowed
- down more conventional over in some of the more high-
- 13 specialty crops, some of the more distinct areas or
- 14 niche markets for this. It has been acceptable, but
- 15 to start seeing it widely adopted across other areas
- 16 there will have to be some advancements and
- improvements, but I have full confidence we'll get
- 18 there at some point.
- 19 One more slide, and then let's pause for a
- 20 couple of questions.
- 21 So the last slide we have is just to really
- 22 talk around weather stations. So you are seeing
- 23 quite a few machines coming out from the factory with
- 24 a weather station that's mounted to the machine. On
- 25 this particular instance, one is mounted on the cab.

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- 1 We do know that people also will mount them to the
- 2 boom, which is where you need to take your compliance
- 3 with the speed, humidity, temperature, all those
- 4 (inaudible) compliance for spraying your application
- 5 usually at the start and at the finish and in your
- 6 state regulations.
- 7 But we are also seeing a lot of weather
- 8 stations mounted to the cab. So you're starting to
- 9 understand as you're going through the field are
- 10 conditions changing. You can also report that or
- 11 record that, depending on what your application is
- 12 during the field and how often we do report that is
- determined based on some of the presets, but we do
- 14 have a lot of that technology to help us record and
- 15 document, especially as regulations change or adjust
- 16 for documentation as required between the different
- 17 states.
- 18 So with that, I threw a lot of information
- 19 on the table and let's pause and ask a few questions.
- 20 MR. ANNINOS: Yes, so, Nick and Chad, thank
- 21 you very much. We have about five minutes -- five or
- 22 six minutes left in this segment. We also -- the
- 23 next segment of the agenda touches on the same topic.
- 24 It's the workgroup presentation. There may be some
- 25 time at the end of that presentation as well to fit

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- 1 in some questions and comments. So we have these two
- 2 back-to-back pieces.
- I don't see anybody's name in the chat
- 4 window yet. Is there anyone that wants to just
- 5 "raise their hand" with a question for Nick or Chad?
- 6 (No response.)
- 7 MR. ANNINOS: Go ahead, Mily. Yes, I see
- 8 your hand.
- 9 MS. TREVINO-SAUCEDA: Sorry. I'm bad with
- 10 technology.
- MR. ANNINOS: No, that's okay. Your audio
- 12 is coming together much better than it was earlier in
- 13 the day.
- MS. TREVINO-SAUCEDA: Okay, all right.
- MR. ANNINOS: So just letting you know.
- 16 MS. TREVINO-SAUCEDA: Yeah, yeah, thank
- 17 you.
- 18 You know, I liked your presentation. It
- 19 has a lot of information. At the same time, I just
- 20 -- I mean, I'm a visual person, and in terms of being
- 21 present, I'd like to ask questions, but be there or
- 22 whatever. I mean, right now, you can't do that. But
- 23 I would have more questions seeing how it works and
- 24 whatsoever based on how a lot of machinery has been
- 25 used to apply chemicals and it's still, you know,

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- 1 just the lack of things that could be happening,
- 2 might be affecting, you know, just in terms of the
- 3 surroundings and whatsoever. I imagine that the
- 4 people that would be using the machinery should be
- 5 trained and et cetera, et cetera. But I just want to
- 6 give that kind of feedback right now.
- 7 I wish I could be present looking at the
- 8 machinery and asking questions based on, you know --
- 9 and I'll just say it very outspoken, my family was
- 10 sprayed and we were poisoned like three times during
- 11 the time I was working in the fields. And, right
- 12 now, I can say it very freely, but during the time it
- 13 was -- it was not a joke for us. It was more -- you
- 14 know, it had to do with the situation.
- So I just would like to have a better
- 16 understanding of whatever -- all these -- all
- 17 different equipments. So I just wanted to bring that
- 18 up.
- 19 Thank you.
- 20 MR. ANNINOS: Thanks, Mily. Thank you very
- 21 much.
- 22 And Nina Wilson has a question and Damon
- 23 Reabe also has a comment. So we'll go with Nina and
- 24 then Damon.
- MS. WILSON: Hi, yeah, thanks for the

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- 1 presentation. I have an oddly-specific question, but
- 2 on that pulse width modulation, what I've seen for
- 3 misapplications or misses, which require
- 4 reapplication and all that, is speed. And so that --
- 5 as a pulse width modulator, is that adjusted for air
- 6 blast sprayers and how widely are those being used?
- 7 MR. BIEGLER: Thanks for the question.
- 8 What was (inaudible) question?
- 9 MS. WILSON: The pulse width modulator that
- 10 you showed, I wondered can you -- I was wondering
- 11 whether or not it could be used in air blast
- 12 sprayers, like orchard sprayers.
- MR. BIEGLER: Air blast, there you go.
- 14 Okay. I misheard. I thought you said Airbus, so I
- 15 was asking for a clarification, but thank you.
- So pulse width modulation, like I said, has
- 17 been out for probably almost close to a decade by
- 18 now. It started getting some widely piece of
- 19 adoption about five to six years ago. It is becoming
- 20 a pretty widely adopted technology, especially in our
- 21 industry. I'll throw a few players out there.
- 22 Capstan has a system, Deere has a system, (inaudible)
- 23 has a system, just those three right off the top of
- 24 the head.
- 25 From a use case standpoint, I'd say

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- 1 probably 60 to 70 percent of sprayers in North
- 2 America are receiving that type of technology today.
- 3 It has emerged from the time it was initially
- 4 launched. You do also see pulse width modulation, or
- 5 PWM, type of technology on pumps and valves in
- 6 (inaudible). So it's not just on a specific to the
- 7 nozzle. And so that technology and that cross
- 8 training, that education has helped advance more than
- 9 nozzles.
- 10 It can be more generically adopted, is
- 11 maybe the word I should use, across different systems
- 12 as long as it has availability to meet the rate, the
- 13 pressure, the flow that is required to actually
- 14 operate the system. Once you start getting into some
- 15 very high type of flows, when you start getting into
- 16 some thicker chemicals, that's where PWM is not the
- 17 right application at the moment for certain systems.
- 18 We're making some improvements there. But it is kind
- 19 of more like the niche, more -- what I would consider
- 20 more of a water soluble type of solution at some
- 21 lower type of applications, if that makes sense.
- MS. WILSON: Yes.
- MR. ANNINOS: Thank you, Nina. Thank you,
- 24 Chad, for your response. And we have one minute left
- 25 or less than a minute left. And let's turn it over

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- 1 to our agricultural aviation expert, Damon -- I don't
- 2 know if I'm pronouncing your last name properly,
- 3 Damon. I'm sorry. Is it Reabe or "Raebe?" Go
- 4 ahead.
- 5 MR. REABE: Yeah, it's Reabe. Thanks a
- 6 lot, Paul. I'll make it brief. So really to kind of
- 7 address Mily's comments, these devices that are on
- 8 ground application equipment as well as aerial
- 9 application equipment, whether it be meteorological
- 10 measurement devices, section controls, updated
- 11 technology with nozzles that have a much greater
- 12 ability to control droplet size, all of these
- 13 different devices are widely used by pesticide
- 14 applicators in agricultural settings. And I noticed
- 15 when I travel in these ag settings, you know, that I
- live in and work in the accuracy of pesticide
- 17 application is dramatically improving, particularly
- 18 in the last ten years.
- 19 Combined with the equipment, along with a
- 20 lot of the stewardship, educational initiatives that
- 21 have been implemented for applicators themselves,
- 22 it's really actually quite impressive to see what
- 23 this equipment is capable of, and the level of
- 24 training that the operators have is rather
- 25 monumental.

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Τ.	MR. ANNINGS. Damon, chank you very much.
2	And we're going to wind it up with that
3	comment because we're running up against the next
4	presentation, which, of course, is the same general
5	topic. So thanks for the overview and the
6	orientation. And we'll kind of transition now to the
7	workgroup presentation for the emerging agricultural
8	technologies workgroup.
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- 1 EMERGING AGRICULTURAL TECHNOLOGIES WORKGROUP
- 2 MR. ANNINOS: I'm going to turn this back
- 3 over to Ed and to Mano Basu of CropLife America to
- 4 take this presentation forward. So thanks. And I'm
- 5 not sure who's speaking first, but whoever -- as long
- 6 as you're off of mute, you're good.
- 7 MR. MESSINA: Thanks, Paul.
- 8 I think I'm kicking things off. I'm
- 9 waiting for Mano to turn his video on, but thanks for
- 10 that great presentation. I think just to wrap up the
- 11 last presentation and to continue, some of these
- 12 technologies you'll see in -- yes?
- MR. BASU: I just want to make sure that I
- 14 have the presenter -- I am the presenter, Paul. If
- 15 you can make me the presenter, then I can forward the
- 16 slide, that would be helpful.
- MS. CHADWICK: Yep, you're the presenter.
- MR. BASU: Thank you very much.
- 19 Ed, if you can just tell me next, I'll move
- 20 the slides along. Thank you.
- 21 MR. MESSINA: Sure, actually, I have
- 22 presenter authority as well.
- MR. BASU: Go ahead.
- MR. MESSINA: So, thanks, Mano. And Mano,
- 25 our fearless leader on this workgroup, the co-chair,

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- 1 doing an amazing job. He's got a great presentation
- 2 for you guys today on all the work that this
- 3 workgroup has been doing, getting the slide shows,
- 4 the many members that have participated in multiple
- 5 meetings.
- 6 And really just to remind folks why we
- 7 started this, you know, technology is changing, how
- 8 can EPA adapt to this changing technology, how can we
- 9 use this new technology to make sure that workers are
- 10 protected better, that that goes into our risk
- 11 analysis. Environmental issues are addressed as well
- 12 with, you know, more targeted reduced applications,
- 13 variable rates, you know, making sure our labels are
- 14 adapted to these new technologies that have the
- 15 potential to reduce the need for applications and
- 16 also protect the environment and worker safety.
- 17 So with that, this is our workgroup, and
- 18 I'm going to move it over. This is a reminder of our
- 19 charge questions, and I'll hand it over to Mano.
- 20 So when we first formed this group, writ
- 21 large, PPDC members, it was, how should EPA obtain a
- 22 greater understanding of how the use of emerging
- 23 agricultural technologies leads to reduced or
- 24 increased risks that differ from those resulting from
- 25 current methods? What changes to EPA's approach to

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- 1 pesticide labels, if any, are needed to accommodate
- 2 emerging technologies? So that's what the group's
- 3 been spending their time on, having lots of great
- 4 discussion.
- 5 And so I think I'll also remind folks that,
- 6 you know, this is the spring meeting for PPDC and
- 7 it's sort of a report out from the workgroups. The
- 8 feedback from the larger PPDC group is, you know, are
- 9 these workgroups heading in the right direction, are
- 10 they still asking the right questions, and then at
- 11 the fall meeting for PPDC, we're going to have a
- 12 final presentation by the workgroups with the desire
- 13 that the full PPDC make a recommendation one way or
- 14 another that the materials that the workgroups have
- developed be forwarded on to EPA, writ large, with
- 16 action. So that's kind of the role of the larger
- 17 PPDC workgroup.
- 18 So as you're viewing these workgroup
- 19 sessions, know that eventually in the fall meeting,
- 20 there's going to be a final product that gets
- 21 developed and that is asked for feedback from the
- 22 larger PPDC workgroup. So we really want to give
- 23 these workgroups some feedback now to make -- if you
- 24 feel like they're heading in the right direction or
- 25 there's different issues you'd like them to consider.

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- 1 So thanks for listening and I'll kick it
- 2 over to Mano to take control.
- MS. BASU: Thank you very much, Ed. And we
- 4 all heard the great presentation from Nick earlier on
- 5 talking about the new technologies, and that kind of
- 6 sets up very well going into the discussion of what
- 7 the emerging technology workgroup has been focusing
- 8 for the past few months that we have met and have
- 9 invited external speakers as well.
- 10 Paul, I'm going to forward the slide. I
- 11 just want to make sure that it's not just forwarding
- 12 at my end, but you can see it as well, if you can
- 13 give me a thumbs up if the slide changes. Wonderful.
- 14 Thank you.
- So as I said, we met just before the PPDC
- 16 -- full PPDC meeting on May 6th and have been meeting
- 17 frequently on a monthly basis. That's the plan going
- 18 forward until our October meeting. And as Ed
- 19 mentioned, the goal is to provide some recommendation
- 20 to the agency based on the feedback we get from the
- 21 full PPDC.
- 22 So far, we've had two presentations, one on
- 23 February -- the one you heard earlier today from AEM
- 24 around what are the different technologies that are
- 25 out there. We also had faculty from Ohio State

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- 1 University presenting on what are some of the
- 2 upcoming technologies out there in the market. So
- 3 that presentation, I'm not going to go much into the
- 4 detail given AEM covered the technologies.
- 5 The second one was from Jane Tang,
- 6 presented an overview of the 2020 CERSA Workshop.
- 7 This is the Center for Excellence on Regulatory
- 8 Science in Agriculture. So both presentations are
- 9 available on the PPDC website, so you can go ahead
- 10 and check those presentations out. And if you have
- 11 questions, I'm sure I will find an opportunity to
- 12 connect on those questions.
- Going back to the technology, some of the
- 14 images that you see on the right would be familiar
- 15 from Nick's presentation. Overall, we reviewed quite
- 16 a lot of different technology, how the GPS guidance
- 17 system is now assisting automated equipments,
- 18 autonomous sprayers, and whatnot. The GPS-based
- 19 guidance systems have been used in fixed-wing
- 20 aircraft for a long time. Again, boundary mapping
- 21 and how boundary mapping could be used from a buffer
- 22 point of view, how the sprayers could be managed
- 23 separately, smart guidance. We heard about -- a bit
- 24 about the targeted spray technology, the see-and-
- 25 spray, you know. This is a great advancement. You

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- 1 see a weed, you spray; you don't see a weed, you
- 2 don't spray.
- 4 to 90 percent reduction in application. These are
- 5 some great advancements that are happening within
- 6 technology in the ag space.
- 7 We also heard about machine-mounted weather
- 8 stations. I still recall from the days, you know,
- 9 you had one weather station in one location,
- 10 collecting all the data and not always you would get
- 11 the most accurate weather data. However, now, with
- 12 each machine having its own weather station, it's all
- 13 happening in real time. So some major advancement
- 14 that we continue seeing in the technology space.
- 15 From the North Carolina State University
- 16 Center for Excellence on Regulatory Science and
- 17 Agriculture Workshop, what they were focusing last
- 18 December specifically on drone-based application of
- 19 pesticide and where drones can work.
- 20 CERSA is co-led by North Carolina State and
- 21 Louisiana State University. Primarily, they are
- 22 focused on undergraduate, graduate, and continuing
- 23 education training in the reg science space. There
- 24 were several stakeholders who participated in the
- 25 2020 workshop, discussing where the technology was,

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- 1 remotely piloted aerial application systems. I'm
- 2 talking about in a droplet size research that is
- 3 needed, drift modeling. So a lot of good discussion
- 4 that went into the 2020 workshop.
- Now, I did not attend the 2020 workshop. I
- 6 know Amy Blankenship from EPA was one of the
- 7 participants. I'll just take a quick pause to see if
- 8 Amy has anything to add on the CERSA workshop.
- 9 MS. BLANKENSHIP: Hi, Mano. So hi, this is
- 10 Amy. Yeah, it was a workshop, and I have a little
- 11 bit on a slide that I will discuss, that, you know,
- 12 was focused on potential benefits and current and
- 13 future uses for UASes or drones. But it did also go
- into a little bit about modeling, so what we use for
- 15 current modeling for both ground and manned aerial
- 16 applications, as well as the future of how that model
- 17 or new models can be used for emerging technology,
- 18 like drones. So it was a very interactive workshop,
- 19 lots of participants from growers, registrants, lots
- 20 of stakeholders. So it was a pretty productive space
- 21 for that workshop.
- Thank you very much, Amy.
- 23 And specifically going in to drone and
- 24 drone-based application, what we, as a group, wanted
- 25 to do is share with the full PPDC where some of the

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- 1 other countries outside the U.S. are and also looking
- 2 closely within the U.S. and our neighbors up north
- 3 where they were headed from regulating grounds for
- 4 pesticide application.
- 5 We know from a global perspective, Asian
- 6 countries have made some major advances on the
- 7 pesticide application through drone. They have
- 8 embraced this technology, found several use cases,
- 9 whether it's the small holder rice farmers or -- and
- 10 I've learned about some drone-based application in
- 11 tea gardens in India, regulators in Japan and Korea
- 12 have certainly transitioned to drones through RC
- 13 helicopter guidance.
- 14 Again, China has been leading some of the
- 15 work on drones. We saw some recent development in
- 16 2020 coming out of Philippines, Indonesia and
- 17 Thailand. As I mentioned earlier, there is some
- 18 drone exemptional use that was allowed in India. So
- 19 again, there's a lot of effort going on within Asia
- 20 to promote this technology and the use of this
- 21 technology for pesticide applications.
- 22 Closer to -- from a regulation perspective,
- 23 especially in Japan, we were able to identify this on
- 24 how the Japanese regulations are looking at, from the
- 25 type of data requirement, the label extension new

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- 1 formulations, specifically for drone, what happens
- 2 for bioefficacy data if a pesticide is already
- 3 approved for regular application, and then you, as a
- 4 company, a registrant is requesting drone-based
- 5 application, what happens from a crop residue data
- 6 perspective, as well as the crop safety data
- 7 requirement?
- 8 So there is at least one regulatory agency
- 9 that we were able to find with some sort of
- 10 regulations, requirements in place for UAV drone
- 11 application. As we, in this working group, think
- 12 about how to move the work forward not just from a
- drone perspective, I mean, that is certainly this
- 14 group -- something the group is interested in and is
- 15 looking for, but from an overall promoting emerging
- 16 technologies in the field of agriculture, how could
- 17 we look into making some recommendations on a
- 18 framework to promote technology in agricultural
- 19 space, which again brings the benefit of maybe
- 20 reduction, reducing the use, reducing drift, reducing
- 21 worker exposure and whatnot. So what is the best way
- 22 to evaluate these technologies? And, again, here is
- 23 a good example on how Japan is looking specifically
- 24 from UAV and drone perspective.
- 25 Much closer to home, our neighbors up

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- 1 north, PMRA is working with the remotely piloted
- 2 aerial application workgroup, providing input in
- 3 studies and considerations to reach an approval.
- 4 USDA is involved in the RPAAS working group. They
- 5 are looking into spray drift studies developed in
- 6 2020, how these studies could be used, are there data
- 7 gaps.
- 8 Canada, though, has not approved any
- 9 pesticide application through UAV, but there is a lot
- 10 of work going on.
- 11 We're also aware of work going on within
- 12 the U.S. What I'll do is I'll request Amy
- 13 Blankenship from EFED, again, to provide an overview
- 14 of the work that is going on currently within the
- 15 U.S.
- Amy, please.
- MS. BLANKENSHIP: So thanks, Mano.
- 18 So those of you who don't know me, my
- 19 name's Amy Blankenship. I'm a branch chief in the
- 20 Environmental Fate and Effects Division. And I'm
- 21 sort of supervising and working in this space on
- 22 drones and emerging technology.
- 23 So from the U.S. or the EPA perspective, a
- 24 lot of work that we've been doing has been centering
- 25 around UAVs when it comes to emerging technology.

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- 1 We've been working with several stakeholders in
- 2 working groups both in the U.S. and international. I
- 3 know you just heard a little bit from Mano about some
- 4 of the other efforts going on and, you know, we're
- 5 working in that same space as well.
- 6 So we are working with SFIREG and APPCO on
- 7 emerging technologies, and I know that they released
- 8 and did a survey a year or two ago regarding UAS
- 9 work, you know, who's asking for and where and under
- 10 what circumstances. So that was really useful
- 11 information in continuing that dialogue.
- 12 Mano did discuss or mentioned the RPAAS
- 13 workgroup that is led by Canada. So that is a really
- 14 multi-stakeholder workgroup as well. So we
- 15 participate, but so do several other stakeholders,
- 16 like their version of FAA is involved, they do have
- 17 regulators, they do have folks who are on the ground
- 18 running some of these studies or using it and putting
- 19 in applications. Maybe not for pesticides yet, but
- they are being used for other types of situations.
- 21 And that workgroup there is interested in conducting
- 22 offsite spray drift data and collecting that type of
- 23 information, as well as exposure and efficacy type
- 24 information.
- 25 Another group that we are sort of keyed

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- 1 into is the OECD working group on drones. They are
- 2 just finishing about a six or nine-month review, what
- 3 we'll call a thematic literature review on drone
- 4 applications, where they sort of looked at a wide
- 5 range of publicly available literature and focused on
- 6 sort of four main topics, efficacy, offsite drift,
- 7 exposure, as well as modeling.
- 8 And so they were really interested in
- 9 trying to understand, sort of in the open literature,
- 10 what questions, you know, are sort of still
- 11 outstanding, what information is out there and, you
- 12 know, what then, using that information, are the
- 13 remaining questions that they can use to inform OECD
- 14 member countries on terms of like additional data
- 15 needs or other areas that might need further
- 16 consideration for regulatory adoption.
- We did participate in the CERSA workshop
- 18 that I just mentioned back in December 2020, and we
- 19 were really sort of looking again at the current
- 20 state of science, you know, where are the potential
- 21 benefits, not only from a worker exposure
- 22 perspective, but also from an environmental, right,
- 23 where might drift be less from using this technology
- 24 or might worker exposure be reduced from this type of
- 25 technology. And we really wanted to know not only

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- 1 where are drones being used now, but also what are
- 2 some future anticipated uses of this technology, so
- 3 from a regulatory standpoint, we can kind of
- 4 understand not only today but in the future so we can
- 5 make informed regulatory decisions.
- 6 And we did spend some time discussing the
- 7 spray drift models, not only for existing application
- 8 technology, but -- oh, sorry -- but also for the use
- 9 of drones. Because right now, you know, there isn't
- 10 an approved model to evaluate drift from emerging
- 11 technology, like UAVs or drones.
- 12 So on this slide here, sort of looking at
- 13 it from an EPA risk assessment, risk Management
- 14 perspective, several of you probably know, but just
- 15 for sort of reminding, the EPA currently evaluates
- 16 spray drift in ecological and drinking water
- 17 assessments using two different models. We use the
- 18 AgDRIFT for ground and manned aerial applications and
- 19 then we use the AGDISP model as developed by USDA,
- 20 mainly for adulticide applications.
- 21 So we really kind of are looking both at
- 22 this technology both from a current application
- 23 standpoint, making sure our models are sort of up
- 24 today. We have a current understanding of both that
- 25 ground and man technology. So when we want to make

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- 1 some comparisons to emerging technology, like drones,
- 2 we kind of can make those fair comparisons.
- 3 So in terms for the EPA, our priority is to
- 4 understand the exposure considerations that this
- 5 emerging technology presents and how then we can
- 6 compare it to existing application technology. And
- 7 that's really important for us because we, you know,
- 8 are continuing to work toward a standard policy and
- 9 risk assessment method and we want to make sure we're
- 10 making informed, sound science regulatory decisions
- 11 from this emerging technology, like UAV applications,
- 12 not only from -- you know, in the context of
- directions for use or how to modify or update labels
- 14 potentially, but also worker safety considerations
- 15 and training, protections to nontarget species, and
- 16 also, then pesticide user compliance and oversight.
- 17 And what I will say a little bit about the
- 18 previous slide in terms of the workgroups is that
- 19 there is actually a lot of overlap, not only from the
- 20 participants, but also from some of the common goals
- 21 that those workgroups are trying to achieve. So
- 22 maintaining communication is really going to be key
- 23 across all of these groups because we want to make
- 24 sure that everybody sort of has the latest and
- 25 greatest information, and in an effort maybe to

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- 1 hopefully find some efficiencies and sort of the way
- 2 that we're sort of thinking about this technology and
- 3 moving forward both from a science-driven space, as
- 4 well as maybe a regulatory space, and we just think
- 5 that that's going to be really key to make sort of
- 6 sound informed risk assessment framework decisions,
- 7 as well as regulatory policy.
- 8 So thank you.
- 9 MR. BASU: Thank you very much, Amy.
- 10 And as the working group -- the emerging
- 11 technology working group kept meeting, we were
- 12 thinking about what are the different deliverables.
- 13 We were aware of the two charge questions that the
- 14 working group had received from EPA. What was the
- 15 best way to respond to those charge question?
- What we decided is we'll have two
- 17 deliverables. One is more looking into the list of
- 18 emerging technologies that are out there that we are
- 19 aware of or maybe the ones which are in progress and
- 20 we have heard about it, collecting those list of
- 21 technologies. And then, again, from within those
- 22 lists of technologies thinking, you know, what kind
- 23 of support would be required for pesticide
- 24 applications and regulatory oversight or risk
- 25 assessment changes that EPA needs for facilitating

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- 1 their use.
- 2 And then the second deliverable would be
- 3 taking a deep dive on autonomous application
- 4 platforms. I mean, whether they are remotely or
- 5 manually operated. The manually operated autonomous
- 6 application platforms already exist. You know, you
- 7 may apply a see-and-spray technology nozzle on a
- 8 land-based -- on a tractor sprayer or on a fixed-wing
- 9 aircraft. How does it work in a -- on a drone, UAV.
- 10 There's definitely some more work needed.
- But, again, going back asking the same
- 12 questions that are the charge question, how does it
- 13 reduce or increase risk and the difference from the
- 14 existing technology and, you know, what changes would
- 15 be required from a label perspective for both those
- 16 deliverables.
- 17 As we continued meeting for the first one,
- 18 list of technologies, what we developed is an Excel
- 19 sheet with a long list of technologies that are out
- 20 there with some additional parameters around each of
- 21 these technologies. This is a much summarized
- 22 version here what I'm presenting. The Excel
- 23 certainly has much more details and additional
- 24 parameters on each of these technologies. But,
- 25 broadly, what we did is we divided the technologies

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- in hardware and data and analytics within hardware.
- 2 You heard several times about UAV drones, Nick's
- 3 presentation around spray nozzles, the changes there,
- 4 ground robots,
- 5 equipment improvements that's been going on to
- 6 existing application equipments.
- 7 On the data and analytics side, a lot of
- 8 maps coming in, changes in statistical analysis. We
- 9 know prescriptive agriculture is making an impact.
- 10 New applications are coming in from the perspective
- 11 of prescriptive agriculture and the use of artificial
- 12 intelligence. As more and more data is being
- 13 collected, that data only helps to advance technology
- 14 and make benefits -- provide benefits to our farmers
- 15 and farmworkers.
- Going within the hardware piece, because
- 17 there's so much development going on on a lot of
- 18 these technologies coming in, we then subdivided the
- 19 hardware into specifically looking for equipment
- 20 improvements where you may have existing equipment on
- 21 which you're adding these new sprayers, nozzles,
- 22 ground-based robots, these are the autonomous robots,
- and then on the spray/nozzle side.
- So I'm not going to read the list of
- 25 technology that is here. But we look, overall,

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- 1 what's out there already, what's coming maybe in a
- 2 few months. How does it change agriculture going
- 3 forward? You know, one of the presentations that we
- 4 heard from the University of Ohio faculty was a lot
- of these technologies that are coming up may even be
- 6 based on a subscription service where farmers may not
- 7 own the piece of equipment anymore, but may subscribe
- 8 to the equipments as and when needed. A lot of
- 9 interesting and exciting work happening in the field
- 10 of technology and in the ag sector. So, how can we,
- 11 as this working group, help come up with some
- 12 framework, which can be provided or recommended to
- 13 the agency as a final outcome of this working group?
- 14 Finally looking into deliverable 2, which
- is part of our feature work as well, specifically
- 16 focusing on the autonomous application, what are
- 17 those benefits of the technology, specifically from
- 18 an autonomous application. We'll continue to engage
- 19 with industry, academics, CERSA, EPA, and other
- 20 stakeholders to develop our understanding and develop
- 21 an outline of a risk framework, the benefits, and
- 22 what changes may or may not be needed from a label
- 23 perspective.
- My hope is when we come back in October,
- 25 we'll have some more concrete work that we can share

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- 1 with the full PPDC and get feedback from the full
- 2 PPDC before making a recommendation and provide the
- 3 input to the agency.
- 4 Paul, with that, I think this is my last
- 5 slide. Yep. I am happy to take questions, but I'll
- 6 also -- there are several members of the working
- 7 group who are on the call and have contributed
- 8 significantly to this work. Anyone who wants to
- 9 chime in, please do so. And then after that, I'll
- 10 request Ed to provide some closing remarks and we'll
- 11 take questions then.
- 12 Thank you, Paul.
- 13 MR. ANNINOS: Great. Thank you, Mano.
- 14 Thanks, Amy and Ed, for kicking that off. And this
- is a great opportunity -- again, Mano's inviting the
- 16 working group members who might want to pile on on
- 17 some of these topics and so feel free to either raise
- 18 your hand, put your name in the chat window, let us
- 19 know you want to speak. You can burn out your -- you
- 20 can blurt out something if you'd like that will bring
- 21 you to the forefront. So it's open for discussion
- 22 and O&A.
- 23 And, again, to Ed's point starting off, all
- 24 these working group presentations are considered to
- 25 be a work in progress and the beauty of having 39

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- 1 committee members in a room together, so to speak, is
- 2 to be able to get some real direct feedback to the
- 3 working group members on the charges that they're
- 4 faced with and the challenges that they've identified
- 5 that need to culminate in a set of recommendations to
- 6 EPA in just a few months.
- 7 This is that quiet space that we were
- 8 talking about earlier, that we'll just let people
- 9 kind of --
- 10 MR. BASU: it seems the working group
- 11 agrees to entirely everything I have said so far.
- MR. BASU: Ed, take it away.
- 13 MR. MESSINA: Yeah. Well, maybe -- because
- 14 I think a discussion is warranted. There's a lot of
- 15 work that went into this. I think even having a list
- 16 and the survey is going to be a great deliverable.
- 17 So appreciate all the work that went into that.
- 18 And then also continuing to work with our
- 19 partners on developing SOPs so we can have these
- 20 technologies evaluated and incorporated into our risk
- 21 assessments is, you know, a great step.
- 22 So I guess my first question is, anyone
- 23 want to identify any types of technologies that the
- 24 group may have overlooked that you are aware of, as
- 25 an easy question?

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1	Jeannie?
2	MR. ECONOMOS: Yes, I just have a question.
3	I mean, this looks really great. It looks good to
4	see that there's attempts to reduce drift. But it
5	also looks like this equipment is really expensive
6	and the only people that would be able to buy it
7	would be the big, gigantic corporate farms. And I'm
8	wondering if there's any technologies for small-scale
9	farmers to also help them to reduce and better target
10	the chemicals that they're using, because the small-
11	scale farmers would not be able to afford that kind
12	of technology. So I'm just concerned about what's
13	being done in that realm.
14	MR. MESSINA: Yeah, I think Mano alluded to
15	it on the you know, you think about the Uber of
16	tractors showing up and a subscription service where
17	maybe the coop pitches in and it is you know, you
18	don't have to buy the equipment, but you're leasing
19	it by the hour and you can have it show up and so
20	the affordability of this technology, you know, we
21	think about Moore's Law where the price of a chip
22	doubles in power and is halved in price. These
23	technologies, although they start off being used by
24	the big players, are going to be ubiquitous as time
25	goes on. You think about the computing power that we

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- 1 all carry in our pockets, which is many times over
- 2 the capabilities that NASA had to get people to the
- 3 moon. This technology will eventually make it out to
- 4 the wider audiences.
- 5 But I don't know if maybe folks from IR-4
- 6 wanted to chime in or anybody from the workgroup
- 7 wanted to talk about the availability of these
- 8 technologies and how they're sort of being used, but
- 9 great question.
- 10 MR. WISE: Hi, this is John Wise.
- MR. ANNINOS: Oh, go ahead, go ahead,
- 12 whoever that was.
- MR. WISE: Hi, this is John Wise. Ed asked
- 14 for any comments from IR-4. I valued everything that
- 15 was presented. It was really exciting and
- 16 interesting. There may be another time where we --
- if it hasn't been done already, this is my first
- 18 meeting. There may be another time where we focus
- 19 more on technologies that are relevant to specialty
- 20 crops, fruits and vegetables, and that may also
- 21 include smaller farms. And there are -- there are
- 22 some. In some ways, maybe they ride the coattails of
- 23 what's been presented and in other cases, they're
- 24 just different because the needs are different. But
- 25 maybe that's something I can contribute to over the

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- 1 next period of time.
- 2 Thank you.
- 3 MR. MESSINA: Thanks, John.
- 4 MR. ANNINOS: Thank you, John.
- 5 Damon, you had a comment on Jeannie's
- 6 question?
- 7 MR. REABE: Yeah, and it's really kind of a
- 8 follow-up to John's comments and really Ed's request
- 9 for comments. I was -- participated at CERSA back in
- 10 December of 2020, and one of the outcomes from that
- 11 meeting was that we all thought that UAVs, drones,
- 12 had a real ideal place in niche markets, small farms
- 13 that are raising high-value crops. The size of these
- 14 drones is ideal for those small acreage applications,
- 15 where the grower, probably due to the size of the
- 16 farm, simply wouldn't have access to aerial
- 17 application otherwise.
- 18 And so regarding the affordability of these
- 19 devices, what's really interesting is the -- from
- 20 what I'm seeing from the drone industry, particularly
- 21 the small devices, is that they're actually rather
- 22 affordable units. And the technology itself isn't,
- 23 in any way, out of reach for that small grower.
- 24 And so I think that the work that CERSA did
- 25 and a lot of what we've been talking about actually

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- 1 over the last several years here at PPDC is that
- 2 that's exactly where these devices are ideal.
- 3 I tend to -- you know, my opinion, as far as that
- 4 scale agriculture of large-scale commodity crops
- 5 don't see these operationally or economically
- 6 feasible and, of course, you know, that's just my
- 7 opinion as an expert in pesticide application and,
- 8 frankly, in agriculture in general.
- 9 But I can imagine if I was a small farmer
- 10 raising specialty crops, this would be a tool in my
- 11 arsenal of equipment to affordably raise those crops.
- MR. ANNINOS: Thank you, Damon. Thank you.
- 13 Liza Trossbach, I see you're in the queue.
- 14 MS. FLEESON TROSSBACH: Hi, yeah, thank you
- 15 so much. I just wanted to make a couple of comments.
- 16 First of all, you know, thank you for the
- 17 presentation. It was great. It is exciting to see
- 18 all of this technology.
- 19 I've made this comment before and I'll just
- 20 make it again kind of for the broader group. You
- 21 know, we've talked a lot about the agriculture use of
- 22 some of these technologies with UAVS. And just to
- 23 remind the group that there are non-ag applications
- 24 and so as you're thinking about labels and how do you
- 25 change those labels, just as a reminder that there

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- 1 are also non-agricultural type applications that
- 2 could potentially lend themselves, maybe not for
- 3 trackers with all the GPS, but, you know, UAVs are a
- 4 perfect example.
- 5 There's a lot of public space applications
- 6 that are devices that are being used and different
- 7 kinds of equipment inside hospitals and schools and
- 8 all types of things. And so just a reminder of that,
- 9 whether it's in -- maybe not in this workgroup
- 10 because this is ag focused, but also maybe another
- 11 workgroup in the future.
- 12 The other thing I want to say as far as the
- 13 label, you know, we always say the label is the law
- 14 and you have pesticide regulatory officials in states
- 15 and territories and tribes that are trying to enforce
- 16 the labels and help people be compliant, and the
- 17 absence of language about some of these technologies,
- 18 particularly UAVs, is very problematic and you have
- 19 the opportunity or the profitability of different
- 20 interpretations by different regulatory officials.
- 21 And so I would encourage EPA to come up
- 22 with some kind of guidance for pesticide regulatory
- 23 officials and the regulated industry -- you know,
- 24 there's applicators that are out there using them --
- 25 on can it be used, can you apply product X with a

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- 1 UAV. If it's not strictly prohibited, can you use it
- 2 or does it have to specify that kind of equipment?
- 3 And we understand that technology is ahead
- 4 of the regulations and things take time and we want
- 5 the data to be good. But in the interim, we need
- 6 regulatory officials in the regulated industry to
- 7 know what it is they're supposed to do right now.
- 8 And so I would just encourage that and we have a lot
- 9 of stakeholders represented here, of course, as was
- 10 mentioned earlier, there's APPCO insofar as that can
- 11 help work on some of these issues that come up with
- 12 something in the interim. And, again, on behalf of
- 13 APPCO and SFIREG, we can certainly continue to assist
- 14 with that and, you know, data gathering.
- 15 And then just one last thing, on the other
- 16 side of this, there's also -- there's other questions
- 17 about the certification. You know, what are those
- 18 requirements for the person flying the UAV? Are they
- 19 the applicator? Is it the person who actually loaded
- 20 the product into the UAV? So there's a lot of other
- 21 questions as well. So I appreciate this
- 22 conversation, but, again, we just need to keep moving
- 23 forward with this and bring some of these other
- 24 issues into the emergency technologies discussion,
- 25 because they're not separate, they're absolutely

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- 1 related.
- 2 So thank you very much.
- 3 MR. ANNINOS: Thank you, Liza. Thank you
- 4 very much. And, Damon, for your comments as well.
- I don't see anybody's name in the chat
- 6 window yet, but people are still digesting what
- 7 they're hearing here. So anybody that wants to chime
- 8 in can.
- 9 Jasmine has her name in.
- 10 MS. BROWN: Thanks. I just wanted to say I
- 11 really like the new technologies that are coming out,
- 12 reducing drift and reducing all these other risk
- 13 factors. I just wanted everyone to keep in mind --
- 14 and I'm not sure it could be a label change or not --
- but no matter what products you're using and no
- 16 matter how fancy the technology is, these things are
- 17 still going to persist in the environment and those
- 18 risks never go away.
- 19 So I just feel like, yes, we're getting
- 20 some great technologies for the human aspect of
- 21 things, but to keep that in mind as well. And we do
- 22 -- we do see most crops spray different products
- 23 every seven days and so there is that layering
- 24 effect.
- 25 MR. MESSINA: I'm not sure what that

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- 1 technology would be, the seven-day. So a couple
- 2 points on that, Jasmine. So when we're doing our
- 3 ecological and environmental review, one of the
- 4 inputs we look at is the longevity of that product in
- 5 the environment and we tend to want chemicals that
- 6 are going to break down into more harmful -- into
- 7 less harmful constituents, and so that's part of the
- 8 analysis.
- 9 Some of the older chemistries, the ones
- 10 that do fail from an environmental and human health
- 11 risk perspective tend to be those chemicals that have
- 12 a long persistence in the environment. And unless
- there's a real benefits piece, you know, a highly
- 14 beneficial product, those tend to be the ones that
- 15 are canceled or the registrations are canceled. We
- 16 saw a couple of examples of those today, whereas part
- 17 of the registration review process, we canceled
- 18 those. Some of those chemicals have those
- 19 characteristics of being long-lasting. So that is
- 20 one of the inputs we look at.
- 21 And then on the -- Liza's comment, yeah, I
- 22 agree. I mean, I've seen the video of the UAV with
- 23 the Raid can attached floating up above the house to
- 24 spray the hornets' nest. That's a fun one. I think
- 25 the robot disinfectant, you know, sprayers that are

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- 1 in hospitals that are going room to room and spraying
- 2 disinfectants, I've seen those videos, too. So
- 3 there's definitely lots of new technologies that are
- 4 in the non-ag space that are quite interesting and
- 5 that we need to keep an eye on.
- 6 MR. ANNINOS: Excellent.
- Hey, John, you want to chime back in? John
- 8 Wise?
- 9 MR. WISE: Yes, I do. Thanks.
- I was listening to Jasmine's comments and
- 11 concern about residues that never go away. And based
- on my own experience, what I've learned and also what
- 13 I've studied, I do see benefits of modern delivery
- 14 systems that put pesticides and biopesticides in
- 15 locations that reduce exposure to nontargets, while
- 16 allowing persistence either in the crop or parts of
- 17 the canopy that are more exposed to the target pest
- 18 and less exposed to nontargets, whether those are
- 19 farmworkers or beneficials.
- 20 So I want to just share that what I see in
- 21 some of the research is that, in fact, we can reduce
- 22 risk and reduce exposure through modern delivery
- 23 systems. So I just wanted to make that comment.
- MR. ANNINOS: Thank you, John.
- 25 Any other PPDC members that want to chime

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- 1 in on this topic, provide any advice to the
- 2 workgroup?
- I see a note there from Sheryl, if you're
- 4 watching, Ed, in the chat window, a note from Sheryl
- 5 Kunickis. And I didn't know if you wanted to say
- 6 anything, Sheryl, or if you just up through that
- 7 comment in the chat for everybody to see. Thank you.
- 8 MR. MESSINA: Yeah, maybe back to the
- 9 specialty -- oh, go ahead, Sheryl, please.
- DR. KUNICKIS: No, I wasn't planning to
- 11 make the comment verbally, but I do just want to say
- 12 that EPA does have a very good process for evaluating
- 13 pesticides and I always like to reference when they
- 14 did print out the N List (inaudible). They spent a
- 15 -- they did a -- I think it was a good hour or two on
- 16 how they do register pesticides and the work that
- 17 goes into that. And it's very well thought-out and I
- don't believe they miss anything when it comes to
- 19 evaluating how pesticides can be used and be used
- 20 safely when they look at the ecological aspects of a
- 21 pesticide, as well as the human health. So it's an
- 22 excellent process.
- 23 And, also, I want to note that they make
- 24 accommodation as they do learn more information about
- 25 that. So I just thank you and all your staff for all

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- 1 the good work that you do.
- 2 MR. ANNINOS: Thank you, Sheryl. Thank
- 3 you.
- 4 Also, there's a question in the chat window
- 5 from Jeannie Economos. Are these technologies being
- 6 shared with farmers of color? That's the question
- 7 she's posed in the chat box. And I'm not sure if
- 8 anybody wants to weigh in.
- 9 MR. MESSINA: I will say in response, you
- 10 know, to that question, that environmental justice
- 11 and diversity is something that the agency and the
- 12 new administration has highlighted as a priority. I
- 13 think you'll hear that from Michal tomorrow. So that
- 14 is an area that we're continuing to incorporate into
- 15 our ongoing work. These technologies are available
- 16 to anybody in the United States who wants to buy them
- 17 and use them and they're being marketed to farmers
- 18 across the country, regardless of race or color or
- 19 creed. And so I think that will continue.
- 20 I think to the extent that we can help
- 21 amplify that and make sure that the message is being
- 22 received by farmers of color is certainly something,
- as an agency, we can continue to do as part of our
- 24 environmental justice and equities work.
- 25 So thanks for the comment, Jeannie.

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- I don't know if others had a response or a
- 2 comment to that.
- 3 MS. SANDERS: Bryan Sanders with HSE-UAV.
- 4 Also, yeah, I'd like to expand that, you know, around
- 5 the world we're seeing, at least [audio issue] you
- 6 know, farmers and growers --
- 7 MR. ANNINOS: Hey, Bryan, your audio --
- 8 MS. SANDERS: Oh, is it --
- 9 MR. ANNINOS: I think your audio may have
- 10 cut out or maybe I just didn't hear it properly.
- 11 Anybody else?
- MR. MESSINA: It did cut out. Maybe you
- 13 can start over.
- 14 MS. SANDERS: Yeah, sure. Is that any
- 15 better now? A little bit?
- MR. ANNINOS: Yes.
- 17 MR. SANDERS: Okay. Good. Sorry. I'm in
- 18 the middle of nowhere in Alaska right now. So my
- 19 connection's a little unstable. What I was saying is
- 20 that, you know, to Jeannie's question, one of the
- 21 great things about how affordable the unmanned
- 22 technology is, it allows farmers and growers around
- the world that might not have, you know, \$100,000 or
- 24 more to invest in a ground tractor or traditional
- 25 spraying equipment, it allows them to really leverage

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- 1 this new technology at a much more affordable price.
- 2 I think that's an important piece.
- 3 And then the other thing that I'd add about
- 4 emerging technology on the unmanned space is we're
- 5 starting to see -- mainly this is coming out of China
- 6 at this point, but our company is a broker for
- 7 commercial drones and we do a lot in the spraying
- 8 sector. And we're starting to see from China all
- 9 sorts of technology around unmanned vehicles
- 10 themselves, including tractors, unmanned spraying
- 11 tractors, and also full weather stations, you know,
- on the ground, which communicate both to the spraying
- drones with RPAAS, and the spraying tractors.
- 14 So we're starting to see some really neat
- 15 technology that will impact all sorts of unmanned
- 16 application systems, which is pretty exciting. So I
- 17 just wanted to share that from our perspective, what
- 18 we're seeing out there.
- 19 MR. ANNINOS: Thank you, Bryan.
- MS. SANDERS: Yeah, you're welcome.
- 21 MR. MESSINA: Any other comments or
- 22 questions?
- 23 (No response.)
- MR. MESSINA: I was going to address the
- 25 specialty crop piece, too, because I -- to echo some

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- of the applications I've seen involve, you know,
- 2 orchards where, you know, maybe you're not going to
- 3 get a fixed-wing aircraft in there, but you've got a
- 4 robot that is able to have extension arms that sort
- 5 of wraps around the tree. It's using video to
- 6 understand where the tree is. You know, vineyards.
- 7 So we have seen specialty crop applications.
- 8 The indoor growing facility, too, as an
- 9 area where specialty crops are being grown, you know,
- 10 where you've got a warehouse in the middle of a city
- 11 that's using grow lights for lettuce, where there's a
- 12 robot inspecting the lettuce, where trays are being
- moved, or there's a robot that's moving the
- 14 particular crop around the warehouse to get it the
- 15 right level of moisture and lighting. So these
- 16 technologies are impacting, you know, all reaches of
- 17 agricultural production. And they're really changing
- 18 the labor curve, right?
- 19 I mean, I've talked about this in the past
- 20 at other PPDC meetings, but, you know, pesticides
- 21 were a way to address the fact that having, you know,
- 22 manual withdrawal of weeds, you know, was more cost
- 23 effective than employing many, many people to pull
- 24 all those weeds.
- Now, you can have a mechanical robot that's

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- 1 potentially, at some point, going to be cheaper than
- 2 the need for that pesticide, such that the robot is
- 3 roaming the field constantly, using the solar power
- 4 at a docking station. It spots a weed and it can
- 5 remove it through mechanical or pesticidal means sort
- 6 of constantly. And so the labor curve there is sort
- 7 of changed such that, you know, maybe the robot is
- 8 now going to -- is going to be the manual labor that
- 9 takes the place of the need for more pesticide
- 10 application, which is why pesticide applications
- 11 occurred in the first place, which was because they
- 12 were cheaper than hiring all that labor.
- Now, the labor is going to be a lot
- 14 cheaper. And so that's going to create a lot of
- 15 questions and disruptions for this industry that, as
- 16 an agency, we need to be prepared for. And as
- 17 growers and industry and NGOs, the reason why we're
- 18 having this group is the disruptions that are
- 19 happening in our society, writ large, are happening
- 20 in this industry. And just like a lot of government
- 21 agencies, we're trying to adapt to the use of drones
- 22 in air space or, you know, automatic driving cars on
- 23 the highway. We are an agency that's experiencing
- 24 that technical -- technological disruption, and it's
- 25 important for us to understand it and get ahead of it

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- 1 to the extent that we can because it is changing so
- 2 rapidly.
- 3 So it is going to find its way into all
- 4 aspects of agricultural growth and also non-ag
- 5 applications that we (inaudible).
- 6 Any other comments and questions?
- 7 MR. ANNINOS: It looks like Dan Martin has
- 8 a comment.
- 9 MR. MESSINA: Great.
- 10 MR. ANNINOS: Dan, can you --
- MR. MARTIN: So --
- MR. ANNINOS: Okay, there you go.
- 13 MR. MARTIN: I can. There we go. Good.
- 14 So I was muted there for a while. I couldn't talk.
- 15 But, anyway, so I agree with Bryan. This is a --
- 16 this is an emerging technology. First of all, I'm a
- 17 research engineer with USDA. This is kind of some of
- 18 the research I do. But this is an emerging
- 19 technology that is adequately suited for the small
- 20 farmer. They can get in for about \$10,000 with a
- 21 small unit. It'd be great for small farmers or
- 22 organic farmers. Anybody that really is trying to
- 23 replace a backpack sprayer, it's perfect for that.
- 24 And it would reduce the human exposure element of
- 25 that as well.

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- 1 So it's an exciting technology. It can,
- 2 you know, cover areas that are a little bit more
- 3 dangerous for some of the conventional application
- 4 methods as well, and spots or in a field where you
- 5 may only be treating, you know, a small, small
- 6 fraction of the field. So the technology is there,
- 7 especially with the GPS technology that's on board.
- 8 And even some of the R2K technology that can get you
- 9 within just a few inches of your target for spots,
- 10 Bryan, it's perfect for someone doing -- doing some
- 11 of these niche applications.
- 12 Thank you, guys.
- MR. MESSINA: Great comment.
- MR. ANNINOS: Thank you, Daniel.
- 15 MR. MESSINA: Cathy Tortorici has a
- 16 comment.
- 17 MR. ANNINOS: It looks like -- oh, yeah.
- 18 Go ahead.
- 19 MS. TORTORICI: I'm wondering the
- 20 following, I'm listening to this dialogue and I don't
- 21 -- I'm not sure that you can answer this question
- 22 right now, but I am curious about the various
- 23 technologies that you all have talked about and the
- 24 extent that you think that they can really reduce the
- 25 amount of pesticide application, not only target it

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- 1 in the way that you're saying, but also reduce the
- 2 amount of application because if you're targeting it
- 3 and it's not drifting or moving to places where you
- 4 don't want it to, then the total amount of pesticide
- 5 you're applying, I think, would be reduced.
- 6 And I recognize this might even be a little
- 7 bit of an unfair question, not only because it's late
- 8 in the day, but, also, because you talked about a
- 9 variety of different methodologies. So I am curious
- 10 about -- I'm curious about this from our perspective,
- in terms of working with EPA and thinking about
- 12 pesticide application mitigations and what we can do
- 13 in that arena.
- 14 Thanks.
- MR. MESSINA: Yeah, I'm happy to address
- 16 it.
- Mano, did you want to address this or
- 18 anybody on the team?
- 19 MS. BASU: Yeah. That's a great comment,
- 20 Cathy. Again, what we saw in Nick's presentation, an
- 21 up to 90 percent reduction. You know, is that number
- 22 coming from overall? There's certainly a need for a
- 23 lot more research on what that reduction is going to
- 24 be on an overall basis, but since the see-and-spray
- 25 technology, you apply only if you see a weed, we do

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- 1 expect a great reduction in the overall use of
- 2 pesticides. And that certainly brings benefit from
- 3 multiple aspects.
- 4 MR. TINDALL: Mano, it's Nick with AEM. If
- 5 I could just add a comment on to that. In addition
- 6 to the benefit of, you know, a 90 percent reduction
- 7 with things like see-and-spray, if we get the label
- 8 language right where you can maybe spray a little bit
- 9 more on when you do see a weed to make sure you kill
- 10 it, and the reason why that can have really good,
- 11 long-term environmental benefits is that we could
- 12 prevent weed resistance.
- So once we get a chemistry that works
- 14 really well, if we make sure we allow that see-and-
- 15 spray technology to ensure it kills a weed when it
- 16 sees it, then we prevent the need to have to develop
- 17 a new chemistry, which has, you know, unknown, maybe
- 18 unintended consequences, because we could prevent
- 19 resistance from developing in the first place.
- 20 MR. BASU: Great point, Nick. Thanks.
- 21 MR. ANNINOS: Thank you, Nick. And we have
- 22 a comment --
- 23 MR. MESSINA: So, yeah, I come at this --
- MR. ANNINOS: Oh, go ahead, Ed.
- 25 MR. MESSINA: Yeah, Gary -- Gary's got a

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- 1 comment. I mean, I -- just to answer Cathy's
- 2 question, I come at this a little differently
- 3 personally. The question is written, how can these
- 4 technologies lead to reduced or increase risks,
- 5 right? So I think there's potential for both. I
- 6 certainly see -- and Mano and Nick and folks are
- 7 really able to see where the risks are going to be
- 8 reduced. Right? If I swap out a backpack sprayer
- 9 for a drone and I'm nowhere near the backpack
- 10 sprayer, we're reducing risks to workers. If I can
- 11 spot spray, we're reducing the amount of pesticides.
- 12 On the increased risk potentially, areas
- 13 that I couldn't otherwise cultivate because of
- 14 technology are now reachable and maybe now I'm able
- 15 to use more pesticides, right? In the genetic
- 16 engineering space, which is a technology, a new
- 17 technology, we've seen examples of where BT corn,
- 18 that technology's really reduced the amount of the
- 19 need for pesticides to be applied, right? And then
- 20 also in other areas, genetically modified plants that
- 21 are able to tolerate higher amounts of pesticides,
- 22 now we've got an increased use of pesticides.
- 23 So I come at this from -- that's why the
- 24 question is written -- there's going to be examples
- 25 where there's reduced risk and there's potentially

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- 1 examples where there could be increased risk. I'm a
- 2 big proponent of the benefits of this new technology.
- 3 I think, on the whole, it's going to reduce risks.
- 4 That's why it's important for us to look at this.
- 5 But just to fully answer your question, Cathy, I feel
- 6 like we've got to point out that there potentially
- 7 could be examples where risks is -- risks are, in
- 8 fact, increased and we need to account for them as
- 9 part of a risk assessment where they do occur.
- 10 MR. ANNINOS: We only -- thank you, Ed.
- 11 We only have like three minutes left and we
- 12 have two people in the queue. We have Mark Johnson
- 13 and then Gary Prescher.
- MR. M. JOHNSON: Thank you, Paul.
- 15 Guys, a question -- first of all, thank
- 16 you. Your comments on labor is critical. You know,
- 17 it's hard to fill jobs out there right now and people
- 18 are trying to compensate for that, but the robotics
- 19 and UAVs are going to be an impact. There's no
- 20 doubt.
- 21 You know, the technology -- in the turf
- 22 grass landscape alone, when we can isolate a spot in
- 23 an acre of features that only needs treatment, the
- 24 technology is going to save money and use less
- 25 pesticides. And that even applies to water. I mean,

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- 1 that's -- the technology with this is critical. It's
- 2 the future. And as the EPA -- so I appreciate your
- 3 comments, everyone there, but as the EPA considers
- 4 the labels and the work of this task group,
- 5 everything pretty much here has been big ag or even
- 6 small farms with crops and turf is a specialty crop
- 7 and I'm not talking about those that are growing
- 8 grass, but more of the professionals in the landscape
- 9 application is -- number one, is the workgroup
- 10 considering those technologies that's more -- let's
- 11 call it a micro scale for the landscape applications,
- 12 including like the golf course, right?
- 13 And so when recommendations come forth,
- 14 whether it be -- boiling down to even nozzles, but
- 15 when you do the assessment and the risks to all
- 16 people, you know, the applicators and those using a
- 17 playing field, are you going to be able with the work
- 18 of this task group to ensure that we don't close the
- 19 door to some technologies that's going to help people
- 20 accomplish their job? And when we accomplish our
- job, we're also protecting the environment, right?
- 22 We want to do that, but we don't want to shut the
- 23 door unnecessarily.
- So I hope that question makes sense to you,
- 25 Ed.

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- 1 MR. MESSINA: Yeah, and I'm wondering,
- 2 Mano, if we make that a future deliverable, which is
- 3 what other areas should EPA explore and other
- 4 industries should EPA examine to get a better handle
- 5 for future workgroups, you know, including turf,
- 6 ornamentals, specialty crops, structural pesticide
- 7 uses. So I think that's maybe a -- just an easy
- 8 deliverable for us to add if you agree.
- 9 MR. BASU: Yep.
- 10 MR. MESSINA: Thanks for the comments.
- 11 MR. ANNINOS: And even though we're right
- 12 at 4:00, let's give Gary Prescher a moment to add a
- 13 comment or a question.
- 14 MR. PRESCHER: Yeah, thanks. Just two
- 15 comments. Cycling back to Ed about risk, I
- 16 appreciate that last comment on, you know, there
- 17 could be basis either way here. For example, just a
- 18 couple of examples here, I'm on the resistance
- 19 management workgroup and when we're dealing, for
- 20 example, with a resistant critter or whatever it is,
- 21 you know, weed insect or disease, the best way to
- 22 prevent it is to keep it from happening and how we do
- 23 that in production agriculture a lot of times is a
- 24 broad scale classification of pesticide to keep the
- 25 weed or pest from even developing.

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- So, you know, a lot of this improved or
- 2 less funds on the ground discussion, you know, was
- 3 geared at weeds, for example, that have already
- 4 emerged, so -- and here again, we're trying to
- 5 maximize the yield as a producer. Just perspective
- from a producer standpoint, the best yield potential
- 7 is always established with a weed freed -- weed free
- 8 field starting at the beginning of the crop. So just
- 9 a little background there.
- But I appreciate everybody's comments.
- 11 It's a great discussion, great presentation, and keep
- 12 up the good work on that.
- MR. MESSINA: Thanks, Gary.
- 14 All right. Mano, you want to bring us home
- 15 and then we'll kick it over to Paul? I think we're
- 16 good.
- 17 MR. BASU: Yep, we are good. Thank you
- 18 very much everyone. Thanks, Ed.
- 19 MR. MESSINA: All right. 4:02, I don't
- 20 know how you keep doing this, Paul, but keeping us on
- 21 track.
- Thanks, everyone, for your comments.
- You're on mute, Paul. Paul's on mute.
- 24 MR. ANNINOS: Sorry. Every time I'm on
- 25 mute, Sarah keeps muting and unmuting me. I couldn't

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1
     come off sorry about that, Sarah.
 2
               You know, it's not me keeping you on. I
     think it's very self-regulated. You're a very
 3
 4
     disciplined crowd.
 5
               So, we're ready to move -- you know, Mano,
 6
     Ed, Amy Blankenship, thank you very much for your
 7
     comments. Obviously, a pretty hot topic. Thank you
 8
     very much.
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- 1 PPDC MEMBER PRESENTATION ON STAKEHOLDER INTERESTS
- 2 PART 1 BIOLOGICAL PRODUCTS STAKEHOLDERS AND
- 3 INDUSTRY
- 4 MR. ANNINOS: We're going to move now to
- 5 the next thing on the agenda. It's a 30-minute
- 6 segment. We have a few of these segments throughout
- 7 the two-day workshop called PPDC member presentation
- 8 on stakeholder interests. So this is the first of a
- 9 few of these. And this one is on biological
- 10 products, the stakeholder and industry element of
- 11 biological products.
- 12 I'm going to turn this over to Nina Wilson
- 13 and Keith Jones, both with the Biological Products
- 14 Industry Alliance. And I think Nina is going to have
- 15 the -- is going to have the magic cursor for moving
- 16 the slides. So I'm not sure if that's happened.
- 17 Have we given her the presenter --
- 18 MS. WILSON: Yes, yes, I've got the con
- 19 and --
- 20 MR. ANNINOS: Perfect, perfect, you're up,
- 21 Nina.
- 22 MS. WILSON: And I'm going to introduce
- 23 Keith Jones, who's our executive director of BPIA, to
- 24 just give a little brief view of what BPIA is all
- 25 about and then talk to you a little bit about some of

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- 1 our industry concerns, very high level.
- 2 MR. JONES: Thanks. Thanks, Nina. Thanks,
- 3 Paul. Nina, you could actually go on to the next
- 4 slide. I'm going to be very brief. I'm just
- 5 going to tell you a little bit about our association
- 6 and then I'm going to hand it back to Nina and she's
- 7 really going to talk about the products. I think
- 8 that's really what you all are interested in hearing.
- 9 So just very briefly, who is BPIA? We are
- 10 the Biological Products Industry Alliance. We're a
- 11 Washington, D.C. area-based trade association. We've
- 12 been around for almost 20 years. And when we
- 13 started, we started with just -- it was five
- 14 biopesticide companies. And biopesticides are just
- 15 what they sound like, they're biological or natural-
- 16 based pesticides. And back then, those five
- 17 companies came together and they said, we really need
- 18 our association, we need our own voice. And at that
- 19 time, the BPIA actually stood for Biopesticide
- 20 Industry Alliance.
- 21 So fast forward almost 20 years, last year,
- 22 2020, we finished the year with our highest number of
- 23 members ever. We had 137 members. And we've
- 24 actually -- along the way, we changed our name. The
- 25 BPIA now stands for the Biological Products Industry

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- 1 Alliance. And our membership -- it's all companies.
- 2 We don't have individual members. But our member
- 3 companies include manufacturers, marketers,
- 4 distributors, service providers of biological
- 5 products as we define it. So for us, biological
- 6 products, or biopesticides, biostimulants,
- 7 biofertilizers. And Nina will talk a lot more about
- 8 that. But we're not pharmaceutical or medical
- 9 biological products.
- 10 Our membership is pretty broad. It ranges
- 11 from -- we have some very small companies. We
- 12 literally have companies that are maybe one or two
- 13 people, they're regulatory consultants, all the way
- 14 up to some of the largest agro-chemical companies in
- 15 the world, and then everything in between. And what
- 16 they all have in common is that they're, in some way,
- 17 involved with biological products. So it may be a
- 18 company that's dedicated entirely to biological
- 19 products or it may just have one small division or
- 20 department that deals with biological products.
- 21 And, again, the association was formed
- 22 really to cooperate with others, to cooperate with
- 23 governmental agencies, like EPA, USDA, PMRA up in
- 24 Canada. We also work with universities. And our
- 25 association is always growing and expanding. In the

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- last couple years, we've started -- we added some
- 2 food company members. We're looking to get some
- 3 growers involved just to -- really so that our
- 4 industry can talk for the entire biological industry.
- If we could go on to the next slide.
- 6 So like any association, what is it that we
- 7 do? We do advocacy, basically just trying to promote
- 8 biological products as an industry. And we do that
- 9 through education in a wide variety of ways,
- 10 including even a presentation like this today. This
- 11 is part of what we do in a variety of forums. And we
- 12 do it through communication and we do a lot of
- 13 collaboration, and I'll talk more about that in just
- 14 a minute.
- We can go ahead.
- 16 So we are a small association. I do not
- 17 have a large staff. What we -- the way we do our
- 18 work is through our committees. We have a very large
- 19 committee structure. And all these committees, most
- 20 of these committees have subcommittees, they have
- 21 task forces, and all those committees, subcommittees
- 22 task forces, they're all staffed by volunteers from
- 23 our member companies. So we have a biostimulant
- 24 committee, a Canadian committee, regulatory,
- 25 specialty markets.

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- 1 For us, specialty markets is anything
- 2 that's not traditional commercial agriculture. So it
- 3 would include forestry, public health, as you were
- 4 all just talking about, turf, ornamentals, because
- 5 there are biological products for all these sectors.
- 6 And then we have all the usual finance, government
- 7 affairs, you know, membership, et cetera.
- 8 We do a lot of meetings. We used to do a
- 9 lot of in-person meetings. We would do Capitol Hill
- 10 fly-ins. We would do a variety of symposiums and
- 11 workshops. But like everybody else, the last year or
- 12 so, we switched to the virtual world. We've now done
- 13 a lot of webinars. We've done a lot of webinars over
- 14 the last year or so.
- Our big meeting is our annual meeting, and,
- 16 in fact, we are having our annual meeting next week
- 17 and it will be the first time ever that we've done a
- 18 completely virtual annual meeting. It's going to be
- 19 a combination of prerecorded speakers and then also
- 20 live panels with Q&A, and then hopefully some really
- 21 interesting networking -- virtual networking through
- 22 a variety of platforms that we've engaged for our
- 23 meeting.
- It's not too late. If you're so interested
- 25 in what I -- what Nina and I have to tell you today

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- 1 and you want to attend our meeting next week, if you
- 2 go to the BPIA website, you can still sign up. It's
- 3 easier than ever this year because you don't have to
- 4 book a flight or a hotel or anything like that. It's
- 5 all going to be virtual. And we're hoping it goes
- 6 well.
- 7 We can go on to the next slide.
- Nina, did you fall asleep? No, I'm...
- 9 MR. ANNINOS: Nina, are you having trouble
- 10 advancing the slide?
- 11 MR. JONES: Okay, there we go.
- 12 MS. WILSON: Sorry. Technical
- 13 difficulties.
- MR. JONES: No problem, no problem. I'm
- 15 almost done with my part.
- 16 So collaboration, I talked about this. I'm
- 17 sure you all recognize all those associations. Those
- 18 are all much bigger associations than BPIA, but we
- 19 have a lot of members in common, a lot of our members
- 20 belong to these other associations. And whenever we
- 21 have the opportunity to collaborate and work together
- 22 with these associations we do because there's
- obviously strength in numbers and opportunity to
- 24 leverage resources, et cetera.
- 25 Sometimes, you know, we go our own way or

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- 1 we don't agree on things and then we don't
- 2 collaborate, but there's certainly plenty of
- 3 opportunity where we can agree and collaborate, and
- 4 we try to do that whenever we can.
- 5 And I think I just may have one more slide,
- 6 Nina.
- 7 Okay. And this is the -- this slide, one
- 8 of our members is a company called DunhamTrimmer, and
- 9 they're actually an economic consulting firm, but
- 10 they specialize just in the biological market. So
- 11 they've provided this market slide. And what it is
- 12 is the global bioprotection market in U.S. dollars,
- and they've been tracking it since the early '90s.
- 14 And you can see back when they started it was
- 15 practically zero. Their projection is by the year
- 16 2025, globally, we're going to be a \$10 billion a
- 17 year industry, which is pretty significant.
- 18 And then besides that, what you can see --
- 19 our membership committee put together this part of
- 20 the slide -- it tracks our membership growth. And
- 21 it's amazing, you can see our association -- I always
- 22 say this, our association grows as the industry
- 23 grows. So those lines are very similar. As the
- industry has grown, we've seen our membership grow.
- 25 As I said, last year was our biggest number --

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- 1 membership number that we've ever had.
- 2 At some point, the industry is going to
- 3 plateau and I expect our membership will plateau.
- 4 We're nowhere near that point. The reality is, we
- 5 lose, I would say, maybe a half-dozen members every
- 6 year because there's so much activity in this market.
- 7 There's a lot of mergers, acquisitions. If there's a
- 8 company -- if you only have one biopesticide product
- 9 and, you know, you get rid of that for whatever
- 10 reason, then you're not going to be a member of our
- 11 association. But the overall trend, even though we
- 12 may lose half a dozen members every year, we're
- 13 adding new members of all sizes; you know, small,
- 14 new, innovative companies or larger companies that
- 15 say, hey, we want to get into this sector.
- 16 So they're making an investment either by
- 17 acquisition of a smaller company or through their own
- 18 research and development. So the overall trend
- 19 continues to be one of growth. And, again, I think
- 20 our association really just mirrors the industry.
- 21 So now, I'm going to hand it over to Nina.
- 22 I'm done with the boring part. And she'll talk about
- 23 the products and what you really want to hear about,
- 24 the actual biopesticide products.
- 25 Thank you.

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- 1 MS. WILSON: Thanks, Keith. So I --
- 2 MR. ANNINOS: Nina --
- 3 MS. WILSON: Yes.
- 4 MR. ANNINOS: -- could I interrupt -- could
- 5 I interrupt you for just one moment? It's Paul.
- 6 MS. WILSON: Sure.
- 7 MR. ANNINOS: And I just want to just call
- 8 your attention, you're under a little bit of a
- 9 pressure -- a little bit of pressure. We go until
- 10 4:30 and that's when the public hearing starts, the
- 11 public comment period --
- MS. WILSON: Sure.
- 13 MR. ANNINOS: -- which has been advertised
- 14 as starting at a very specific time.
- MS. WILSON: Okay.
- MR. ANNINOS: So we kind of have a hard
- 17 stop at that point. Just wanted to let you know.
- MS. WILSON: Okay, all right.
- 19 MR. ANNINOS: Okay.
- 20 MS. WILSON: So I hope everyone -- well, no
- 21 pressure. We're all taking root a little bit, so
- 22 move around in your seat and let's get you to the end
- 23 here.
- 24 So I'm going to talk to you, like Keith
- 25 said, a little bit about the products. So what are

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- 1 we talking about? You know, everybody has a
- 2 different idea. But these that are green microbial
- 3 products, vectors, bacterias, pathogens;
- 4 semiochemicals, pheromones, plant volatiles, we think
- of sex pheromones oftentimes for insects, it confuses
- 6 them so that they can't get together and mate and do
- 7 their number on the crops; and biochemicals, which
- 8 are usually botanicals and other substances.
- 9 If any of these things say that they
- 10 control pesticide, they are going to fall under FIFRA
- 11 and they have to be registered by EPA. If it is a
- 12 ladybug that a lot of the growers used to actually
- 13 -- as a natural predator to get rid of their pests,
- 14 that is not under their purview, although they did
- 15 have an interesting registration a little while ago
- 16 with one of our members. It's called bee vectoring
- 17 where the bee is actually delivering the fungicide to
- 18 the plant. We're talking about targeted -- we were
- 19 talking about targeted applications. That's about as
- 20 targeted as you can get.
- 21 But biochemicals would be something like
- 22 oils, things like that, that could be their natural -
- 23 or other items. If you can imagine if you extract
- 24 things from a plant, there's a lot of different
- 25 things in the plant.

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So that's what we're talking about. 1 2 let's see, the others -- let's talk about where -who's using these biochemicals which, as you know, 3 our -- as an industry what we really want to do is 4 educate people, because just like everything in the 5 ag business, this might seem straightforward, but it 6 7 really isn't straightforward. And those are the couple things I'll talk near the end. But really 8 9 over 80 percent of biological products, natural or 10 synthetic equivalents, are in the fruit and vegetable 11 segments. 12 And let's see -- I don't know if everybody 13 can see the bottom of that screen, but it's -- for one thing, they're not -- they tend to be fairly 14 15 expensive -- and I bite my tongue when I say that 16 because obviously there's a lot of things that are 17 going on where people are trying to make it more cost-effective, but they're not exactly, you know, 18 19 inexpensive, let's say. So there -- it is a -- it is 20 input. 21 And another thing is that a lot of these 22 kind of crops, they're harvested multiple times, 23 right? They're not just harvested once, like wheat at the end. And so you have a lot -- the grower is 24

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managing a lot of things, and we'll talk about some

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- 1 of the things and why he's using biologicals. And a
- 2 big thing, which I think is interesting, is that the
- 3 consumers are demanding it, the grocery stores are
- 4 demanding it. And there's also a focus for consumers
- 5 -- I mean, we eat a lot of processed foods, but for
- 6 those things where we're actually eating the food
- 7 itself that's not processed, the vegetable itself,
- 8 you know, the consumers tend to be a lot more focused
- 9 on that.
- 10 And I'm going to talk a little about
- 11 organic, organic-compliant. There's all different
- 12 kinds of organic -- sometimes conflated with safety.
- 13 We're very supportive of the organic industry. We
- 14 work with them, but it's really only 1 to 3 percent
- of the agricultural land. So even though we talk
- 16 about organic growing by leaps and bounds, I think,
- 17 over 15 percent this last thing that I -- this last
- 18 survey that I saw, it's still 1 to 3 percent of the
- 19 entire ag industry.
- 20 So I think a lot of people would be very
- 21 surprised to know that the largest market for
- 22 biologicals is actually the conventional acre, which
- 23 are looking for the benefits that biological control
- 24 and nutrition bring to the market. And so what are
- 25 those? The benefits -- well, first off, it has to do

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- what it says, right? I mean, if you're -- if you
- 2 have a biological product that says that it's a
- 3 fungicide, you've got to control that fungicide
- 4 because people don't have the money to be putting
- 5 inputs into the crop.
- 6 And it's got to be, you know, beneficial
- 7 for quality and yield. It also has to have --
- 8 usually, there's a beneficial insect population.
- 9 There's good -- you know, good insects and bad
- insects and you want to preserve those good ones, and
- 11 biologicals tend to be pretty soft on the
- 12 beneficials.
- There is a lot more label and harvest
- 14 flexibility. So I talked about how there was
- 15 multiple harvests, like with strawberries. They're
- 16 in there. Once they start coming on, every few days
- 17 with the strawberries. So there are people going
- 18 into those very often and so what you want, you want
- 19 to be able to have very low, minimal pre-harvest
- 20 intervals, hours, reentry periods, and very minimal
- 21 PPE. And biopesticides, because of their design,
- 22 tend to offer those label sort of flexibility. So
- 23 that's one reason why people use them.
- I talked to a grower who was actually a
- 25 conventional grower, and it just looked like it was

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- 1 really on the edge about where he was going to get a
- 2 big break on some -- a fungus coming in and pretty
- 3 much decimating the crop, and he needed to harvest
- 4 and he just needed to protect that crop for that 24
- 5 hours before he could get the harvest in. And he
- 6 ended up using a biopesticide that had a zero-day
- 7 pre-harvest interval. So those are the kind of tools
- 8 and flexibilities that people are looking for.
- 9 They're great also for integrated pest
- 10 management, and resistance management programs are
- 11 very compatible. Talked a little bit about how not
- 12 just the market is wanting these benefits, but there
- 13 also is the food chain. Grocery stores are coming up
- 14 with their own metrics for measuring different kinds
- 15 of residues. And that was my next point. There's
- 16 some residue management going on with the food chains
- 17 that gets a little bit more complex, and we'll talk
- 18 about that. But they are definitely being used and I
- 19 do know of -- certainly like McDonald's, I mean,
- 20 Walmart, you name any of those big food companies,
- 21 they're all looking for more sustainable ways to grow
- 22 and they're pulling in that need. And so that's
- another reason why we're seeing that.
- The U.S. has a national organic program
- 25 that's managed by the USDA. A lot of the

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- 1 biopesticides can be grown -- can be used on
- 2 certified national organic lands and also fruits and
- 3 vegetables, but I'm going to talk a bit about the
- 4 little complexities there are for that. But the
- 5 benefits are there, as long as we can provide the
- 6 agronomic benefits.
- 7 So I'm going to give you the EPA definition
- 8 of what a biological pesticide is and you -- you
- 9 think it's a straightforward, oh, they're safe, you
- 10 know, they're naturally occurring. And, in fact,
- 11 when I first got a chance to go into biopesticides, I
- 12 thought this is great. You know (inaudible) do a
- 13 little \$10 million worth of studies and it's going to
- 14 be a lot easier and I'm going to have all this time
- 15 to walk my dog, da, da, da, da. It actually has
- 16 not turned out to be.
- 17 So the definition is it's a naturally
- 18 occurring chemical that can be -- or a synthetic-
- 19 derived equivalent. So again, an oil that's derived
- 20 from any kind of rosemary oil, for instance, you can
- 21 derive it from rosemary or you can actually
- 22 synthetically make it. And so as long as you can
- 23 prove those things are equivalent, then you would be
- 24 considered to be able to use as a biological
- 25 pesticide, which has its own hurdles at EPA. It has

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- 1 to have a history of exposure to humans and the
- 2 environment demonstrating minimal toxicity, or in the
- 3 case of synthetically derived chemicals, are
- 4 equivalent to the naturally occurring chemicals that
- 5 have such a history.
- 6 So what does that mean? That means if I
- 7 say that I'm going to use soybean oil as a pesticide
- 8 because -- and you can, it is a pesticide, that you
- 9 can spray it on, dilute it, very much diluted. You
- 10 could spray it on an insect and it basically is a
- 11 smothering. There's not a lot of -- there's no
- 12 systemic toxicity, basically. So that would be
- 13 considered a nontoxic mode of action. But keep that
- 14 nontoxic mode of action because what we're trying to
- 15 do is control a pest that -- through a nontoxic mode
- 16 of action, and that usually gives a lot of people,
- including me at first pause, but it's like how do we
- 18 control these pests if there's a nontoxic mode of
- 19 action.
- 20 So there lies the complexity. And we'll
- 21 talk a little bit about that. And again, I'm
- 22 bringing up the organic because it is a -- it is a
- 23 big market and it may or may not be organically
- 24 compliant, and that's because the national organic
- 25 program is not a safety-based program, but certainly

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- 1 the EPA is. And so it's just got two very different
- 2 metrics that they use. And so what you're trying to
- 3 do, if you're trying to have a -- design a product
- 4 that's nationally organic compliant, then you're
- 5 actually trying to do two things at once, which is --
- 6 gets confusing.
- 7 So one of our industry issues is a
- 8 qualitative versus a quantitative risk assessment.
- 9 What do I mean by that? You hear about risk
- 10 assessments all the time and the risk assessments are
- 11 complex if it's quantitative because you need to do a
- 12 lot of studies and get numbers. So that's the
- 13 quantitative part. And if it's qualitative, meaning
- 14 that you meet a hurdle for EPA by saying that
- 15 basically my product is nontoxic because of that
- 16 slide I showed you previous. EPA still has the same
- 17 standards to control -- to get to as far as legally.
- 18 So how do I do that? Well, just as an
- 19 example, they're -- and the whole idea in this
- 20 qualitative risk assessment is because there's
- 21 existing data out there, you know, that's, you know,
- 22 good data, GLP data, data that's dependable and
- 23 reliable, that we could use it, that we don't have to
- 24 use specific testing for. However, I put this cup of
- 25 coffee up there because I tell people that you --

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- 1 caffeine cannot be a biopesticide according to these
- 2 metrics. It would have to be really considered a
- 3 conventional chemistry, because why do we all drink
- 4 coffee or tea for that matter in the morning? We
- 5 drink it because we want that -- I want some right
- 6 now, you know, just a little pick-me-up in the
- 7 afternoon or the morning, something that will get my
- 8 heart racing. That's a toxic effect. And so it
- 9 would not, according to the EPA standards, be
- 10 considered for a -- as a biopesticide.
- I also put soybean oil in there because I
- 12 talked a little bit about it just as an example over
- 13 here, soybean oil, even organic soybean oil or
- 14 safflower oil or whatever kind of oil that we eat. I
- 15 actually had experience with registering a product
- 16 that I said it's got oil in it and it was a carrier
- 17 and we truly were trying to find a carrier that was
- 18 nontoxic, but gave us, you know, some of the elements
- 19 that we needed from an oil, and it did not pass as an
- 20 inert substance as a carrier. It had to be
- 21 registered as an active ingredient.
- 22 So was I going to do a whole bunch of
- 23 studies on it? Was EPA asking? No, but we had to
- 24 sit down and really work together and think about how
- 25 do I prove that this oil, even though we eat it all

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- 1 the time, I can't say we eat it all the time, it's
- 2 fine. You actually -- we had to actually go through
- 3 and find data in the literature and we submitted all
- 4 these different studies that we did not actually have
- 5 to do, we were able to find them, that were very
- 6 specific in the literature. But that's why I'm
- 7 saying that it's not quite as simple as you might
- 8 think.
- 9 So I got the five-minute warning. So I'm
- 10 also -- I'll do this real quickly, but -- so we're
- 11 having -- national organic program in the U.S. is for
- 12 the U.S. Every single country -- and there's all
- 13 sorts of different kinds of sustainability markers
- 14 that people have. They all have different kinds of
- 15 reciprocal agreements. They all have different
- 16 metrics. The development timeline, because of the
- 17 design, can be at least seven-plus years. We used to
- 18 think of it as being a lot easier. It's a lot more
- 19 difficult now.
- 20 It's also very difficult because when I
- 21 talked about the nontoxic mode of action, it means
- 22 that if I -- a traditional efficacy test against
- 23 maybe something that has acute toxicity, where it
- 24 would -- you spray it and you go back a day or two
- 25 later and, you know, it basically has controlled the

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- 1 population of whatever pest that you're looking for.
- 2 With a biological pesticide, you're not going to get
- 3 that because it's not acutely toxic.
- 4 So if you want to help think about it,
- 5 think about an insect growth regulator. So insects
- 6 have, you know, quite a complicated growth where
- 7 they're, you know, shedding skin and going through
- 8 all these different kinds of stages of life. Well,
- 9 an insect growth regulator maybe would keep them from
- 10 growing the cuticle, which would stop their growth.
- 11 But they're going to be there for a while until they
- 12 actually, you know, morph out and aren't able to go
- on to the next step and actually get control.
- 14 So that doesn't take a long -- that takes a
- 15 long time. And in order to do the testing on that,
- 16 you just can't set up a regular protocol, which is a
- 17 one-time deal. You actually -- the really best way
- 18 to do it is a seasonal program and you look at it
- 19 with other alternatives and, you know, you use it
- 20 with IPM, often with conventional tools. That really
- 21 seems the best way to work with this. And a lot of
- 22 growers are very interested in doing so. But it --
- 23 really it's very difficult to produce data and it's
- 24 very expensive versus -- we're talking instead of one
- 25 test you might have to do that one test throughout

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- 1 the whole complete season and then look at quality
- 2 and look at quantity at the very end, and that's a
- 3 lot more expensive.
- 4 Just real quickly, harmonization, that's a
- 5 subject that EPA is hearing a lot about, and I would
- 6 say we would like EPA and encourage them to continue
- 7 in participating in the international discussions
- 8 that people have. People want to use biological
- 9 products. However, it's a little bit of a pitfall
- 10 because biological products often can be assigned an
- 11 exemption from a numerical tolerance because it's a
- 12 qualitative risk assessment. It's considered, you
- 13 know, safe enough to where, you know, you don't have
- 14 to limit of the amount, like considering, you know,
- 15 oil.
- Then going -- one-minute warning here. But
- 17 I just want to say that not all countries treat it
- 18 the same. They might give a tolerance --a lot of
- 19 people don't understand an exemption of tolerance.
- 20 And so it's -- actually, the tolerance is on the food
- 21 and it really complicates trade. So anything we can
- 22 do with not only harmonizing tolerances, but
- 23 harmonizing the exemption tolerance and also what a
- 24 biological pesticide is so that we all agree it's the
- 25 same thing and how we assess them would be very

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1	helpful	for	the	industry.
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- 2 So I'm going to stop right there. Keith
- 3 and I are always available. Last slide. And I think
- 4 you've got them. Feel free to contact us. We love
- 5 to talk about the subject.
- 6 Thank you.
- 7 MR. ANNINOS: Nina, you really stuck the
- 8 landing there. Good. You're at the 4:30 mark.
- 9 Sorry about the additional pressure that I placed on
- 10 you, but I think you just know from the agenda that
- 11 we have to open the public comment period kind of
- 12 right on time --
- MS. WILSON: Sure.
- 14 MR. ANNINOS: -- because we have a very
- 15 finite period of time allowed for that. So thank you
- 16 very much.
- MS. WILSON: We appreciate it.
- MR. ANNINOS: Enjoyed your presentation.

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PUBLIC COMMENT PERIOD 1 2 MR. ANNINOS: And I think what we'll do now is get set up for the public comment period. I think 3 what we'll do is we'll spend about the next 30 4 minutes on that, and then I'll turn it over to Ed to 5 close out today's meeting and then we, of course, 6 7 pick this up again tomorrow. So here's -- we're now prepared to receive 8 9 comments from the public. And maybe I should just 10 ask live right now in the meeting, Sarah, Shannon, last I heard, we had nine individuals that had 11 12 preregistered to comment during this period. Is that 13 still a valid number or -- maybe you could help 14 confirm that. 15 MS. CHADWICK: Hi, Paul. So we did have 16 nine people preregistered. I've been keeping an eye 17 on the attendance list and it looks like we only have three or four of those people on the line at the 18 19 moment. MR. ANNINOS: Okay, okay. So what we'll do 20 21 is probably -- you will kind of flash a slide with at 2.2 least the folks that were preregistered or maybe only

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Here we go. So here are the folks that

the three that are here. But if you could present

that slide, I can walk us through the process.

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- 1 were preregistered. We have a 30-minute block for
- 2 this period. And we definitely want to give anybody
- 3 who's on this list first shot at presenting their
- 4 comments. We -- you know, based upon this number and
- 5 the amount of time we had, we were thinking maybe two
- 6 to three minutes per person. If we have fewer,
- 7 obviously, we have a little bit more time, but we
- 8 also would like to leave some time to find out if
- 9 there's anybody that has joined this call that would
- 10 like to also present.
- 11 We're not requiring that you had to be
- 12 preregistered. We just want to give the
- 13 preregistered people first shot and then -- so the
- 14 way that you would -- the way that you would let us
- 15 know if you'd like to make a comment during this
- 16 period is you could -- you could -- I think you can
- 17 go to the chat window and you can select host as the
- 18 -- on the drop-down for the two, you can select host
- 19 and maybe -- and that's going to be Sarah, let her
- 20 know that you'd like to make comments, or you can
- 21 email Shannon, Shannon Jewell. Sarah has displayed
- 22 that for you right now. We have some basic
- 23 instructions here.
- And so the way we'll start this -- so while
- 25 -- you know, while we get started and while we get

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- 1 started with the people that are actually here and
- 2 ready to present their comments, you can be reaching
- 3 out to Sarah or Shannon to identify your interest --
- 4 to register your interest in making a comment.
- 5 The way we'll do this is we will -- I will
- 6 identify the person and the next person on deck so
- 7 that they're kind of ready to go. When it's time for
- 8 that person, we will unmute you. Sarah will provide
- 9 an unmuting and so you'll have your two or three
- 10 minutes. If you need more time, we'll just -- it
- 11 will be based upon how many people are speaking.
- 12 So before I get started, Sarah, is there
- 13 anything you want to provide [audio issue] any
- 14 additional [audio issue]?
- MS. CHADWICK: No, I believe you covered
- 16 everything.
- 17 MR. ANNINOS: Okay. And we'll just start
- 18 out and see how it goes.
- 19 Shannon, I see you've come off of mute.
- 20 Are you -- did you want to say something?
- 21 MS. JEWELL: I just wanted to let you know
- 22 I am here monitoring my email, so people can feel
- 23 free to write and let me know if they want to speak.
- 24 MR. ANNINOS: That's right. And that's --
- 25 it's Jewell.Shannon@EPA.gov. Shannon is with two Ns

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- 1 and Jewell is with two Ls. So Jewell.Shannon@
- 2 EPA.gov.
- 3 Okay. So if you could display, Sarah, the
- 4 list of preregistered speakers, I'm just going to do
- 5 roll call and the first person that actually is here
- 6 is going to speak first.
- 7 So first, we have Abdul Jaleeh Makowi
- 8 (phonetic) (inaudible) and I don't know if DHS is
- 9 Department of Homeland Security or something else,
- 10 but Abdul Jaleeh, are you available? Are you here?
- 11 (No response.)
- 12 MS. CHADWICK: It does not look like he is
- in the meeting.
- 14 MR. ANNINOS: Okay, all right. So we'll go
- 15 to the next name.
- Dave Bolin with Atticus, Atticus, LLC.
- 17 Dave Bolin, are you here?
- 18 (No response.)
- 19 MS. CHADWICK: He also does not appear to
- 20 be in the meeting.
- 21 MR. ANNINOS: Okay. We're going to number
- 22 three, Laura Campbell with the Michigan Farm Bureau.
- 23 Laura, are you in attendance?
- 24 (No response.)
- 25 MS. CHADWICK: She also does not appear to

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- 1 be in the meeting.
- 2 MR. ANNINOS: All right. How about Olga
- 3 Naidenko with Environmental Working Group? Olga?
- 4 (No response.)
- 5 MS. CHADWICK: Nope, she doesn't appear to
- 6 be here either.
- 7 MR. ANNINOS: Okay, all right. Ray
- 8 McAllister with CropLife America?
- 9 (No response.)
- 10 MS. CHADWICK: I do not see Ray's name on
- 11 the list.
- 12 MR. ANNINOS: Okay. Steve Holmer with the
- 13 American Bird Conservancy?
- 14 (No response.)
- MS. CHADWICK: It doesn't appear that Steve
- 16 is in the meeting either.
- 17 MR. ANNINOS: All right. Todd Schultz with
- 18 the American Pulp Association, USADP and Lentil
- 19 Council?
- 20 (No response.)
- 21 MS. CHADWICK: I think we may have skipped
- 22 Sydney Morton.
- MR. ANNINOS: Oh, you're right, we did, and
- 24 he probably -- he or she is the first one here. So
- 25 is Sydney Morton available, D.C. Legislative and

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- 1 Regulatory Services?
- MS. CHADWICK: Yes, Sydney's in the
- 3 meeting. I'm going to unmute your line now, so you
- 4 can begin your public comment.
- 5 MS. MORTON: Hi, I'm going to go ahead and
- 6 submit some questions for tomorrow, but I do not have
- 7 any for today. Thank you to everyone who presented.
- 8 MR. ANNINOS: Okay, Sydney, you're very
- 9 welcome. Thank you very much. And so we'll look
- 10 forward to hearing from you in tomorrow's public
- 11 comment period.
- MS. MORTON: Thank you.
- MR. ANNINOS: Okay. Thanks very much. I'm
- 14 sorry I skipped over you. Maybe it was just like --
- 15 I was just thinking no one was here. So I'm glad you
- 16 were able to join us today.
- 17 Todd Schultz?
- MS. CHADWICK: Todd is in the meeting. I
- 19 received a chat for him that -- from him that he
- 20 doesn't have a public comment for today.
- 21 MR. ANNINOS: Okay, all right.
- 22 And then, finally, William Jordan,
- 23 Environmental Protection Network?
- MS. CHADWICK: William is in the meeting,
- 25 so I'm going to go -- I'm going to unmute your line

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- 1 now so you can provide your public comment.
- 2 MR. JORDAN: Thank you very much for the
- 3 opportunity to comment. I have been listening to
- 4 most of the presentations today and they're very
- 5 interesting and informative, and I appreciate both Ed
- 6 Messina and all the other workgroup presenters'
- 7 excellent work. It looks like the Office of
- 8 Pesticide programs is doing a great deal of very good
- 9 work, and I commend them for that.
- 10 I'd like to comment on two things today:
- 11 The ECSF, the electronic version of the confidential
- 12 statement of formula, and Spanish labeling. I think
- with regard to both of those EPA has an opportunity
- 14 to do things that will improve the agency's
- 15 efficiency and provide greater public health
- 16 protections.
- 17 Specifically with regard to Spanish
- 18 labeling, the Migrant Clinicians Network and Amy
- 19 Liebman submitted a letter, a petition in 2009,
- 20 asking that labeling of pesticide products appear not
- 21 only in English but also in Spanish. And it took EPA
- 22 11 years to answer that in December of last year.
- 23 EPA responded and did not grant the request, the
- 24 petition.
- 25 Instead, EPA pointed to the 2015 amendments

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- 1 to the worker protection standards and the annual
- 2 training programs to say that that was going to
- 3 provide better education for farmworkers for
- 4 pesticide safety. It pointed to its recently
- 5 developed Spanish translation guide, which is a nice
- 6 piece of work, but pretty limited. And then it noted
- 7 that voluntary efforts by pesticide registrants could
- 8 lead to products appearing with both English and
- 9 Spanish instructions and labeling.
- 10 But I've got to say I find that a very
- 11 disappointing response and I will hope and encourage
- 12 the agency with its commitment to environmental
- 13 justice to revisit this issue, because there are
- 14 things that EPA could do beyond those fairly limited
- 15 efforts that would provide better information for
- 16 Spanish-speaking users of pesticide products, as well
- 17 as others who might be affected by pesticide use,
- 18 such as farmworkers.
- 19 Specifically, I think it's time to revisit
- 20 how information is given to farmworkers who are not
- 21 fluent in English. And it doesn't have to be the
- 22 entire label, but I think EPA ought to be looking at
- 23 options, for example, to put the signal word in
- 24 Spanish. Now, I know some products are required to
- 25 have it, but it's only a subset of the universe of

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- 1 pesticide products that have the signal word, the
- 2 most important single piece of communication on a
- 3 product label.
- 4 I think it should also include the
- 5 warnings, as well as the personal protective
- 6 equipment requirements for using the pesticide in
- 7 Spanish. These are critical pieces of information
- 8 about how to protect oneself from any harm that the
- 9 pesticide might cause.
- 10 And even if you are not willing at EPA to
- 11 put this fairly limited and focused information in
- 12 Spanish on the labels, there is another option that I
- 13 think you should very seriously consider, and that is
- 14 requiring registrants to make information available
- 15 via the Internet, using the policies that have been
- 16 established in -- over five years, six years ago, for
- 17 web-distributed labeling.
- Using the Internet, you don't have any
- 19 concerns about the space that's occupied by Spanish
- 20 labeling. People can get the entire label in
- 21 Spanish, in a language that they can understand, and
- 22 you can do a lot of other things through web-
- 23 distributed labeling that would be very beneficial.
- 24 So I encourage the agency to take another hard look
- 25 at the Spanish labeling. I think it would be

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- 1 consistent with your commitment to environmental
- 2 justice.
- 3 The second topic I want to talk about is
- 4 the electronic confidential statement of formula.
- 5 Recently, EPA announced that applicants must use the
- 6 new ECSF to submit information about the composition
- 7 of their products when they are applying through the
- 8 CDX portal for registration or amended registration
- 9 of their products. And I think that's a very
- 10 significant step forward in capturing information
- 11 electronically, and it will certainly expedite and
- 12 make more efficient the review of new applications.
- But I think that you're missing an
- 14 opportunity if you don't expand the obligation to
- 15 provide information on ECSF for all products. I
- 16 strongly encourage you, after you've had a little bit
- 17 of experience receiving these materials through the
- 18 CDX, to look at issuing data call-in notices that
- 19 would require all products to submit electronic CSFs.
- That will allow the agency to compile a
- 21 comprehensive database on the ingredients in
- 22 pesticide products. It will be extraordinarily
- 23 useful in all of the risk assessment procedures,
- 24 whether they're dealing with human health or
- 25 environmental exposure issues and would be an

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- 1 excellent learning experience for the agency about
- 2 how to manage these kinds of submissions in building
- 3 databases and making them available to the scientists
- 4 who use them for their analyses of the safety of
- 5 pesticide products.
- 6 So the agency has some very real
- 7 opportunities both with the ECSF and with Spanish
- 8 labeling to make some very significant improvements.
- 9 Thank you.
- 10 MR. ANNINOS: William, thank you very much
- 11 for your comments.
- 12 And I guess maybe I'll just do one final
- 13 call to anybody whose name -- if you've joined us and
- 14 your name is on this list that's on the slide and you
- 15 want to make a -- if you want to make a comment, then
- 16 let the host by selecting to host and send a note and
- 17 Sarah will get that.
- 18 Shannon, have you received any emails from
- 19 anybody else who wants to present?
- MS. JEWELL: I have not, Paul, no.
- 21 MR. ANNINOS: Okay. And, Sarah, have you
- 22 received any messages in the chat window -- in your
- 23 chat window for that, requesting that?
- 24 MS. CHADWICK: I have not.
- 25 MR. ANNINOS: Okay. Okay. With that, I

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Т	probably could ask our sponsors a question at EPA.
2	I'm assuming that we don't have to leave the public
3	comment period open for an additional 15 minutes
4	waiting for possible people to arrive. Have we done
5	enough to give people the opportunity to present?
6	MS. JEWELL: I believe so, Paul.
7	MR. ANNINOS: Okay, all right. Very good.
8	MR. MESSINA: Plus we have time tomorrow
9	for folks as well, so
10	MR. ANNINOS: Exactly, that's right. And
11	we'll do the same process tomorrow. Hopefully, if
12	anybody is online that wants to present tomorrow, has
13	that opportunity.
14	And with that, I'll kind of formally
15	conclude the public comment period for today's public
16	meeting of the PPDC, and I'll turn it over to Ed
17	Messina for some final words and concluding remarks.
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- 1 CLOSEOUT/REMARKS
- MR. MESSINA: Great thanks, Paul. And I
- 3 think we should, if we haven't already, I know it's
- 4 been put in the chat, the updated agenda for
- 5 tomorrow. We can review that to see what's on the
- 6 slate for tomorrow.
- 7 Thank you to all our presenters today.
- 8 Thank you for the lively discussion. Thank you for
- 9 our public commenters, Bill Jordan and others who
- 10 provided comments throughout the day.
- 11 So tomorrow, we're going to pick up at
- 12 11:00. We have our emerging pathogens workgroup
- 13 update from Komal Jain and Tajah Blackburn.
- 14 We've got our pesticide resistance
- 15 management workgroup update with David Shaw, Bill
- 16 Chism, and Alan Reynolds. So that's going to be a
- 17 great session from 12:00 to 1:00.
- 18 From 1:00 to 1:20, we have our PPDC member
- 19 presentation on stakeholder interests, and we're
- 20 going to hear from Charlotte Sanson from ADAMA. And
- 21 then we're going to take a lunch break 1:20 to 2:00
- 22 p.m.
- 23 Michal Freedhoff is going to join us for a
- 24 welcome. And then 2:15 to 3:00, we're going to do
- 25 PPDC member presentation again on ESA consultation

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- 1 from Cathy Tortorici from NOAA who's going to present
- on the Federal Government's ESA response, not just
- 3 NOAA's. And then the ESA consultations and species
- 4 protections presentation from Lori Anne Burd from the
- 5 Center for Biological Diversity to provide that
- 6 perspective. Question and comments first
- 7 we're going to do 3:00 p.m.
- 8 Moving forward, I'm going to talk about
- 9 sort of what are next steps in the fall, and I will
- 10 have our public comments again, and then we'll
- 11 adjourn the meeting at 4:00. That's a change from
- 12 the prior agenda that folks have seen and that's to,
- 13 again, adapt to the deletion of the presentation on
- 14 risk communication, which we'll do in the fall. We
- 15 should be able to secure Casey for that presentation.
- 16 So that's what Day 2 looks like.
- 17 Again, appreciate the great discussion,
- 18 diverse viewpoints. I just -- I really enjoy this.
- 19 I feel like this is government at work, hearing from
- 20 all different sectors for the work that impacts the
- 21 public and growers and industry and academics and
- 22 NGOs. So thank you for your time. I know how busy
- 23 each and every one of you are and I just really
- 24 appreciate you devoting time to helping EPA be the
- 25 best that it can be. So thank you with that.

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1	I'll kick it back over to Paul and Shannon.
2	MR. ANNINOS: Thank you, Ed. And I have
3	nothing else to add other than just joining you in
4	thanking everybody for their attention today. It was
5	really a great dialogue that we had.
6	And then, Shannon, do you have anything to
7	wind up with?
8	MS. JEWELL: I don't. I just want to say
9	thank everyone so much. I agree with that. It's
10	democracy in action and it's really great to see. So
11	thank you all so much for taking part. Bye-bye.
12	MR. ANNINOS: Bye-bye, everybody. See you
13	tomorrow at 11:00 a.m. Eastern time.
14	(Day 1 adjourned.)
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