Agricultural Innovation Board Meeting
August 28, 2023 1pm-4:15pm
Transcript Text

0:0:0.0 --> 0:0:1.100
0700be24-25be-4d97-bd37-0ac775d39cec
Alright, welcome.

0:0:3.390 --> 0:0:7.780
0700be24-25be-4d97-bd37-0ac775d39cec
We it's 1:00 o'clock on the 28th.

0:0:7.940 --> 0:0:10.980
0700be24-25be-4d97-bd37-0ac775d39cec
This is our ID meeting for August.

0:0:12.10 --> 0:0:15.300
0700be24-25be-4d97-bd37-0ac775d39cec
As a reminder, this meeting will is being recorded.

0:0:15.690 --> 0:0:20.120
0700be24-25be-4d97-bd37-0ac775d39cec
The recording is a public record that will be available to the public for review.

0:0:20.130 --> 0:0:30.390
0700be24-25be-4d97-bd37-0ac775d39cec
The recording is going to be posted on the agency of AG website and participation in this meeting, including by joining online, we'll be deemed as your consent to be recorded.

0:0:32.410 --> 0:0:32.980
0700be24-25be-4d97-bd37-0ac775d39cec
So.

0:0:35.270 --> 0:0:40.380
0700be24-25be-4d97-bd37-0ac775d39cec
With that, we start each meeting going around with some introduction.

0:0:40.390 --> 0:0:47.320
0700be24-25be-4d97-bd37-0ac775d39cec
So I'll start with the AIB members that I see online and.

0:0:49.680 --> 0:0:49.890
0700be24-25be-4d97-bd37-0ac775d39cec
OK.

0:0:50.190 --> 0:0:54.30
0700be24-25be-4d97-bd37-0ac775d39cec
The first one I see because you just came up, Amanda.

0:0:54.40 --> 0:0:57.200
0700be24-25be-4d97-bd37-0ac775d39cec
We were just doing some introductions.

0:0:57.130 --> 0:0:57.560
Amanda St.Pierre
Happened.

0:0:59.320 --> 0:0:59.930
Amanda St.Pierre
I'm sorry.

0:0:59.710 --> 0:0:59.940
0700be24-25be-4d97-bd37-0ac775d39cec
It's.

0:1:0.0 --> 0:1:2.690
Amanda St.Pierre
Did you just say my name OK.

0:1:1.610 --> 0:1:4.850
0700be24-25be-4d97-bd37-0ac775d39cec
Yep, we're just starting with introductions of members.

0:1:5.200 --> 0:1:5.530
Amanda St.Pierre
OK.

0:1:5.540 --> 0:1:6.470
Amanda St.Pierre
Amanda Saint Pierre.

0:1:6.480 --> 0:1:7.970
Amanda St.Pierre
I'm a farmer in Berkshire, Vt.

0:1:11.130 --> 0:1:11.570
0700be24-25be-4d97-bd37-0ac775d39cec
Great.

0:1:12.260 --> 0:1:14.700
0700be24-25be-4d97-bd37-0ac775d39cec
Umm clearance?

0:1:17.800 --> 0:1:21.0
Cutler, Clarice
Hi, this is Clarice Cutler, representing the agency of Natural Resources.

0:1:27.530 --> 0:1:28.240
0700be24-25be-4d97-bd37-0ac775d39cec
Sarah Owen.

0:1:30.690 --> 0:1:33.900
Owen, Sarah
Hi, Sarah Owens, state toxicologist with the health department.

0:1:37.220 --> 0:1:38.80
0700be24-25be-4d97-bd37-0ac775d39cec
Thanks Roy.

0:1:40.80 --> 0:1:40.410
Roy Beckford
Uh.

0:1:40.420 --> 0:1:41.170
Roy Beckford
Roy Beckford.

0:1:41.520 --> 0:1:42.480
Roy Beckford
Extension director.

0:1:45.320 --> 0:1:45.720
0700be24-25be-4d97-bd37-0ac775d39cec
Ryan.

0:1:47.850 --> 0:1:49.920
Ryan Rebozo (Guest)
Ryan ribosome, with the Vermont Center for Equal Studies.

0:1:52.760 --> 0:1:57.560
0700be24-25be-4d97-bd37-0ac775d39cec
Thanks for joining us and in the room we have Jonathan Jonathan, Chairman, crowd control.

0:1:59.320 --> 0:2:0.330
0700be24-25be-4d97-bd37-0ac775d39cec
See you going.

0:2:0.340 --> 0:2:1.680
0700be24-25be-4d97-bd37-0ac775d39cec
All director form division.

0:2:4.580 --> 0:2:6.710
0700be24-25be-4d97-bd37-0ac775d39cec
Umm, not and I'm working.

0:2:6.720 --> 0:2:10.40
0700be24-25be-4d97-bd37-0ac775d39cec
Griffith also work for HCA tag in the Farm division.

0:2:12.600 --> 0:2:14.830
0700be24-25be-4d97-bd37-0ac775d39cec
So beyond our Members.

0:2:14.980 --> 0:2:16.750
0700be24-25be-4d97-bd37-0ac775d39cec
Uh, keep going in the room, Jill.

0:2:16.760 --> 0:2:19.210
0700be24-25be-4d97-bd37-0ac775d39cec
Go ahead, Josh Applegarth.

0:2:19.290 --> 0:2:23.760
0700be24-25be-4d97-bd37-0ac775d39cec
I'm a DC fertilizer specialist with the agencies, agriculture, farmers market.

0:2:26.670 --> 0:2:26.950
0700be24-25be-4d97-bd37-0ac775d39cec
Patty.

0:2:29.190 --> 0:2:29.920
Casey, Patti
Hi, Casey.

0:2:29.930 --> 0:2:32.500
Casey, Patti
Environmental Surveillance Program director, agency bag.

0:2:40.630 --> 0:2:46.340
Johnstone, Doug
Doug Johnstone, Farm field agent in Windham, Windsor and Bennington.

0:2:50.10 --> 0:2:52.150
0700be24-25be-4d97-bd37-0ac775d39cec
Thanks, Jonathan wolf.

0:2:56.830 --> 0:2:57.310
Jonathan Wolff
Everyone.

0:2:57.320 --> 0:2:59.160
Jonathan Wolff
Jonathan Wolff with Primer piper.

0:2:59.170 --> 0:3:2.60
Jonathan Wolff
Eggleston Kramer, on behalf of Bio and CLA Croplife America.

0:3:10.840 --> 0:3:11.210
0700be24-25be-4d97-bd37-0ac775d39cec
Stephanie.

0:3:13.110 --> 0:3:19.850
Smith, Stephanie
Stephanie Smith with the Vermont Agency of Agriculture, Food and Markets Deputy director within public health and agricultural resource management.

0:3:22.310 --> 0:3:22.540
0700be24-25be-4d97-bd37-0ac775d39cec
That.

0:3:24.620 --> 0:3:29.480
Szczukowski, Zach
Zach Schikowski Agricultural resource management specialists with the Agency of Agriculture.

0:3:32.840 --> 0:3:35.890
0700be24-25be-4d97-bd37-0ac775d39cec
And just going back up, Brooke, we're just doing quick introduction.

0:3:37.110 --> 0:3:37.350
Decker, Brooke
No.

0:3:37.390 --> 0:3:37.900
Decker, Brooke
Excellent.

0:3:38.330 --> 0:3:39.280
Decker, Brooke
Brooke Decker.

0:3:39.290 --> 0:3:42.420
Decker, Brooke
Pollinator health specialist with the Agency of Agriculture.

0:3:45.850 --> 0:3:47.440
0700be24-25be-4d97-bd37-0ac775d39cec
Great. Welcome all.

0:3:47.510 --> 0:3:48.520
0700be24-25be-4d97-bd37-0ac775d39cec
Thanks for joining us.

0:3:52.740 --> 0:3:58.910
0700be24-25be-4d97-bd37-0ac775d39cec
I I'm going to start.

0:3:58.920 --> 0:4:2.320
0700be24-25be-4d97-bd37-0ac775d39cec
So next thing up for us is just to go over.

0:4:4.730 --> 0:4:6.380
0700be24-25be-4d97-bd37-0ac775d39cec
Umm, the agenda for today?

0:4:8.370 --> 0:4:15.600
0700be24-25be-4d97-bd37-0ac775d39cec
And I sent out the minutes from our July end of July meeting and I didn't hear back from anybody.

0:4:15.610 --> 0:4:23.810
0700be24-25be-4d97-bd37-0ac775d39cec
But for any edits or additions to those minutes, so are we OK with accepting them as they were shared?

0:4:29.600 --> 0:4:30.0
0700be24-25be-4d97-bd37-0ac775d39cec
Great.

0:4:31.980 --> 0:4:34.830
0700be24-25be-4d97-bd37-0ac775d39cec
Umm, OK so the 1st.

0:4:36.880 --> 0:4:39.730
0700be24-25be-4d97-bd37-0ac775d39cec
Meet for our agenda today.

0:4:39.740 --> 0:4:44.450
0700be24-25be-4d97-bd37-0ac775d39cec
I'm gonna share my screen is we for our our farm update.

0:4:44.540 --> 0:4:53.100
0700be24-25be-4d97-bd37-0ac775d39cec
We are gonna give you a little bit of a summary of results from our redistribution of the farm input survey.

0:4:54.750 --> 0:4:56.50
0700be24-25be-4d97-bd37-0ac775d39cec
So let me pull that up.

0:5:7.800 --> 0:5:8.600
0700be24-25be-4d97-bd37-0ac775d39cec
Wendy's suit?

0:5:8.610 --> 0:5:8.870
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

0:5:8.910 --> 0:5:9.570
0700be24-25be-4d97-bd37-0ac775d39cec
Ohh, great.

0:5:9.580 --> 0:5:10.210
0700be24-25be-4d97-bd37-0ac775d39cec
Wendy sue.

0:5:10.220 --> 0:5:11.910
0700be24-25be-4d97-bd37-0ac775d39cec
You wanna just quickly introduce yourself?

0:5:11.920 --> 0:5:15.0
0700be24-25be-4d97-bd37-0ac775d39cec
We just finished our round of introduction.

0:5:15.750 --> 0:5:18.220
Wendy Sue Harper (Guest)
Thank you and sorry that I was a little late.

0:5:18.610 --> 0:5:19.800
Wendy Sue Harper (Guest)
Wendy's, who Harper.

0:5:19.850 --> 0:5:23.490
Wendy Sue Harper (Guest)
I'm a social scientist and I have the position in the soil biologist.

0:5:25.920 --> 0:5:26.570
0700be24-25be-4d97-bd37-0ac775d39cec
Thanks, honey too.

0:5:29.170 --> 0:5:41.20
0700be24-25be-4d97-bd37-0ac775d39cec
OK, for farm update, we we're gonna have a quick rundown of our round two of our agricultural input survey.

0:5:41.30 --> 0:5:56.210
0700be24-25be-4d97-bd37-0ac775d39cec
So if we remember, we sent it out to heads of certain kind of organizations, distribution lists with Anthony's health asking for participation.

0:5:56.220 --> 0:6:6.330
0700be24-25be-4d97-bd37-0ac775d39cec
Participation and we got 4 responses from the second round.

0:6:6.340 --> 0:6:8.370
0700be24-25be-4d97-bd37-0ac775d39cec
So this should be pretty quick.

0:6:8.380 --> 0:6:11.70
0700be24-25be-4d97-bd37-0ac775d39cec
So what I ended up doing is this is the same.

0:6:11.260 --> 0:6:16.150
0700be24-25be-4d97-bd37-0ac775d39cec
This is the same result summary that we gave however many months ago.

0:6:16.460 --> 0:6:26.860
0700be24-25be-4d97-bd37-0ac775d39cec
I just added into the numbers are including the four new responses, but I can just quickly go through what kind of those new ones were so we don't have to rehash what we learned before.

0:6:28.170 --> 0:6:37.580
0700be24-25be-4d97-bd37-0ac775d39cec
Umm, so we're still representing the 14 counties, so before responses, three of them indicated they were small farm operations.

0:6:37.640 --> 0:6:40.270
0700be24-25be-4d97-bd37-0ac775d39cec
One was a certified small farm operation.

0:6:40.280 --> 0:6:41.640
0700be24-25be-4d97-bd37-0ac775d39cec
One of them is a Maple producer.

0:6:45.900 --> 0:6:48.750
0700be24-25be-4d97-bd37-0ac775d39cec
So what type of operation you have?

0:6:49.940 --> 0:6:55.510
0700be24-25be-4d97-bd37-0ac775d39cec
Two people, two of the four answered, and they're either certified or non certified organic.

0:6:58.920 --> 0:7:4.550
0700be24-25be-4d97-bd37-0ac775d39cec
For treated seed, the four new responses didn't really come.

0:7:5.180 --> 0:7:11.660
0700be24-25be-4d97-bd37-0ac775d39cec
Also, the results other than three of the four just said other they don't use treated seed or only use organic seeds.

0:7:15.270 --> 0:7:24.920
0700be24-25be-4d97-bd37-0ac775d39cec

So this is kind of gets at that this was, I don't know or no or I don't for just for another response for treated seeds if you could get them without me.

0:7:24.930 --> 0:7:28.570
0700be24-25be-4d97-bd37-0ac775d39cec
Unix if you want it custom ones.

0:7:28.580 --> 0:7:30.170
0700be24-25be-4d97-bd37-0ac775d39cec
This, again, wasn't the audience.

0:7:30.180 --> 0:7:32.110
0700be24-25be-4d97-bd37-0ac775d39cec
The four people weren't the audience for this question.

0:7:34.590 --> 0:7:44.870
0700be24-25be-4d97-bd37-0ac775d39cec
For add plastic, we did so of the four new responses we got up ticks for Maple tubing.

0:7:44.880 --> 0:7:47.970
0700be24-25be-4d97-bd37-0ac775d39cec
One of them was a Maple producer. Other.

0:7:49.940 --> 0:7:57.50
0700be24-25be-4d97-bd37-0ac775d39cec
Responses they got round Bell rap, fail, netting, feeding pellet bags, one responded.

0:7:57.60 --> 0:8:4.240
0700be24-25be-4d97-bd37-0ac775d39cec
We do not use plastic and one was coverall barn structure or plastic mulch was used.

0:8:5.510 --> 0:8:13.100
0700be24-25be-4d97-bd37-0ac775d39cec
So of the trends, some of those were high were high numbers anyway.

0:8:13.110 --> 0:8:26.390
0700be24-25be-4d97-bd37-0ac775d39cec
So the feed and telefax and the ball, net and twine in our previous responses for managing agricultural plastic that was similar.

0:8:26.400 --> 0:8:29.230
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah, no change in the trend with the four new responses.

0:8:29.740 --> 0:8:34.790
0700be24-25be-4d97-bd37-0ac775d39cec
They either chose the sterilize and reuse option.

0:8:37.240 --> 0:8:44.210
0700be24-25be-4d97-bd37-0ac775d39cec
Or I think one person did click recycling so we didn't get a one for that this recycle.

0:8:50.330 --> 0:8:56.800
0700be24-25be-4d97-bd37-0ac775d39cec
They are interested the four new people are interested in the convenient recycling option.

0:8:56.810 --> 0:9:0.120
0700be24-25be-4d97-bd37-0ac775d39cec
They're interested in Armory approved biodegradable plastic.

0:9:3.30 --> 0:9:6.150
0700be24-25be-4d97-bd37-0ac775d39cec
Not basically all that they responded to this question.

0:9:8.540 --> 0:9:12.960
0700be24-25be-4d97-bd37-0ac775d39cec
And so it kind of just uptick that orange bar, there are a convenient recycling option.

0:9:15.450 --> 0:9:36.370
0700be24-25be-4d97-bd37-0ac775d39cec
When asked about fertilizer 4 responses, we got two were they chose the response of 0% synthetic, 100% natural one that I use minor produced on or imported to the farm and one response was our fields are rented to another farmer.

0:9:37.180 --> 0:9:38.840
0700be24-25be-4d97-bd37-0ac775d39cec
So that was another section.

0:9:43.10 --> 0:9:53.680
0700be24-25be-4d97-bd37-0ac775d39cec
For technical services, uh it was extension specialist was added to with the four new responses and talking to.

0:9:53.750 --> 0:10:7.30
0700be24-25be-4d97-bd37-0ac775d39cec
To Ohh and the natural Resource Conservation Service and then one was another and it was that I talked to other local farmers.

0:10:13.320 --> 0:10:17.480
0700be24-25be-4d97-bd37-0ac775d39cec
When asked about IBM, of the four, two said yes.

0:10:17.490 --> 0:10:18.30
0700be24-25be-4d97-bd37-0ac775d39cec
Two said no.

0:10:20.970 --> 0:10:21.680
0700be24-25be-4d97-bd37-0ac775d39cec
The two.

0:10:21.690 --> 0:10:27.380
0700be24-25be-4d97-bd37-0ac775d39cec
That said, no ones in Maple producer and one produces certified organic grains and honey.

0:10:30.20 --> 0:10:38.490
0700be24-25be-4d97-bd37-0ac775d39cec
So what strategies are the ones that said yes, using scouting, whether monitoring, mechanical pest control, crop rotation?

0:10:44.620 --> 0:10:48.140
0700be24-25be-4d97-bd37-0ac775d39cec
Of the four, so this question is what would encourage you to practice I PM.

0:10:52.0 --> 0:10:55.380
0700be24-25be-4d97-bd37-0ac775d39cec
No responses other than we do not use pesticides.

0:11:2.550 --> 0:11:4.730
0700be24-25be-4d97-bd37-0ac775d39cec
Same for.

0:11:6.960 --> 0:11:10.550
0700be24-25be-4d97-bd37-0ac775d39cec
Types of pesticides is we don't use more of the four new.

0:11:10.620 --> 0:11:24.720
0700be24-25be-4d97-bd37-0ac775d39cec
So, and I think our next step for this is it, we are just I'm proposing we include the summary of these results.

0:11:24.730 --> 0:11:37.100
0700be24-25be-4d97-bd37-0ac775d39cec
So with the four added in with from our two rounds of distribution just in our annual report for the for 2023, our charge is to survey that.

0:11:39.210 --> 0:11:43.470
0700be24-25be-4d97-bd37-0ac775d39cec
Reached all 14 counties and we did get representation from all 14 counties.

0:11:44.980 --> 0:11:45.600
0700be24-25be-4d97-bd37-0ac775d39cec
So I think that.

0:11:48.70 --> 0:11:55.960
0700be24-25be-4d97-bd37-0ac775d39cec

I guess I'm proposing that we can summarize the results of that in into the yearly report to add members.

0:11:58.580 --> 0:12:2.160
0700be24-25be-4d97-bd37-0ac775d39cec
Have any other thoughts or next steps that they wanna propose?

0:12:5.840 --> 0:12:7.890
0700be24-25be-4d97-bd37-0ac775d39cec
Any questions or any questions?

0:12:15.730 --> 0:12:15.900
0700be24-25be-4d97-bd37-0ac775d39cec
Cool.

0:12:18.170 --> 0:12:19.90
0700be24-25be-4d97-bd37-0ac775d39cec
So we try.

0:12:19.520 --> 0:12:21.90
0700be24-25be-4d97-bd37-0ac775d39cec
Looks like Roy and Wendy.

0:12:21.130 --> 0:12:22.590
0700be24-25be-4d97-bd37-0ac775d39cec
Ohh, go ahead Roy.

0:12:22.600 --> 0:12:22.820
0700be24-25be-4d97-bd37-0ac775d39cec
Go ahead.

0:12:23.720 --> 0:12:24.540
Roy Beckford
Like so, this is.

0:12:24.550 --> 0:12:27.440
Roy Beckford
This is kind of like a peripheral question I guess.

0:12:28.270 --> 0:12:39.300
Roy Beckford
I don't know if I remember clearly whether we developed a shared file, a shared folder for these types of documents.

0:12:39.820 --> 0:12:48.820
Roy Beckford
So I am creating my own and sometimes I look back and I realize that the particular document I have is not updated as in the case of this one.

0:12:48.830 --> 0:12:55.890
Roy Beckford
This is an updated document, so do we have a shared file or folder and is this something that we should do for the membership?

0:12:57.730 --> 0:12:58.120
0700be24-25be-4d97-bd37-0ac775d39cec
Yep.

0:13:5.530 --> 0:13:5.920
Roy Beckford
Umm.

0:12:58.130 --> 0:13:6.220
0700be24-25be-4d97-bd37-0ac775d39cec
So we do, we have a team like you are all members of a Microsoft team for AIB.

0:13:20.750 --> 0:13:20.950
Roy Beckford
Yeah.

0:13:6.230 --> 0:13:28.230
0700be24-25be-4d97-bd37-0ac775d39cec
And so within that team, there's a there's file folders with all of our meeting materials agendas, and then also just like resources that we find, so like BMP's that we've found that were already published and all of our like when we did the big extension lit review of those papers are in there as well.

0:13:28.960 --> 0:13:43.490
0700be24-25be-4d97-bd37-0ac775d39cec
Umm, so for anything that is posted online that's also in the team site for the team site has more than what's posted online as far As for internal resources for AIB.

0:13:43.950 --> 0:13:46.770
0700be24-25be-4d97-bd37-0ac775d39cec
So I can send you that link again, Roy.

0:13:46.780 --> 0:13:52.320
0700be24-25be-4d97-bd37-0ac775d39cec
I'll make sure to do that so that you can get in there and play around and see what's in there.

0:13:52.730 --> 0:13:52.970
Roy Beckford
Yeah.

0:13:52.620 --> 0:14:9.90
0700be24-25be-4d97-bd37-0ac775d39cec
So this, umm, these results will be on the website too, because we're presenting it here today, but also be on that team site that help, OK, OK.

0:14:4.960 --> 0:14:13.900
Roy Beckford
OK, alright, totally helps because I am keeping my own independent file that I'm seems to be lagging quite a bit.

0:14:15.610 --> 0:14:16.700
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah, we'll get.

0:14:16.770 --> 0:14:18.50
0700be24-25be-4d97-bd37-0ac775d39cec
I'll get you connected, right?

0:14:18.380 --> 0:14:18.660
Roy Beckford
OK.

0:14:23.450 --> 0:14:24.830
0700be24-25be-4d97-bd37-0ac775d39cec
When did you have your hand up to?

0:14:25.750 --> 0:14:26.460
0700be24-25be-4d97-bd37-0ac775d39cec
Did she or no?

0:14:26.510 --> 0:14:27.110
0700be24-25be-4d97-bd37-0ac775d39cec
No. OK.

0:14:35.310 --> 0:14:37.90
0700be24-25be-4d97-bd37-0ac775d39cec
Alright so.

0:14:43.610 --> 0:14:48.10
0700be24-25be-4d97-bd37-0ac775d39cec
Next, on a couple of things that we are gonna bring up.

0:14:48.20 --> 0:14:54.190
0700be24-25be-4d97-bd37-0ac775d39cec
So that's all we have for farm update right now is just that survey.

0:14:54.200 --> 0:15:0.810
0700be24-25be-4d97-bd37-0ac775d39cec
And so then we are wanted to kind of go through one of the action items from.

0:15:2.820 --> 0:15:7.640
0700be24-25be-4d97-bd37-0ac775d39cec
Past month was to go through a kind of a recap of what we've heard.

0:15:8.560 --> 0:15:16.400
0700be24-25be-4d97-bd37-0ac775d39cec
So the way that I have been thinking about it is from our work plan.

0:15:19.400 --> 0:15:27.260
0700be24-25be-4d97-bd37-0ac775d39cec
And we've been looking at this as far as this is what we've been charged to do.

0:15:27.270 --> 0:15:52.850
0700be24-25be-4d97-bd37-0ac775d39cec
This has been our priority, so it says it's from 1:45 from 2022 and it says that the Secretary of Agriculture, Food and markets, after consultation with the Agricultural Innovation Board, shall adopt by rule the MP's for the use in the state of neonicotinoid treated article seeds.

0:15:52.960 --> 0:16:9.830
0700be24-25be-4d97-bd37-0ac775d39cec
So in developing the rules with agricultural Innovation Board, the Secretary shall address and it lists 7 topics, and that's how we've kind of worked towards who, what experts we've brought in and what information we've been learning about.

0:16:9.840 --> 0:16:22.330
0700be24-25be-4d97-bd37-0ac775d39cec
It would be 7 topics, so when we're asking about a recap of what we've learned, I thought well, let's just look at it in reference to these seven required topics.

0:16:23.640 --> 0:16:40.780
0700be24-25be-4d97-bd37-0ac775d39cec
So the first one is economic threshold levels for identified tests and so I've tried to put it here in column G and so this also this is on our team site so we can go in and and look at this at any time.

0:16:40.860 --> 0:16:45.50
0700be24-25be-4d97-bd37-0ac775d39cec
But so column G is trying to answer like the recap question.

0:16:45.60 --> 0:16:46.910
0700be24-25be-4d97-bd37-0ac775d39cec
So what information do we have?

0:16:46.920 --> 0:16:47.990
0700be24-25be-4d97-bd37-0ac775d39cec
Have we heard already?

0:16:48.540 --> 0:16:56.210
0700be24-25be-4d97-bd37-0ac775d39cec
So for economics, threshold levels for identified tests, I think we can reference in March, we heard from Heather Darby.

0:16:56.220 --> 0:17:3.990
0700be24-25be-4d97-bd37-0ac775d39cec

We asked her to specifically address that for Vermont, and we also heard about it from John Tooker last month.

0:17:10.280 --> 0:17:13.950
0700be24-25be-4d97-bd37-0ac775d39cec
For identifying non treated seeds.

0:17:13.960 --> 0:17:18.30
0700be24-25be-4d97-bd37-0ac775d39cec
So non neonet treated seeds that are available to Vermont farmers.

0:17:18.100 --> 0:17:22.790
0700be24-25be-4d97-bd37-0ac775d39cec
We've been trying to track this down.

0:17:22.840 --> 0:17:24.950
0700be24-25be-4d97-bd37-0ac775d39cec
Information on this for a while.

0:17:24.960 --> 0:17:31.670
0700be24-25be-4d97-bd37-0ac775d39cec
So it started with kind of looking at our seed reporting within the agency.

0:17:31.680 --> 0:17:41.890
0700be24-25be-4d97-bd37-0ac775d39cec
So we've heard our seed sales, uh reports in January and February from with agency updates to.

0:17:41.900 --> 0:17:44.960
0700be24-25be-4d97-bd37-0ac775d39cec
They're also talked about it in her March presentation.

0:17:47.630 --> 0:18:2.640
0700be24-25be-4d97-bd37-0ac775d39cec
We ohh in April we had another update to our seed report and then we had a corteva agriscience representatives and pioneer representatives come in and talk about the availability and sales logistics in June.

0:18:8.270 --> 0:18:14.150
0700be24-25be-4d97-bd37-0ac775d39cec
For the third required topic, it's touches on economic analysis of using municipalities.

0:18:15.820 --> 0:18:31.390
0700be24-25be-4d97-bd37-0ac775d39cec
So we heard some of the economic uh from corteva agriscience in June and also an analysis specifically for C corn maggot from Elton Shields research out of Cornell.

0:18:32.650 --> 0:18:39.280
0700be24-25be-4d97-bd37-0ac775d39cec
And today we should hear more of that from Scott Mccart from Cornell University.

0:18:39.290 --> 0:18:47.340
0700be24-25be-4d97-bd37-0ac775d39cec
So he's kind of our our last presenter that set up to touch upon these required documents.

0:18:47.430 --> 0:18:54.950
0700be24-25be-4d97-bd37-0ac775d39cec
The reason why he's not at the beginning of the meeting and he's at three, is because he's in Australia, so he's waking up nice and early for us to present to us at three.

0:18:59.530 --> 0:19:8.180
0700be24-25be-4d97-bd37-0ac775d39cec
I so required topic D is a lit review risk assessment of new and treated fees.

0:19:8.550 --> 0:19:15.190
0700be24-25be-4d97-bd37-0ac775d39cec
So the risk to human health and the environment, so we have quite a long list.

0:19:15.280 --> 0:19:37.530
0700be24-25be-4d97-bd37-0ac775d39cec
We did some internal environmental impact, lit reviews and provided those like annotated bibliography and presentation on that, and the spring we heard we had from our Peace Keepers Association, Andrew Mooncrest, come in and speak to us about impact pollinator health.

0:19:40.460 --> 0:19:51.730
0700be24-25be-4d97-bd37-0ac775d39cec
And we've had some dust, so that impact on dust reviews and presentations by us and then off from.

0:19:54.470 --> 0:20:3.750
0700be24-25be-4d97-bd37-0ac775d39cec
Research available from Doctor Schaff's mom and again, we should hear a little bit more of that today from Doctor Scott Mccart.

0:20:13.500 --> 0:20:23.340
0700be24-25be-4d97-bd37-0ac775d39cec
Ford required topic E We have identified an outline test, pressure, surveillance and monitoring techniques the farmers can use to inform.

0:20:23.350 --> 0:20:25.490
0700be24-25be-4d97-bd37-0ac775d39cec
See purchasing decisions.

0:20:25.500 --> 0:20:26.860
0700be24-25be-4d97-bd37-0ac775d39cec
Heather talked about that.

0:20:26.950 --> 0:20:28.520
0700be24-25be-4d97-bd37-0ac775d39cec
Allison Shields talked about that.

0:20:28.530 --> 0:20:31.20
0700be24-25be-4d97-bd37-0ac775d39cec
John took her also talked about that.

0:20:31.30 --> 0:20:34.790
0700be24-25be-4d97-bd37-0ac775d39cec
So those are kind of the presentations or minutes to reference for that.

0:20:37.450 --> 0:20:41.500
0700be24-25be-4d97-bd37-0ac775d39cec
Identify ways to reduce pest harborage from conservation tillage.

0:20:42.420 --> 0:20:46.30
0700be24-25be-4d97-bd37-0ac775d39cec
Again, Heather talked about that and John Tooker talked about that quite a bit last month.

0:20:49.570 --> 0:20:57.760
0700be24-25be-4d97-bd37-0ac775d39cec
And the last required topic is worded in the Act as established criteria for approval of neonicotinoid treated seeds.

0:21:1.120 --> 0:21:1.350
0700be24-25be-4d97-bd37-0ac775d39cec
We.

0:21:3.130 --> 0:21:5.740
0700be24-25be-4d97-bd37-0ac775d39cec
I believe still have a question out to general counsel to.

0:21:7.740 --> 0:21:21.530
0700be24-25be-4d97-bd37-0ac775d39cec
Consult with him about interpretation of this, how I'm interpreting it as far as what we've heard so far, but I'm welcome for feedback is we've really dug in and to learn about what other people have done.

0:21:21.540 --> 0:21:23.570
0700be24-25be-4d97-bd37-0ac775d39cec
So what other regulations are out there?

0:21:23.580 --> 0:21:30.50
0700be24-25be-4d97-bd37-0ac775d39cec
So what other systems are out there for regulating new, inexperienced seeds, or neonics as a whole?

0:21:30.600 --> 0:21:39.930
0700be24-25be-4d97-bd37-0ac775d39cec
So we have Dean Harrington gave that overview presentation in May of State Unit use laws and regulations.

0:21:40.930 --> 0:21:45.130
0700be24-25be-4d97-bd37-0ac775d39cec
We have summary table that's on the team site.

0:21:45.580 --> 0:21:57.150
0700be24-25be-4d97-bd37-0ac775d39cec
We heard from the Canadian side, we have Tracy Dowdy and Emily Bergeron and then we give kind of the Health Canada overview as well.

0:21:58.150 --> 0:22:0.760
0700be24-25be-4d97-bd37-0ac775d39cec
So those are how we can reference it.

0:22:0.770 --> 0:22:2.140
0700be24-25be-4d97-bd37-0ac775d39cec
What's already been done for?

0:22:4.720 --> 0:22:5.770
0700be24-25be-4d97-bd37-0ac775d39cec
Regulation so far.

0:22:8.470 --> 0:22:21.570
0700be24-25be-4d97-bd37-0ac775d39cec
Seeing the Health Canada one, we did have a question from last end of last meeting about the Health Canada requirement for prohibiting the use of talcum graphite and how how does that regulated.

0:22:21.580 --> 0:22:24.170
0700be24-25be-4d97-bd37-0ac775d39cec
And I have that question out there.

0:22:24.180 --> 0:22:26.300
0700be24-25be-4d97-bd37-0ac775d39cec
I just don't have an answer yet, so it will just.

0:22:27.120 --> 0:22:28.910
0700be24-25be-4d97-bd37-0ac775d39cec
I will share it when I get it.

0:22:29.620 --> 0:22:35.800
0700be24-25be-4d97-bd37-0ac775d39cec
I just don't have an answer quite yet of their answer to that question of how do they enforce regulate that.

0:22:39.10 --> 0:22:44.890
0700be24-25be-4d97-bd37-0ac775d39cec
So I unless people can think of things that I'm missing, or is there anything else that?

0:22:47.370 --> 0:22:56.60
0700be24-25be-4d97-bd37-0ac775d39cec
A big gap that Members are seeing for what we've covered compared to what we have to cover.

0:23:3.750 --> 0:23:5.20
0700be24-25be-4d97-bd37-0ac775d39cec
Or you want me to reach out?

0:23:5.30 --> 0:23:5.180
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

0:23:5.790 --> 0:23:7.30
0700be24-25be-4d97-bd37-0ac775d39cec
Well, going to say so.

0:23:7.40 --> 0:23:12.60
0700be24-25be-4d97-bd37-0ac775d39cec
First of all, thanks Morgan for keeping us so well organized.

0:23:12.630 --> 0:23:14.570
0700be24-25be-4d97-bd37-0ac775d39cec
So job, we appreciate it.

0:23:15.950 --> 0:23:27.290
0700be24-25be-4d97-bd37-0ac775d39cec
I think the sort of a well just general statement, so a lot of information, OK, the the General Assembly gave us, you know that list of things we need to consider.

0:23:28.170 --> 0:23:31.420
0700be24-25be-4d97-bd37-0ac775d39cec
But when you when you start diving into, there's just a ton of information.

0:23:31.430 --> 0:23:41.340
0700be24-25be-4d97-bd37-0ac775d39cec
And so it's I think it's something that as we go forward in our discussions, we should keep referring back to and all that informations on the team site, right, Morgan.

0:23:41.350 --> 0:23:43.510
0700be24-25be-4d97-bd37-0ac775d39cec
So we can pull up a document if we need to.

0:23:43.520 --> 0:23:43.840
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

0:23:44.120 --> 0:23:58.20
0700be24-25be-4d97-bd37-0ac775d39cec
And I think that is something that we'll need to do individually as well as occasionally collectively, you

know when the question comes up, we'll need to pull up a document and sort of go back and look at it again and make sure we've got it all together.

0:23:58.30 --> 0:24:15.760
0700be24-25be-4d97-bd37-0ac775d39cec
But you know basically the problem for the task in front of us is to take all that information and try to synthesize it or keep it in mind anyway, while we're making recommendations for best management practices, that's just sort of a general statement of the obvious.

0:24:16.270 --> 0:24:18.650
0700be24-25be-4d97-bd37-0ac775d39cec
So anyway, that's it.

0:24:19.910 --> 0:24:25.350
0700be24-25be-4d97-bd37-0ac775d39cec
That anybody has any thoughts about that or and I guess we're gonna talk about the process next.

0:24:25.410 --> 0:24:25.740
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

0:24:25.790 --> 0:24:26.140
0700be24-25be-4d97-bd37-0ac775d39cec
OK.

0:24:26.190 --> 0:24:27.490
0700be24-25be-4d97-bd37-0ac775d39cec
So we'll talk about the processing.

0:24:27.500 --> 0:24:32.430
0700be24-25be-4d97-bd37-0ac775d39cec
Does anybody have any questions or comments or thoughts about what we've done so far?

0:24:34.430 --> 0:24:36.610
0700be24-25be-4d97-bd37-0ac775d39cec
Which is basically gather a whole bunch of information.

0:24:44.10 --> 0:24:44.560
0700be24-25be-4d97-bd37-0ac775d39cec
OK. OK.

0:24:46.10 --> 0:24:48.240
0700be24-25be-4d97-bd37-0ac775d39cec
So yeah, the next thing I'm gonna pull up.

0:24:50.740 --> 0:24:52.120
0700be24-25be-4d97-bd37-0ac775d39cec
Yes, we've talked about before.

0:24:58.20 --> 0:25:9.130
0700be24-25be-4d97-bd37-0ac775d39cec
So this we presented and kind of accepted at the at the February meeting and so this is how.

0:25:11.470 --> 0:25:23.940
0700be24-25be-4d97-bd37-0ac775d39cec
Members and representatives from HD Vague can propose, like, have proposals and reports, and how we review and whether it's going to be voted on or things like that.

0:25:23.950 --> 0:25:28.100
0700be24-25be-4d97-bd37-0ac775d39cec
So this is how the process that we presented in agreed upon.

0:25:28.110 --> 0:25:38.100
0700be24-25be-4d97-bd37-0ac775d39cec
So anybody basically agency bag and the ID members can present proposals.

0:25:40.140 --> 0:25:40.590
0700be24-25be-4d97-bd37-0ac775d39cec
And.

0:25:43.270 --> 0:25:48.360
0700be24-25be-4d97-bd37-0ac775d39cec
We can survey the members or acceptance of the proposal.

0:25:48.670 --> 0:26:9.710
0700be24-25be-4d97-bd37-0ac775d39cec
If someone does not support that proposal, then the Member can state and record the reason why they're not supporting what was proposed and to see if something can be changed to the proposal that would result in them supporting it.

0:26:9.720 --> 0:26:37.410
0700be24-25be-4d97-bd37-0ac775d39cec
So is there something that basically, is there a a negotiation that can happen where it would change from not supporting to supporting so continue that process of modifications until there's consensus, but if consensus is not achieved then the proposal will just come with the record of those Members that are in support and those Members that are not in support of that proposal.

0:26:38.930 --> 0:26:40.380
0700be24-25be-4d97-bd37-0ac775d39cec
And the same things I'm saying.

0:26:40.390 --> 0:26:42.970
0700be24-25be-4d97-bd37-0ac775d39cec
Proposals thinking with a report except into.

0:26:45.840 --> 0:26:48.860
0700be24-25be-4d97-bd37-0ac775d39cec
It's something in a report is not supported.

0:26:49.360 --> 0:26:53.830
0700be24-25be-4d97-bd37-0ac775d39cec
Can it be changed to gain that support?

0:26:54.600 --> 0:26:59.530
0700be24-25be-4d97-bd37-0ac775d39cec
If not, then we will just make sure that it's provided.

0:27:2.330 --> 0:27:8.760
0700be24-25be-4d97-bd37-0ac775d39cec
Members that don't accept the report to be included in like the that's specifically a report generated by.

0:27:9.350 --> 0:27:12.840
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah, it's not for things that we've worked hard.

0:27:13.140 --> 0:27:14.580
0700be24-25be-4d97-bd37-0ac775d39cec
It's like we generate a report.

0:27:16.120 --> 0:27:20.980
0700be24-25be-4d97-bd37-0ac775d39cec
We can record the position of the AIB members on whatever said now import, yeah.

0:27:24.750 --> 0:27:31.700
0700be24-25be-4d97-bd37-0ac775d39cec
Uh, so he's trying to go over that as we start brainstorming that there's gonna be the proposals made. Right?

0:27:31.710 --> 0:27:32.90
0700be24-25be-4d97-bd37-0ac775d39cec
So.

0:27:32.200 --> 0:27:34.750
0700be24-25be-4d97-bd37-0ac775d39cec
So don't be scared.

0:27:34.760 --> 0:27:37.670
0700be24-25be-4d97-bd37-0ac775d39cec
There's no voting off the island.

0:27:38.770 --> 0:27:39.440
0700be24-25be-4d97-bd37-0ac775d39cec
We're not going to.

0:27:39.480 --> 0:27:40.50
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

0:27:40.230 --> 0:27:44.700
0700be24-25be-4d97-bd37-0ac775d39cec
So I guess one question right now would be for board members.

0:27:44.810 --> 0:27:52.100
0700be24-25be-4d97-bd37-0ac775d39cec
Board members have any questions or comments about that process that we decided to follow.

0:27:52.890 --> 0:27:55.50
0700be24-25be-4d97-bd37-0ac775d39cec
They're really understand what we're talking about.

0:28:4.550 --> 0:28:14.650
0700be24-25be-4d97-bd37-0ac775d39cec
I just sort of, but implied in that process is that we will get each Member to state the position as part of the process.

0:28:14.960 --> 0:28:29.390
0700be24-25be-4d97-bd37-0ac775d39cec
OK, so in order to record what physician or what thoughts Members have, we're going to actually actively ask, you know, what is your position on this, you know?

0:28:29.400 --> 0:28:30.580
0700be24-25be-4d97-bd37-0ac775d39cec
And so we can record it all.

0:28:31.470 --> 0:28:47.160
0700be24-25be-4d97-bd37-0ac775d39cec
Uh, so you know, I guess it's an opportunity to, you know, state your thoughts and opinions and ideas, which is what we're here for, you know, so be aware of that, I guess.

0:28:56.10 --> 0:28:56.240
0700be24-25be-4d97-bd37-0ac775d39cec
OK.

0:29:0.240 --> 0:29:11.920
0700be24-25be-4d97-bd37-0ac775d39cec
So the next big chunk until Doctor Scott Mccart joins us is member brainstorming participation thoughts.

0:29:11.930 --> 0:29:12.490
0700be24-25be-4d97-bd37-0ac775d39cec
We haven't.

0:29:12.500 --> 0:29:13.910
0700be24-25be-4d97-bd37-0ac775d39cec
We've kind of been going.

0:29:13.920 --> 0:29:14.790
0700be24-25be-4d97-bd37-0ac775d39cec
Go, go, go, go.

0:29:14.800 --> 0:29:26.250
0700be24-25be-4d97-bd37-0ac775d39cec
Go of information intake and so we just wanted a chance for members to kind of have, like talking out your reflect.

0:29:26.260 --> 0:29:31.490
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah, reflect that because we're and and you know if you have ideas, we talk about them.

0:29:31.500 --> 0:29:42.190
0700be24-25be-4d97-bd37-0ac775d39cec
If you don't have ideas right now, what you think of BMPR have in it, we can talk about, you know, what your reactions have been so far, or what your thoughts are so far.

0:29:42.200 --> 0:29:44.290
0700be24-25be-4d97-bd37-0ac775d39cec
For the information where for.

0:29:46.980 --> 0:29:53.870
0700be24-25be-4d97-bd37-0ac775d39cec
And it's kind of unstructured in the sense that we're not, we're not following a list or anything.

0:29:54.180 --> 0:29:59.750
0700be24-25be-4d97-bd37-0ac775d39cec
It's just whatever people want to want to bring forward and we'll, you know, just have a discussion.

0:30:1.410 --> 0:30:6.360
0700be24-25be-4d97-bd37-0ac775d39cec
So this is the beginning of the process of formulating the BMP's.

0:30:8.620 --> 0:30:15.660
0700be24-25be-4d97-bd37-0ac775d39cec
To to present to the Secretary, and ultimately to the General Assembly, so that.

0:30:17.970 --> 0:30:18.650
0700be24-25be-4d97-bd37-0ac775d39cec
Floor is open.

0:30:27.640 --> 0:30:29.260
0700be24-25be-4d97-bd37-0ac775d39cec
Our folks, Lincoln, right.

0:30:29.270 --> 0:30:29.710
0700be24-25be-4d97-bd37-0ac775d39cec
What do you think?

0:30:35.550 --> 0:30:36.690
Roy Beckford
Thanks for singling me out.

0:30:36.700 --> 0:30:38.500
Roy Beckford
Then I don't know why it did that.

0:30:40.210 --> 0:30:45.470
0700be24-25be-4d97-bd37-0ac775d39cec
Your your camera's got the biggest picture, so you're sort of on the nominated by default there.

0:30:47.460 --> 0:30:51.390
Roy Beckford
Umm I I think I don't know if I have anything specific to say.

0:30:51.400 --> 0:30:55.910
Roy Beckford
I've just been thinking all this time that I was looking at the document that we'll just share it.

0:30:56.720 --> 0:31:5.480
Roy Beckford
I was just wondering whether Umm, acceptance or refusal of acceptance of a particular.

0:31:7.780 --> 0:31:12.390
Roy Beckford
Proposal or or any aspect of BMP, shouldn't that?

0:31:12.400 --> 0:31:18.110
Roy Beckford
Shouldn't we just determine whether this should be based on some kind of logical framework?

0:31:18.120 --> 0:31:18.810
Roy Beckford
Cause you don't.

0:31:18.820 --> 0:31:22.970
Roy Beckford
People shouldn't disagree or not accept just because they don't want to accept.

0:31:28.570 --> 0:31:28.780
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

0:31:22.980 --> 0:31:31.710
Roy Beckford
I mean, is there a 3 come up with some I don't know and that's that's what happens when I'm when you're when when I'm singled out to you.

0:31:31.720 --> 0:31:41.0
Roy Beckford
So so my answer is not gonna be specific, but I was wondering what just logic when we're agreeing to any set of proposals or not.

0:31:41.890 --> 0:31:49.450
Roy Beckford
Shouldn't hear somebody, so shouldn't there be some conformity to some kind of logical framework when we're thinking through this?

0:31:49.460 --> 0:31:50.590
Roy Beckford
And how do we determine that?

0:31:50.650 --> 0:31:51.220
Roy Beckford
I don't know.

0:31:51.230 --> 0:31:52.510
Roy Beckford
I'm that was what I was thinking.

0:31:53.880 --> 0:31:55.990
0700be24-25be-4d97-bd37-0ac775d39cec
Well, well, I mean, that's a really interesting thought.

0:31:56.0 --> 0:31:57.700
0700be24-25be-4d97-bd37-0ac775d39cec
I mean, it seems like that could be.

0:32:0.280 --> 0:32:5.750
0700be24-25be-4d97-bd37-0ac775d39cec
Accommodated in the process of the discussion of a proposal.

0:32:6.640 --> 0:32:25.450
0700be24-25be-4d97-bd37-0ac775d39cec
So if a proposal was to, you know, I don't know, I can't think of a good example, but whatever proposal is if a person, you know, the person advocating or the OR the the Members advocating it put it forward and then some people say, well, I don't like that idea.

0:32:26.750 --> 0:32:44.10
0700be24-25be-4d97-bd37-0ac775d39cec
We should have a discussion about why that idea is not, you know, acceptable or or why the Member doesn't want to see that become, and it's not so much what you like or don't like the the key point is, should this be a recommendation for a best management practice for?

0:32:44.650 --> 0:32:48.490
0700be24-25be-4d97-bd37-0ac775d39cec
Uh agricultural producers in the state of Vermont.

0:32:48.790 --> 0:32:49.890
0700be24-25be-4d97-bd37-0ac775d39cec
That's the ultimate question.

0:32:49.900 --> 0:32:56.670
0700be24-25be-4d97-bd37-0ac775d39cec
Should this be a bit, and if the if someone says this should be a BMP and then somebody else says no, it shouldn't.

0:32:56.990 --> 0:33:1.120
0700be24-25be-4d97-bd37-0ac775d39cec
We need to explore in the context what you just said in terms of a logical framework.

0:33:1.490 --> 0:33:2.700
0700be24-25be-4d97-bd37-0ac775d39cec
Why or why not?

0:33:2.990 --> 0:33:11.100
0700be24-25be-4d97-bd37-0ac775d39cec
And some people may be able to, you know, articulate why it should or shouldn't.

0:33:11.110 --> 0:33:15.840
0700be24-25be-4d97-bd37-0ac775d39cec
But other people may say that just doesn't think they just don't think it's a good idea, which is fine too.

0:33:15.850 --> 0:33:16.410
0700be24-25be-4d97-bd37-0ac775d39cec
I mean, there's no.

0:33:18.250 --> 0:33:47.330
0700be24-25be-4d97-bd37-0ac775d39cec
Process specified by the legislature about how we have to formulate these just so we have to consider all these ideas which we have all these factors, but I think you know Roy as we're going through it, I think that'll sort of come out, you know, and we can always reiterate the question, what is what is it about this proposal that doesn't fit of what you know or should be a BMP for a farmer in Vermont?

0:33:47.650 --> 0:33:52.780
0700be24-25be-4d97-bd37-0ac775d39cec
I mean that's that's the question we should go back to should this be BMP for a farmer, for modern not.

0:33:54.140 --> 0:33:54.830
0700be24-25be-4d97-bd37-0ac775d39cec
Does that make sense?

0:33:54.320 --> 0:33:56.230
Roy Beckford
And then yeah, it does.

0:33:56.280 --> 0:34:2.490
Roy Beckford
So do these do any disagreements or differences of opinion that are significant?

0:34:2.500 --> 0:34:5.730
Roy Beckford
Should they get into the footnotes of the BNP at some point?

0:34:6.380 --> 0:34:7.490
Roy Beckford
I remember years ago.

0:34:7.500 --> 0:34:12.550
Roy Beckford
I mean, you might recall this, but as part of a team working on citrus BMP's in Florida.

0:34:12.560 --> 0:34:17.880
Roy Beckford
Florida this was after Kanker just before citrus greening up.

0:34:18.800 --> 0:34:27.840
Roy Beckford
We made sure that those kinds of major disagreements got into the footnotes and we we included in there, so that at least when someone's reading the whole document, they'll see that this is a point that.

0:34:27.230 --> 0:34:30.0
0700be24-25be-4d97-bd37-0ac775d39cec
Ohh yeah, yeah, yeah, yeah, absolutely.

0:34:30.10 --> 0:34:45.310
0700be24-25be-4d97-bd37-0ac775d39cec
The the process is set up the they're doing exactly that, you know, which is why, if they're, you know, every BMP proposal that a member has will be in the document, and every statement of opinion about that will be in the document.

0:34:45.320 --> 0:34:47.950
0700be24-25be-4d97-bd37-0ac775d39cec
And every reason for against will be in the doctor.

0:34:49.590 --> 0:34:52.400
0700be24-25be-4d97-bd37-0ac775d39cec
So, but it's not like we're gonna try to create a finished.

0:34:52.410 --> 0:34:54.470
0700be24-25be-4d97-bd37-0ac775d39cec
I may be able to create a finished emptying.

0:34:54.480 --> 0:34:59.520
0700be24-25be-4d97-bd37-0ac775d39cec
Would be great if we could, but if we can't, at least we'll have a record of all the discussions.

0:35:0.70 --> 0:35:7.530
0700be24-25be-4d97-bd37-0ac775d39cec
I mean, ultimately the, you know, at some point it's going to be the legislature that decides what to be amps.

0:35:7.540 --> 0:35:11.160
0700be24-25be-4d97-bd37-0ac775d39cec
Are you know what else lately?

0:35:11.170 --> 0:35:18.590
0700be24-25be-4d97-bd37-0ac775d39cec
Because our job is just to put it all together, the I was at a I gave the last session.

0:35:18.600 --> 0:35:38.220
0700be24-25be-4d97-bd37-0ac775d39cec
I had an opportunity to give the testimony to the Senate committee and and chairman star, you know, specifically brought up the point that they established this group to consider all the factors that the legislature couldn't consider because they don't have the time and the, you know, the opportunity to get into it.

0:35:38.230 --> 0:35:39.540
0700be24-25be-4d97-bd37-0ac775d39cec
The detail or we're getting into it.

0:35:39.550 --> 0:35:53.100
0700be24-25be-4d97-bd37-0ac775d39cec
So that's the whole purpose of this is to really get into the details and record all the the options and and pluses and minuses and then ultimately you know if the whole board can agree on one or two be a piece, that's great.

0:35:53.410 --> 0:36:6.300
0700be24-25be-4d97-bd37-0ac775d39cec
You know that that that's almost a done deal, but there I'm sure there's some we won't be able to agree on completely and that information will be presented to everybody for them.

0:36:6.690 --> 0:36:7.940
0700be24-25be-4d97-bd37-0ac775d39cec
So in a way.

0:36:8.220 --> 0:36:14.760
0700be24-25be-4d97-bd37-0ac775d39cec
So I mean that you know we have a very specific task and I think everyone's doing a fantastic job doing it.

0:36:15.30 --> 0:36:17.410
0700be24-25be-4d97-bd37-0ac775d39cec
We just have to get to that part of the the cycle now.

0:36:18.400 --> 0:36:18.710
Roy Beckford
OK.

0:36:18.720 --> 0:36:24.260
Roy Beckford
And I have one question will will will should, should, should.

0:36:24.860 --> 0:36:29.330
Roy Beckford
Should the BMP have BMP's have a time or life term?

0:36:29.670 --> 0:36:34.490
Roy Beckford
Should it be a 5 year term as new information becomes available, that kind of thing?

0:36:34.620 --> 0:36:48.290
Roy Beckford
I know that Heather Darby, for example, is looking at each season each year just updating and modernizing the kind of data she collects and the kind of advice she gives out.

0:36:48.800 --> 0:36:52.750
Roy Beckford
So will that impact a life term for these people?

0:36:51.430 --> 0:36:54.40
0700be24-25be-4d97-bd37-0ac775d39cec
That's that's a great that's that's.

0:36:54.50 --> 0:36:56.340
0700be24-25be-4d97-bd37-0ac775d39cec
That's a suggestion for part of the PNP.

0:36:56.550 --> 0:37:7.180
0700be24-25be-4d97-bd37-0ac775d39cec
So you know that's a basically a proposal, is that any BMP or set of BNPB reviewed as new data comes forward or some kind of time schedule.

0:37:7.580 --> 0:37:9.640
0700be24-25be-4d97-bd37-0ac775d39cec
I mean that that's an example of a BMP right there.

0:37:10.270 --> 0:37:10.570
Roy Beckford
Right.

0:37:10.450 --> 0:37:13.740
0700be24-25be-4d97-bd37-0ac775d39cec
You know, or a factor of a faster than being piece.

0:37:15.390 --> 0:37:16.620
Roy Beckford
OK, so that's all I have.

0:37:15.480 --> 0:37:17.0
0700be24-25be-4d97-bd37-0ac775d39cec
So give first one.

0:37:19.640 --> 0:37:20.420
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah, great.

0:37:20.700 --> 0:37:21.630
Roy Beckford
Go. Go ahead.

0:37:21.640 --> 0:37:22.940
Roy Beckford
I didn't want interrupt you.

0:37:24.180 --> 0:37:25.410
0700be24-25be-4d97-bd37-0ac775d39cec
No, you did right.

0:37:25.420 --> 0:37:27.510
0700be24-25be-4d97-bd37-0ac775d39cec
So who else wants to jump in?

0:37:29.610 --> 0:37:30.870
0700be24-25be-4d97-bd37-0ac775d39cec
Start talking about ideas.

0:37:38.420 --> 0:37:39.260
0700be24-25be-4d97-bd37-0ac775d39cec
Go ahead, Wendy too.

0:37:43.550 --> 0:37:46.840
Wendy Sue Harper (Guest)
So for the process, one thing that I.

0:37:49.110 --> 0:37:57.130
Wendy Sue Harper (Guest)
I've been thinking about is do we need even a if van kind of flow chart?

0:37:57.300 --> 0:38:4.810
Wendy Sue Harper (Guest)

Because some things that farmers might do might depend on what they've done before or something like that, or what.

0:38:4.820 --> 0:38:19.720
Wendy Sue Harper (Guest)
They're, you know, that some of their equipment or or how they, umm how they're farming because like how detailed are we supposed to get on this for a particular situations and things?

0:38:21.60 --> 0:38:21.770
0700be24-25be-4d97-bd37-0ac775d39cec
Well, there are.

0:38:21.780 --> 0:38:26.330
0700be24-25be-4d97-bd37-0ac775d39cec
There are a number of rules that exist that that do have.

0:38:26.340 --> 0:38:38.870
0700be24-25be-4d97-bd37-0ac775d39cec
If then type states I think of uh tables of of requirements that you know if you're in this situation then you got this set of requirements.

0:38:38.880 --> 0:38:41.190
0700be24-25be-4d97-bd37-0ac775d39cec
If you're in this situation, you have this set of requirements.

0:38:41.200 --> 0:38:50.190
0700be24-25be-4d97-bd37-0ac775d39cec
So yeah, I mean it certainly you wanna have the BMP's applied to the situation they applied to, so you certainly could, you know use them.

0:38:51.130 --> 0:38:56.820
0700be24-25be-4d97-bd37-0ac775d39cec
But if that I don't know if a flow chart the right way to do it, but we certainly use a flow chart to organize our thinking about it.

0:38:57.360 --> 0:38:58.610
0700be24-25be-4d97-bd37-0ac775d39cec
So you couldn't do that.

0:38:59.410 --> 0:39:3.60
Wendy Sue Harper (Guest)
And then Morgan, do you want me to share the ideas I sent you?

0:39:4.0 --> 0:39:5.160
Wendy Sue Harper (Guest)
This is a good time for that.

0:39:4.450 --> 0:39:7.430
0700be24-25be-4d97-bd37-0ac775d39cec
I think, yeah, I think that's a great time.

0:39:9.440 --> 0:39:10.610
Wendy Sue Harper (Guest)
Yes, that would be great.

0:39:10.620 --> 0:39:11.0
Wendy Sue Harper (Guest)
Thank you.

0:39:7.440 --> 0:39:11.450
0700be24-25be-4d97-bd37-0ac775d39cec
Do you want me to put them up on the screen or do you want to? OK.

0:39:15.50 --> 0:39:15.760
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah, sorry.

0:39:17.970 --> 0:39:19.570
0700be24-25be-4d97-bd37-0ac775d39cec
No, really.

0:39:21.800 --> 0:39:24.390
0700be24-25be-4d97-bd37-0ac775d39cec
Yes, when you suit did your homework?

0:39:24.400 --> 0:39:25.240
0700be24-25be-4d97-bd37-0ac775d39cec
Shared her homework.

0:39:27.190 --> 0:39:28.340
0700be24-25be-4d97-bd37-0ac775d39cec
Is that big enough for everyone?

0:39:28.630 --> 0:39:30.200
Wendy Sue Harper (Guest)
That very good.

0:39:30.210 --> 0:39:30.620
Wendy Sue Harper (Guest)
Thank you.

0:39:31.610 --> 0:39:31.770
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

0:39:31.770 --> 0:39:43.780
Wendy Sue Harper (Guest)

So one thing I tried to do at the end of most of our meetings was to jot down some ideas that would be a part of the BMP's so that it would help me.

0:39:43.790 --> 0:39:44.480
Wendy Sue Harper (Guest)
Me.

0:39:44.570 --> 0:39:48.420
Wendy Sue Harper (Guest)
Then go back because we've been meeting for quite a while and collect them.

0:39:48.870 --> 0:39:51.210
Wendy Sue Harper (Guest)
So some of these came out of specific meetings.

0:39:51.910 --> 0:39:55.600
Wendy Sue Harper (Guest)
Uh, so the top is near tonic.

0:39:55.870 --> 0:39:59.470
Wendy Sue Harper (Guest)
Are are the neotenic know net take a noise.

0:39:59.780 --> 0:40:3.390
Wendy Sue Harper (Guest)
The seed treatments, they're toxicity to bees.

0:40:3.400 --> 0:40:6.810
Wendy Sue Harper (Guest)
They're half life in the soil, so you could think about that.

0:40:7.320 --> 0:40:19.280
Wendy Sue Harper (Guest)
And the first one is umm, if you look at the classification for bees, which I found online is moderately toxic, the rest of them are considered highly toxic to bees.

0:40:19.330 --> 0:40:22.870
Wendy Sue Harper (Guest)
So the recommendations are in part based on that information as well.

0:40:23.40 --> 0:40:26.640
Wendy Sue Harper (Guest)
So if you can move up to the recommendations, that would be good.

0:40:28.310 --> 0:40:38.50
Wendy Sue Harper (Guest)
So the first one is to after hearing everything I heard, I think we should prohibit the use of all neonicotinoids phrase that are above ground in Vermont.

0:40:38.790 --> 0:40:39.200
Wendy Sue Harper (Guest)
Umm.

0:40:39.290 --> 0:40:45.420
Wendy Sue Harper (Guest)
And then we should prohibit the use of the highly toxic neonicotinoid seed treatments.

0:40:45.960 --> 0:40:53.20
Wendy Sue Harper (Guest)
Umm for and this is highly toxic to bees in Vermont and the one that is moderately toxic.

0:40:53.280 --> 0:40:55.150
Wendy Sue Harper (Guest)
We could, we could keep that one.

0:40:55.700 --> 0:41:2.680
Wendy Sue Harper (Guest)
The third one is to recommend prohibiting farmers treating their own seed with NEO to nikoil pesticides.

0:41:2.690 --> 0:41:19.260
Wendy Sue Harper (Guest)
And that's because the one of the speakers talked about how that that's one way where they they get out into the environment the the 4th one came from our April meeting and I'm probably going to butcher this, but I'll I'll try it.

0:41:19.330 --> 0:41:19.550
Wendy Sue Harper (Guest)
Umm.

0:41:20.370 --> 0:41:23.10
Wendy Sue Harper (Guest)
Plate penarol uh.

0:41:23.20 --> 0:41:30.750
Wendy Sue Harper (Guest)
Butoxide prohibit that as an inert ingredient because we learned that that makes the neonics a lot more toxic.

0:41:31.530 --> 0:41:34.450
Wendy Sue Harper (Guest)
Umm, so we would say don't put that in there.

0:41:35.270 --> 0:41:35.570
Wendy Sue Harper (Guest)
Umm.

0:41:35.790 --> 0:41:48.460
Wendy Sue Harper (Guest)

And then the fifth one is to require that farmers use a fluency agent and prohibits them from using graphite or talk, and this would be all to reduce reduce dust.

0:41:49.450 --> 0:41:53.440
Wendy Sue Harper (Guest)
And we heard from several people that said that that was a a good thing.

0:41:54.130 --> 0:42:13.710
Wendy Sue Harper (Guest)
And then we would recommend to the legislature that they provide funding to help farmers modify their equipment, and if they're, if it, if farmers can do it themselves, then we would provide some funding to extension to, to run programs to, to help farmers do those modifications.

0:42:14.740 --> 0:42:39.270
Wendy Sue Harper (Guest)
#7 is to require that farmers remove waste, seed and dust from the soil and dispose of them properly so that the the bees don't in colonies don't get into that that stuff cause people will probably remember that the dust has a lot of protein in it from the corn and that's very attractive to to the pop on the others.

0:42:40.220 --> 0:42:43.910
Wendy Sue Harper (Guest)
And then Doctor, Kimberly, Stoners outline of BMP's.

0:42:43.920 --> 0:42:53.800
Wendy Sue Harper (Guest)
'S I I think we should recommend following those, but that would be some provisions because not all farmers would maybe need to do all of those depending on their situation.

0:42:55.460 --> 0:42:57.820
Wendy Sue Harper (Guest)
And the number the next 1 #9.

0:42:58.400 --> 0:43:15.830
Wendy Sue Harper (Guest)
Umm, I would recommend that the legislature provide funding for workshop for beekeepers on varilla might management because we heard from several people and this was especially include beekeepers that are maybe like homeowner beekeepers or hobby beekeepers.

0:43:15.840 --> 0:43:31.940
Wendy Sue Harper (Guest)
Because of, you know, some of the bee death comes from the, you know, Gorilla might being a problem in our state and the last one is to recommend a phase out period for all the new neck pesticides of two to three years.

0:43:32.270 --> 0:43:36.630
Wendy Sue Harper (Guest)
So those are some ideas I jotted down this weekend for our conversation.

0:43:37.430 --> 0:43:37.830
Wendy Sue Harper (Guest)
Thank you.

0:43:39.740 --> 0:43:42.440
0700be24-25be-4d97-bd37-0ac775d39cec
And you go ahead easier.

0:43:42.450 --> 0:43:42.760
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

0:43:42.770 --> 0:43:46.810
0700be24-25be-4d97-bd37-0ac775d39cec
And and rather than, like, get into these and try to, you know, react to them.

0:43:46.820 --> 0:43:52.590
0700be24-25be-4d97-bd37-0ac775d39cec
At this point, I think at this point we're still going around to see what ideas people have, and so this is great.

0:43:53.50 --> 0:44:0.520
0700be24-25be-4d97-bd37-0ac775d39cec
Wendy's due to, you know, to put this out there and for discussion and you know consideration.

0:44:1.110 --> 0:44:10.20
0700be24-25be-4d97-bd37-0ac775d39cec
But at this point, I think I'd like to hear from some of the other folks too, what kind of ideas and if you have been writing, you want to send them into Morgan, that's that's great.

0:44:10.390 --> 0:44:10.790
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

0:44:10.800 --> 0:44:16.680
0700be24-25be-4d97-bd37-0ac775d39cec
So I I started because when you sent this in, I started kind of like a trek.

0:44:16.690 --> 0:44:23.220
0700be24-25be-4d97-bd37-0ac775d39cec
So eventually I'll share it and put it up on line that we can add to it.

0:44:23.230 --> 0:44:29.990
0700be24-25be-4d97-bd37-0ac775d39cec
But however we want to be on our team site so we can keep a running track of all of our proposed in peace, I put Wendy.

0:44:30.0 --> 0:44:34.210
0700be24-25be-4d97-bd37-0ac775d39cec
She's on there now and for then we can keep adding to it and it will.

0:44:35.240 --> 0:44:36.330
0700be24-25be-4d97-bd37-0ac775d39cec
But I can talk about that later.

0:44:36.340 --> 0:44:36.930
0700be24-25be-4d97-bd37-0ac775d39cec
I don't wanna.

0:44:37.330 --> 0:44:38.370
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah, squelch.

0:44:38.380 --> 0:44:41.110
0700be24-25be-4d97-bd37-0ac775d39cec
The right brainstorming right now. Yeah.

0:44:41.120 --> 0:44:41.570
0700be24-25be-4d97-bd37-0ac775d39cec
So.

0:44:41.700 --> 0:44:42.920
0700be24-25be-4d97-bd37-0ac775d39cec
So, thanks, Willie.

0:44:42.930 --> 0:44:46.420
0700be24-25be-4d97-bd37-0ac775d39cec
Sue, why don't we just start going around to the Members that are on the call?

0:44:46.480 --> 0:44:51.190
0700be24-25be-4d97-bd37-0ac775d39cec
Ryan, what are you thinking in terms of where we need to go?

0:44:52.940 --> 0:44:53.200
Ryan Rebozo (Guest)
Yeah.

0:44:53.210 --> 0:45:11.360
Ryan Rebozo (Guest)
I mean, what one thought that kept coming to mind for me and also this isn't really a fully formed thought, just kind of questions I came out with is you know given what we've heard about the you know a lot of the treated seeds being kind of a preventative practice rather than reactive.

0:45:11.370 --> 0:45:18.70
Ryan Rebozo (Guest)

I wonder if there's a strategy for IPM earlier in the growing season as opposed to checking mature plants.

0:45:18.80 --> 0:45:20.780
Ryan Rebozo (Guest)
You know when they treated seats are more likely to be effective.

0:45:20.930 --> 0:45:23.600
Ryan Rebozo (Guest)
You know the first two to three weeks for soil pests.

0:45:24.170 --> 0:45:25.300
Ryan Rebozo (Guest)
I just don't know enough about it.

0:45:25.310 --> 0:45:34.250
Ryan Rebozo (Guest)
It's something I meant to look up and just haven't worked on, but that's that's a question that I've come away with after some of hearing and our speakers over the past few months.

0:45:37.10 --> 0:45:37.310
0700be24-25be-4d97-bd37-0ac775d39cec
OK.

0:45:42.610 --> 0:45:55.210
0700be24-25be-4d97-bd37-0ac775d39cec
Jonathan, 22nd, I think for myself, you know, the a lot of what needs to be considered is the idea of keeping the material on target.

0:45:56.210 --> 0:45:56.550
0700be24-25be-4d97-bd37-0ac775d39cec
No.

0:45:56.700 --> 0:46:22.640
0700be24-25be-4d97-bd37-0ac775d39cec
You know, whether it's technology in flow, umm and working our way towards Hartford hardening and you know, looking at research and what's keeping it where we want it, to me a lot of what I hear is once stuff has left uh seed or you know, not being in the appropriate spot and where we go from there.

0:46:25.430 --> 0:46:25.730
0700be24-25be-4d97-bd37-0ac775d39cec
OK.

0:46:25.740 --> 0:46:28.820
0700be24-25be-4d97-bd37-0ac775d39cec
So be thinking along BMP's that accomplished that.

0:46:28.930 --> 0:46:29.800
0700be24-25be-4d97-bd37-0ac775d39cec
Correct, right.

0:46:29.850 --> 0:46:32.0
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah. OK.

0:46:35.190 --> 0:46:36.140
0700be24-25be-4d97-bd37-0ac775d39cec
I'm Amanda.

0:46:41.300 --> 0:46:41.890
Amanda St.Pierre
Thank you.

0:46:44.620 --> 0:46:45.140
0700be24-25be-4d97-bd37-0ac775d39cec
Yep, Yep.

0:46:42.0 --> 0:46:45.720
Amanda St.Pierre
I think am I, am I unmuted OK?

0:46:45.810 --> 0:46:46.420
Amanda St.Pierre
Yeah.

0:46:47.50 --> 0:46:50.740
Amanda St.Pierre
So joining this team a little bit later in the process.

0:46:50.750 --> 0:47:6.60
Amanda St.Pierre
So I've got some more reading and and stuff to do, but as of farmer I think I'm still looking for a little more information and maybe it was earlier on or maybe I need to reread through some of the presentation.

0:47:6.70 --> 0:47:13.340
Amanda St.Pierre
But seasonality and and and at what times and what weather conditions do we use them?

0:47:13.410 --> 0:47:14.240
Amanda St.Pierre
I don't know.

0:47:14.560 --> 0:47:17.700
Amanda St.Pierre
I think I'm also on equipment.

0:47:17.710 --> 0:47:29.80
Amanda St.Pierre
What kind of equipment we can use to keep the dusting to a minimal umm, I am concerned that there's a lot of other things happening umm to the colonies.

0:47:29.90 --> 0:47:34.650
Amanda St.Pierre
And you know, how can we help in those areas to bring back health?

0:47:35.50 --> 0:47:35.700
Amanda St.Pierre
Umm.

0:47:36.390 --> 0:47:38.220
Amanda St.Pierre
And a concerned of.

0:47:40.380 --> 0:47:43.600
Amanda St.Pierre
Making a widespread change without really having.

0:47:46.120 --> 0:47:50.880
Amanda St.Pierre
Having it really pinpointed that it's really that it's really wrong.

0:47:50.890 --> 0:48:7.600
Amanda St.Pierre
Like I I do think if we can keep it on the use of what it's intended for and keep the dusting to a minimal and maybe it's, you know, certain times of the year or or maybe the seed companies can help develop something, I don't know.

0:48:7.990 --> 0:48:17.500
Amanda St.Pierre
But I just know that we're facing a lot of challenges and I think the bees are facing a lot of challenges with climate change as well.

0:48:17.950 --> 0:48:22.40
Amanda St.Pierre
And I'm and I guess I'm still kind of trying to weigh in my mind.

0:48:22.550 --> 0:48:24.790
Amanda St.Pierre
What can we do to be part of the solution?

0:48:25.120 --> 0:48:29.210
Amanda St.Pierre
Not that we will be the whole solution if that makes any sense.

0:48:34.830 --> 0:48:35.510
0700be24-25be-4d97-bd37-0ac775d39cec
Alright, thank you.

0:48:37.180 --> 0:48:37.750
0700be24-25be-4d97-bd37-0ac775d39cec
Umm.

0:48:40.130 --> 0:48:41.940
0700be24-25be-4d97-bd37-0ac775d39cec
See well, so yeah.

0:48:47.720 --> 0:48:48.790
0700be24-25be-4d97-bd37-0ac775d39cec
How about clarice?

0:48:48.800 --> 0:48:51.150
0700be24-25be-4d97-bd37-0ac775d39cec
Any thoughts or ideas you wanna share?

0:48:54.660 --> 0:48:55.390
Cutler, Clarice
Sure.

0:48:55.400 --> 0:49:1.220
Cutler, Clarice
I feel like and what I've been thinking about a lot and I might be a broken record on this.

0:49:1.290 --> 0:49:3.380
Cutler, Clarice
Umm, to a certain extent.

0:49:3.390 --> 0:49:4.10
Cutler, Clarice
So apologies.

0:49:4.420 --> 0:49:5.10
Cutler, Clarice
Umm.

0:49:5.540 --> 0:49:7.250
Cutler, Clarice
But I've been thinking about a lot is that?

0:49:9.230 --> 0:49:29.400
Cutler, Clarice
Even for folks in Vermont who want to farmers in Vermont who want to experiment with using nonionic treated seeds and the availability for the particular kind of corn that they want is just not there.

0:49:29.830 --> 0:49:50.280
Cutler, Clarice
And so if if folks wanted to start and you know, doing I PM for neonet treated seeds or just wanted to use a different seed treatment in a different field to you know just kind of see for themselves what the difference is, it's just not available.

0:49:50.450 --> 0:50:8.320
Cutler, Clarice
And when we talked to the seed industry folks, it, you know, it sounds like a very complex process and very difficult and time consuming.

0:50:8.390 --> 0:50:12.230
Cutler, Clarice
You know, for anybody to be able to preorder, and even then it's not guaranteed.

0:50:13.210 --> 0:50:29.420
Cutler, Clarice
And yet, in umm parts of Canada, where bands or umm, a lot of regulation has taken place, it sounds like farmers are still planting corn.

0:50:29.500 --> 0:50:30.680
Cutler, Clarice
And I don't.

0:50:30.730 --> 0:50:39.210
Cutler, Clarice
I don't have the details there, but it, but just what it seems like to me is if we want to have more options available to farmers.

0:50:39.790 --> 0:50:47.10
Cutler, Clarice
Umm, you know, there needs to be some big movement and that just seems a little out of order to me.

0:50:48.70 --> 0:50:50.880
Cutler, Clarice
So that's all to say.

0:50:51.270 --> 0:50:54.580
Cutler, Clarice
I don't know how we get at that.

0:50:54.640 --> 0:51:6.980
Cutler, Clarice
I'm still interested to know, like I I haven't been keeping track of the new law that's in New York State because a lot of that was, like, heavily caveated is my recollection.

0:51:6.990 --> 0:51:11.640
Cutler, Clarice
It's like you, you know these requirements are there.

0:51:11.650 --> 0:51:22.210
Cutler, Clarice
If the you know non neonet treated seeds are available and if there's not, did if and if it's determined that there's not going to be extreme cost to the farm.

0:51:23.100 --> 0:51:23.730
Cutler, Clarice
Umm.

0:51:24.680 --> 0:51:41.370
Cutler, Clarice
And so, yeah, I'm wondering if that will have any impact to availability in the US generally or if all those, you know, caveats are worth looking at or if that's going to, you know, give enough of a carve out.

0:51:42.450 --> 0:51:43.670
Cutler, Clarice
So I'll stop rambling now.

0:51:46.870 --> 0:51:47.840
0700be24-25be-4d97-bd37-0ac775d39cec
Was not rambling.

0:51:47.930 --> 0:51:48.410
0700be24-25be-4d97-bd37-0ac775d39cec
It was good.

0:51:49.200 --> 0:51:51.380
0700be24-25be-4d97-bd37-0ac775d39cec
Very that's what we're looking for.

0:51:51.390 --> 0:51:52.340
0700be24-25be-4d97-bd37-0ac775d39cec
Is that kind of thinking?

0:51:52.350 --> 0:51:53.170
0700be24-25be-4d97-bd37-0ac775d39cec
You know what?

0:51:53.180 --> 0:51:53.860
0700be24-25be-4d97-bd37-0ac775d39cec
What are you thinking?

0:51:53.870 --> 0:51:57.850
0700be24-25be-4d97-bd37-0ac775d39cec
What are you see some of the issues, Sarah.

0:51:57.910 --> 0:51:58.630
0700be24-25be-4d97-bd37-0ac775d39cec
Anything you wanna?

0:52:0.520 --> 0:52:2.560
0700be24-25be-4d97-bd37-0ac775d39cec
The idea is you want to throw out or thoughts or.

0:52:6.330 --> 0:52:7.320
Owen, Sarah
Yeah.

0:52:7.970 --> 0:52:18.700
Owen, Sarah
So unlike most of my interactions with groups and pesticide regulations, this doesn't really seem to be primarily focused on human health.

0:52:18.710 --> 0:52:51.780
Owen, Sarah
So from the from my my assignment on the committee I I don't know that the human health impact has a lot of bearing on BMP, but I think in general as as you know, as you work towards BMP's, just knowing how and and where any BMP's might conflict with other states or might rub up against EPA umm labels, I think just knowing where those friction points are and laying those out ahead of time and making sure that everyone's really clear on support and direction.

0:52:51.790 --> 0:52:57.580
Owen, Sarah
And I just how to navigate some of those situations going forward.

0:52:58.410 --> 0:52:59.380
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah. Good point.

0:52:59.730 --> 0:53:0.20
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

0:53:0.30 --> 0:53:0.140
0700be24-25be-4d97-bd37-0ac775d39cec
Good.

0:53:1.230 --> 0:53:2.900
0700be24-25be-4d97-bd37-0ac775d39cec
Definitely have to keep aware.

0:53:2.970 --> 0:53:8.610
0700be24-25be-4d97-bd37-0ac775d39cec
All that since we are relatively small market in the scheme of things.

0:53:9.820 --> 0:53:10.250
0700be24-25be-4d97-bd37-0ac775d39cec
Umm.

0:53:11.350 --> 0:53:12.50
0700be24-25be-4d97-bd37-0ac775d39cec
So thanks.

0:53:13.0 --> 0:53:14.910
0700be24-25be-4d97-bd37-0ac775d39cec
Uh, Laura, are you on?

0:53:17.610 --> 0:53:19.230
DiPietro, Laura
Yes, I am. Yeah.

0:53:19.280 --> 0:53:21.900
0700be24-25be-4d97-bd37-0ac775d39cec
So what kind of thoughts do you have about all this?

0:53:23.100 --> 0:53:23.430
DiPietro, Laura
Sure.

0:53:23.440 --> 0:53:27.900
DiPietro, Laura
And I'll share my thoughts, but I've got another meeting I've had to leave at a little bit, so I apologize to everyone.

0:53:27.920 --> 0:53:48.400
DiPietro, Laura
All have to scoot out but umm, I I definitely heard there was a kind of a big gap I feel between what researchers and what industry shared with us and it seems that there's a lot of differences in in from the industry perspective of trying to splice the technology to get the traits that you do want versus the ones that you don't want in terms of the additives to seeds.

0:53:48.410 --> 0:53:59.40
DiPietro, Laura
And so I also think from what I heard from industry that you know the last thing they're going to do is take their last bit of seed and and maybe make a a non Unix seed.

0:53:59.50 --> 0:54:7.720
DiPietro, Laura
And you know, I wouldn't want farmers in Vermont to be held into that situation where they're not getting the kind of seed that they want and the quality of seed that they want.

0:54:8.360 --> 0:54:11.980
DiPietro, Laura
And so I feel like there's also a lot of states across.

0:54:12.260 --> 0:54:19.870
DiPietro, Laura

To me, it seemed like the northern border of the United States, and that is perhaps, maybe it's a climate thing where the pest pressures aren't as great.

0:54:19.880 --> 0:54:39.860
DiPietro, Laura
I really don't know that are all seeming to sort of pick up pieces of this conversation, and I do wonder if there is a bigger conversation because Vermont is so small on the bigger landscape that, you know, our farmers are nothing compared to like the greater Midwest and what a lot of these companies are doing and who they're servicing.

0:54:39.870 --> 0:54:47.350
DiPietro, Laura
And so again, making sure that the farmers aren't hindered here in Vermont based on any recommendation that the legislature makes.

0:54:47.650 --> 0:55:3.860
DiPietro, Laura
But instead maybe having a recommendation that we work with other states across the northern border or whoever is working on this kind of stuff to have a conversation about realistically what could happen because I heard tech, you know the the company saying it's too difficult.

0:55:6.280 --> 0:55:8.170
DiPietro, Laura
But they're very good scientist.

0:55:8.180 --> 0:55:18.580
DiPietro, Laura
And so I do question whether there is an option to be able to make a seed without a trait that has all the other traits that are of interest to protect Vermont farmers.

0:55:19.510 --> 0:55:25.190
DiPietro, Laura
And so having a conversation with other States and maybe building support if that's what the right approach is.

0:55:26.540 --> 0:55:32.960
DiPietro, Laura
Umm, the other major thing that I that struck me was I didn't hear a great number.

0:55:32.970 --> 0:55:36.0
DiPietro, Laura
I think it was like 3% for yield protection.

0:55:36.190 --> 0:55:41.240
DiPietro, Laura
So it didn't really seem like that benefit was as great as I had expected it to be.

0:55:42.10 --> 0:55:49.980
DiPietro, Laura

So I just wanna make sure farmers are also getting a good product in terms of, you know spending the money and and having a resource that's gonna be effective for them.

0:55:53.400 --> 0:55:53.690
0700be24-25be-4d97-bd37-0ac775d39cec
Great.

0:55:53.700 --> 0:55:54.0
0700be24-25be-4d97-bd37-0ac775d39cec
Thank you.

0:55:57.680 --> 0:56:2.650
0700be24-25be-4d97-bd37-0ac775d39cec
But any other any of the have I missed any of the board members, all the board members had a chance to speak.

0:56:3.830 --> 0:56:6.250
0700be24-25be-4d97-bd37-0ac775d39cec
So good morning, right, so.

0:56:7.850 --> 0:56:11.260
DiPietro, Laura
And I'll just add the one like easy BMP that I thought I heard.

0:56:11.270 --> 0:56:29.20
DiPietro, Laura
Sorry, is the fluency stuff like that seems like something that can be done that and and you know, maybe it's not that easy, but Wendy Sue, I thought you had nice recommendations there of providing support to transition equipment and work towards getting to a space where the desk can be reduced.

0:56:32.510 --> 0:56:32.660
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

0:56:33.90 --> 0:56:38.900
0700be24-25be-4d97-bd37-0ac775d39cec
And something I thought I just had as we're going through these, there may be additional questions that get raised.

0:56:39.260 --> 0:56:49.700
0700be24-25be-4d97-bd37-0ac775d39cec
You know, we need more information on something, so should keep or options open about bringing somebody back in or somebody else to make a presentation.

0:56:51.130 --> 0:56:52.590
0700be24-25be-4d97-bd37-0ac775d39cec
It's pending on what the question is.

0:56:53.810 --> 0:56:57.990
0700be24-25be-4d97-bd37-0ac775d39cec
So, OK, when's our Scott coming on?

0:56:58.300 --> 0:56:59.830
0700be24-25be-4d97-bd37-0ac775d39cec
He's coming at three, so we have an hour.

0:56:59.840 --> 0:57:3.950
0700be24-25be-4d97-bd37-0ac775d39cec
So can you want me to bring up my other for the BMP list?

0:57:3.960 --> 0:57:4.730
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

0:57:4.900 --> 0:57:5.340
0700be24-25be-4d97-bd37-0ac775d39cec
OK.

0:57:5.380 --> 0:57:5.920
0700be24-25be-4d97-bd37-0ac775d39cec
Perfect.

0:57:6.180 --> 0:57:8.100
0700be24-25be-4d97-bd37-0ac775d39cec
That's it there, OK.

0:57:9.950 --> 0:57:10.730
0700be24-25be-4d97-bd37-0ac775d39cec
So.

0:57:14.30 --> 0:57:16.910
0700be24-25be-4d97-bd37-0ac775d39cec
Would be a piece we've already heard about right from other states, yeah.

0:57:21.10 --> 0:57:21.350
0700be24-25be-4d97-bd37-0ac775d39cec
Recap.

0:57:25.240 --> 0:57:26.730
0700be24-25be-4d97-bd37-0ac775d39cec
So this is how.

0:57:30.150 --> 0:57:41.480
0700be24-25be-4d97-bd37-0ac775d39cec
My brain works right, so when I start thinking about how what we think right was how what we've been hearing about is OK what's already been done.

0:57:41.530 --> 0:57:54.560
0700be24-25be-4d97-bd37-0ac775d39cec
So I've tried to make a chart that is pulling from all of these different sources that already have published BMP.

0:57:54.570 --> 0:57:56.490
0700be24-25be-4d97-bd37-0ac775d39cec
So when did you reference one?

0:57:56.500 --> 0:58:0.300
0700be24-25be-4d97-bd37-0ac775d39cec
So the doctor Stoner is out of Connecticut.

0:58:0.310 --> 0:58:1.530
0700be24-25be-4d97-bd37-0ac775d39cec
The state of Connecticut.

0:58:2.250 --> 0:58:5.460
0700be24-25be-4d97-bd37-0ac775d39cec
So that's the ones here that will say source Connecticut.

0:58:5.470 --> 0:58:11.260
0700be24-25be-4d97-bd37-0ac775d39cec
That's from the publication that Wendy was referencing and her recommendations.

0:58:12.60 --> 0:58:16.940
0700be24-25be-4d97-bd37-0ac775d39cec
And so we tried to, and there's definitely repeats in here.

0:58:16.950 --> 0:58:24.120
0700be24-25be-4d97-bd37-0ac775d39cec
And I tried to just bucket them just because I was going through each document and writing down there BMPS and then throwing them into the buckets on this.

0:58:24.130 --> 0:58:37.70
0700be24-25be-4d97-bd37-0ac775d39cec
So like when that Laura just mentioned to like fluency agent, so it's kind of worded slightly different in different existing DMP documents but similar.

0:58:39.370 --> 0:58:39.850
0700be24-25be-4d97-bd37-0ac775d39cec
Message.

0:58:41.510 --> 0:58:47.660
0700be24-25be-4d97-bd37-0ac775d39cec
And so we have other ones that are labeled at year end ITM.

0:58:47.670 --> 0:58:52.890
0700be24-25be-4d97-bd37-0ac775d39cec
There's a lot of I PM there's, uh, the accused about communication.

0:58:54.660 --> 0:58:57.960
0700be24-25be-4d97-bd37-0ac775d39cec
Reusing dust, so those are ones that we've been talking about.

0:59:1.780 --> 0:59:3.50
0700be24-25be-4d97-bd37-0ac775d39cec
See disposal.

0:59:4.20 --> 0:59:11.820
0700be24-25be-4d97-bd37-0ac775d39cec
So doing that properly so kind of get that donation like where they should intended to be, right?

0:59:11.830 --> 0:59:18.970
0700be24-25be-4d97-bd37-0ac775d39cec
So instead of having something be not worth it, intended storage and handling.

0:59:22.720 --> 0:59:25.730
0700be24-25be-4d97-bd37-0ac775d39cec
Knowledge of adjacent pollinator habitat.

0:59:27.790 --> 0:59:29.710
0700be24-25be-4d97-bd37-0ac775d39cec
Cleaning equipment so it goes on and on and on.

0:59:29.720 --> 0:59:32.410
0700be24-25be-4d97-bd37-0ac775d39cec
And so some the the corn dust.

0:59:33.460 --> 0:59:34.470
0700be24-25be-4d97-bd37-0ac775d39cec
Ohh what is this?

0:59:34.620 --> 0:59:37.970
0700be24-25be-4d97-bd37-0ac775d39cec
CRC corn dust or research consortium?

0:59:38.40 --> 0:59:38.290
0700be24-25be-4d97-bd37-0ac775d39cec
Yep.

0:59:39.940 --> 0:59:44.220
0700be24-25be-4d97-bd37-0ac775d39cec
So they call out specific people in there being's.

0:59:44.230 --> 0:59:47.330
0700be24-25be-4d97-bd37-0ac775d39cec
'S so like they are calling out like.

0:59:47.340 --> 0:59:50.50
0700be24-25be-4d97-bd37-0ac775d39cec
Here are the recommendations for beekeepers.

0:59:50.120 --> 1:0:4.410
0700be24-25be-4d97-bd37-0ac775d39cec
Here are the recommendations for pesticide manufacturers, and so most of these ones at the bottom I was keeping in the buckets that that publication made because it was too a target audience.

1:0:5.830 --> 1:0:10.830
0700be24-25be-4d97-bd37-0ac775d39cec
So we have this list and what I just started and I alluded to earlier.

1:0:10.840 --> 1:0:16.30
0700be24-25be-4d97-bd37-0ac775d39cec
So when you Sue sent a list, so this is just on another tab.

1:0:16.40 --> 1:0:26.590
0700be24-25be-4d97-bd37-0ac775d39cec
I started making a list of AIB proposed recommendations and so what's in here is what's from Wendy sues.

1:0:26.600 --> 1:0:49.520
0700be24-25be-4d97-bd37-0ac775d39cec
Document that she shared and these buckets are doing slightly different and I was doing it as these BMP's are targeted for the farmer and then I have a target for seed industry and a target for like HD bags state government.

1:0:49.570 --> 1:0:55.950
0700be24-25be-4d97-bd37-0ac775d39cec
People like funding one right over funding one, so that that's kind of like the target of the BNP.

1:0:55.960 --> 1:1:8.40
0700be24-25be-4d97-bd37-0ac775d39cec
So I was organizing them that way, but I can definitely take different organizations thoughts from you guys at this doesn't make sense to you, but it was just how my grant was working today.

1:1:10.380 --> 1:1:18.790
0700be24-25be-4d97-bd37-0ac775d39cec
But what we can do for the next hour is kind of run through these existing ones, so it kinds out there.

1:1:18.800 --> 1:1:26.890
0700be24-25be-4d97-bd37-0ac775d39cec
These are ones that people have used as a recommendation and we can should be one question.

1:1:26.930 --> 1:1:27.560
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

1:1:27.570 --> 1:1:29.280
0700be24-25be-4d97-bd37-0ac775d39cec
If we have questions, I'll add them in.

1:1:29.290 --> 1:1:39.260
0700be24-25be-4d97-bd37-0ac775d39cec
If we need to hear more about that and we can really if we get an overwhelming like no, we can we can we is this document available to everybody?

1:1:39.270 --> 1:1:42.190
0700be24-25be-4d97-bd37-0ac775d39cec
I don't know if I put it on teams yet, but I can do it right this second.

1:1:42.200 --> 1:1:42.680
0700be24-25be-4d97-bd37-0ac775d39cec
You guys want?

1:1:43.290 --> 1:1:44.110
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

1:1:44.570 --> 1:1:45.10
0700be24-25be-4d97-bd37-0ac775d39cec
Let's see.

1:1:47.620 --> 1:2:0.580
0700be24-25be-4d97-bd37-0ac775d39cec
That's what I'm thinking is maybe for for the next meeting, people can be looking at this document and make any comments or notes they want on the document and then send that back to Morgan and we can sort of work through that.

1:2:0.590 --> 1:2:4.70
0700be24-25be-4d97-bd37-0ac775d39cec
That could be the that could be the basis for the next meeting.

1:2:4.900 --> 1:2:5.450
0700be24-25be-4d97-bd37-0ac775d39cec
Right.

1:2:5.500 --> 1:2:7.770
0700be24-25be-4d97-bd37-0ac775d39cec
And that's was my thing is this is homework right?

1:2:7.780 --> 1:2:8.690
0700be24-25be-4d97-bd37-0ac775d39cec
This is our homework.

1:2:9.100 --> 1:2:10.190
0700be24-25be-4d97-bd37-0ac775d39cec
This is gonna be there.

1:2:10.480 --> 1:2:10.970
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

1:2:11.40 --> 1:2:12.930
0700be24-25be-4d97-bd37-0ac775d39cec
Then we can reach out to folks that are here.

1:2:12.940 --> 1:2:17.420
0700be24-25be-4d97-bd37-0ac775d39cec
Explain to them what it is, but so I have a chance to look at it comma.

1:2:23.820 --> 1:2:25.720
0700be24-25be-4d97-bd37-0ac775d39cec
Umm yeah.

1:2:25.820 --> 1:2:30.660
0700be24-25be-4d97-bd37-0ac775d39cec
Just a side note, I think we have we have 4 meetings left for the end of the year.

1:2:31.500 --> 1:2:37.240
0700be24-25be-4d97-bd37-0ac775d39cec
So we had a lot of work to do and a lot of opportunity to talk about this stuff.

1:2:37.250 --> 1:2:38.10
0700be24-25be-4d97-bd37-0ac775d39cec
Think about it so.

1:2:42.190 --> 1:2:43.680
0700be24-25be-4d97-bd37-0ac775d39cec
Are you gonna do all watching me do that?

1:2:44.280 --> 1:2:48.760
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah, I cannot share that four under pressure.

1:2:53.430 --> 1:2:54.860
0700be24-25be-4d97-bd37-0ac775d39cec
OK, so I'm putting it in.

1:3:2.10 --> 1:3:2.620
0700be24-25be-4d97-bd37-0ac775d39cec
Love you.

1:3:3.450 --> 1:3:7.40
0700be24-25be-4d97-bd37-0ac775d39cec
Are on team should be able to get into it right now.

1:3:12.130 --> 1:3:12.820
0700be24-25be-4d97-bd37-0ac775d39cec
They put it under.

1:3:16.400 --> 1:3:17.170
0700be24-25be-4d97-bd37-0ac775d39cec
Resources.

1:3:17.180 --> 1:3:25.620
0700be24-25be-4d97-bd37-0ac775d39cec
Unix treated CBMP, so here it's BMP summary table for AIP discussion, so that is the.

1:3:33.370 --> 1:3:34.140
0700be24-25be-4d97-bd37-0ac775d39cec
Now let me open that.

1:3:40.950 --> 1:3:42.900
0700be24-25be-4d97-bd37-0ac775d39cec
That's one that we can work off now.

1:3:46.450 --> 1:3:46.830
0700be24-25be-4d97-bd37-0ac775d39cec
I think.

1:4:4.420 --> 1:4:4.670
0700be24-25be-4d97-bd37-0ac775d39cec
OK.

1:4:7.150 --> 1:4:9.960
0700be24-25be-4d97-bd37-0ac775d39cec
So first bucket.

1:4:10.450 --> 1:4:13.0
0700be24-25be-4d97-bd37-0ac775d39cec
Umm this one the agents.

1:4:13.150 --> 1:4:18.60
0700be24-25be-4d97-bd37-0ac775d39cec
So I've heard Laura just talked about it.

1:4:18.70 --> 1:4:28.700
0700be24-25be-4d97-bd37-0ac775d39cec

When you Sue talked about it, the why there's four different things here is that they were all worded slightly different.

1:4:28.710 --> 1:4:36.810
0700be24-25be-4d97-bd37-0ac775d39cec
So that right Health Canada is they require the use of fluency agent prohibit use of talking graphite.

1:4:39.200 --> 1:4:43.750
0700be24-25be-4d97-bd37-0ac775d39cec
Some of the other published ones avoid excess use rates.

1:4:45.680 --> 1:4:48.450
0700be24-25be-4d97-bd37-0ac775d39cec
Is it included in the BMP?

1:4:50.490 --> 1:4:52.560
0700be24-25be-4d97-bd37-0ac775d39cec
This one doesn't call out specifics.

1:4:52.570 --> 1:4:57.970
0700be24-25be-4d97-bd37-0ac775d39cec
The Honey Bee coalition and the Corn Dust Research Consortium, just as used.

1:4:57.980 --> 1:4:59.30
0700be24-25be-4d97-bd37-0ac775d39cec
Synthetic lubricants.

1:4:59.40 --> 1:5:19.990
0700be24-25be-4d97-bd37-0ac775d39cec
Instead of talking graphite, so if you have any comments on this or if this is so, this is kind of like I just need this to drop down list right now included in the rule like yes no, maybe these are all similar but there is one added specific about access use rates instead of just actual material.

1:5:20.0 --> 1:5:23.130
0700be24-25be-4d97-bd37-0ac775d39cec
So just interested to hear what you guys are thinking about this one.

1:5:27.550 --> 1:5:34.680
0700be24-25be-4d97-bd37-0ac775d39cec
My experience with Telcon graphite is a rate is it's a hard one to evaluate.

1:5:34.890 --> 1:5:47.680
0700be24-25be-4d97-bd37-0ac775d39cec
Umm, they tell you to use so much per bushel, but depending on the planter, some planters where the central fill or pending on the type of planner.

1:5:47.690 --> 1:5:51.610
0700be24-25be-4d97-bd37-0ac775d39cec
It's so to me that that one, that's a tough one.

1:5:54.40 --> 1:6:2.570
0700be24-25be-4d97-bd37-0ac775d39cec
Like tough to force them to recommend because it it's not like a pesticide, quote unquote.

1:6:2.580 --> 1:6:5.730
0700be24-25be-4d97-bd37-0ac775d39cec
You put so many grams per unit or whatnot.

1:6:5.780 --> 1:6:10.900
0700be24-25be-4d97-bd37-0ac775d39cec
It to me that's a tough one to evaluate or to understand.

1:6:13.390 --> 1:6:14.650
0700be24-25be-4d97-bd37-0ac775d39cec
And what is the practice?

1:6:15.900 --> 1:6:19.130
0700be24-25be-4d97-bd37-0ac775d39cec
Typically you just put either the material when you buy it.

1:6:19.140 --> 1:6:26.150
0700be24-25be-4d97-bd37-0ac775d39cec
It comes with a scoop and you put so many scoops per bushel or per weight.

1:6:27.0 --> 1:6:36.90
0700be24-25be-4d97-bd37-0ac775d39cec
Typically I think it's a lot of it's per weight and you basically as the operator do more or less depending on the performance.

1:6:36.140 --> 1:6:39.550
0700be24-25be-4d97-bd37-0ac775d39cec
So you adjust it based on what's actually happening right?

1:6:39.560 --> 1:6:43.970
0700be24-25be-4d97-bd37-0ac775d39cec
And see, you know, I mean days that are more humid than other days.

1:6:43.980 --> 1:6:50.170
0700be24-25be-4d97-bd37-0ac775d39cec
You have to use more because basically it is a lubricant and the more moisture in the air, the more lubricant you need.

1:6:50.180 --> 1:6:54.930
0700be24-25be-4d97-bd37-0ac775d39cec
So you know that that that one to me is is can be difficult.

1:7:1.120 --> 1:7:2.580
0700be24-25be-4d97-bd37-0ac775d39cec
Have you ever used the fluency agent?

1:7:3.490 --> 1:7:7.610
0700be24-25be-4d97-bd37-0ac775d39cec
No, and I I've even asked vendors about it and.

1:7:11.240 --> 1:7:25.870
0700be24-25be-4d97-bd37-0ac775d39cec
You know, just I know in New York they've used some locations have used it and I'm trying to get more information on exactly how that is dealt with, but I assume it's an upstream treater that puts it on.

1:7:26.200 --> 1:7:37.20
0700be24-25be-4d97-bd37-0ac775d39cec
And so I don't know a lot about it other than the fact in Canada they've been using it and it's a Bayer product for my understanding, I just don't know much about it.

1:7:39.750 --> 1:7:41.400
0700be24-25be-4d97-bd37-0ac775d39cec
I think what you just said confused me.

1:7:41.410 --> 1:7:42.130
0700be24-25be-4d97-bd37-0ac775d39cec
Can I ask a question?

1:7:42.140 --> 1:7:52.980
0700be24-25be-4d97-bd37-0ac775d39cec
So I was under the impression it was something that was added by the farmer at the equipment level, but that's not eyebrows like yes, right.

1:7:52.990 --> 1:8:5.880
0700be24-25be-4d97-bd37-0ac775d39cec
OK, but the but my understanding of the fluid be agent is actually especially if it's if it's a liquid which is actually put on the seed that would need to be an upstream, right?

1:8:6.910 --> 1:8:37.480
0700be24-25be-4d97-bd37-0ac775d39cec
So that's, that's the only fluency agent that I'm aware of, you know, but and maybe there's other sources and and that certainly should be a question if we're going to go with this fluency, which to me, I think is if you know, if we're talking about, you know, in in pesticides for other reasons is drift is a major issue in, you know, that seemed to be a pretty common piece with all of these presenters is, you know, when it's on target, you know, it's staying where you want it.

1:8:37.490 --> 1:8:38.650
0700be24-25be-4d97-bd37-0ac775d39cec
It's doing what it's supposed to.

1:8:39.220 --> 1:8:51.120
0700be24-25be-4d97-bd37-0ac775d39cec
Umm, So what do we do to keep it on target and what our options if we're gonna say BMP fluency agent, you know, I I have a different idea of what a fluency agent is.

1:8:51.130 --> 1:9:5.40
0700be24-25be-4d97-bd37-0ac775d39cec
Obviously than what you had and so maybe we need to again a little bit as to what if talking graphite which talking graphite right now is the industry standard, yeah, I mean you use a planner, you have graphite kelp or a combination of.

1:9:5.50 --> 1:9:11.940
0700be24-25be-4d97-bd37-0ac775d39cec
I mean, there's a lot of combination product 8020 graphite, Intel premixed ready to use.

1:9:14.420 --> 1:9:20.420
0700be24-25be-4d97-bd37-0ac775d39cec
And every planner has different recommendations as to whether they want help or they want graphite, or they want to make sure of.

1:9:23.140 --> 1:9:26.790
0700be24-25be-4d97-bd37-0ac775d39cec
And those are manufacturer recommendations, no different than your.

1:9:26.840 --> 1:9:36.520
0700be24-25be-4d97-bd37-0ac775d39cec
Your car engine says it wants a 20A zero 20 versus other engines want a 1530 or you know that's that's similar piece.

1:9:37.890 --> 1:9:44.400
0700be24-25be-4d97-bd37-0ac775d39cec
So actually the fluency agent, I believe we saw at Heather and Arby's event.

1:9:45.470 --> 1:9:50.90
0700be24-25be-4d97-bd37-0ac775d39cec
Uh Field day with the field days and with the planters.

1:9:50.380 --> 1:9:54.20
0700be24-25be-4d97-bd37-0ac775d39cec
So it's a, it is actually a market product.

1:9:54.980 --> 1:10:4.220
0700be24-25be-4d97-bd37-0ac775d39cec
It looks like it's an application at the planter level, and I can certainly ask Heather again to maybe share with.

1:10:4.230 --> 1:10:4.880
0700be24-25be-4d97-bd37-0ac775d39cec
That's a talk.

1:10:6.220 --> 1:10:11.360
0700be24-25be-4d97-bd37-0ac775d39cec
Ohh there is there is list at the bottom.

1:10:11.470 --> 1:10:12.940
0700be24-25be-4d97-bd37-0ac775d39cec
Ohh yeah, this is the product.

1:10:13.10 --> 1:10:20.580
0700be24-25be-4d97-bd37-0ac775d39cec
Sorry, this is the product that it's comparing rates with talk and graphite to show how they reduce the amount.

1:10:20.750 --> 1:10:31.220
0700be24-25be-4d97-bd37-0ac775d39cec
OK, so this is the Bayer product and it does come in a in a dry formulation, it was in a bucket and it was we can get all we can next item.

1:10:31.230 --> 1:10:33.120
0700be24-25be-4d97-bd37-0ac775d39cec
So we'll share, right.

1:10:33.130 --> 1:10:36.680
0700be24-25be-4d97-bd37-0ac775d39cec
So we can share more information about it, how it's marketed.

1:10:36.690 --> 1:10:40.220
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah, used everything she had to do some work to get it.

1:10:40.230 --> 1:10:41.130
0700be24-25be-4d97-bd37-0ac775d39cec
That's what she said.

1:10:41.170 --> 1:10:41.460
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

1:10:41.470 --> 1:10:48.280
0700be24-25be-4d97-bd37-0ac775d39cec
I mean, it's not something that the Bayer representative that I talked to even had any understanding or knew what it was.

1:10:48.630 --> 1:10:50.540
0700be24-25be-4d97-bd37-0ac775d39cec
And he was a representative for them.

1:10:50.600 --> 1:10:52.710
0700be24-25be-4d97-bd37-0ac775d39cec
So I was going to ask you.

1:10:54.240 --> 1:10:54.590
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

1:10:54.600 --> 1:11:3.580
0700be24-25be-4d97-bd37-0ac775d39cec
So the guy, the person I talked to who is person I've worked with for other bears and stuff, you know, on the crop side had no no idea what it was so.

1:11:9.280 --> 1:11:14.570
0700be24-25be-4d97-bd37-0ac775d39cec
Well, you were just saying about that like manufacturer recommendations is the planter manufacturer, right?

1:11:19.920 --> 1:11:25.930
0700be24-25be-4d97-bd37-0ac775d39cec
Or like rating ratio and and what type of lubricant they recommend using?

1:11:30.580 --> 1:11:30.890
0700be24-25be-4d97-bd37-0ac775d39cec
OK.

1:11:37.340 --> 1:11:41.660
0700be24-25be-4d97-bd37-0ac775d39cec
Anybody else and the other board members have a comment about this or question.

1:11:50.60 --> 1:11:51.420
Wendy Sue Harper (Guest)
This this is Wendy Sue.

1:11:51.430 --> 1:11:58.250
Wendy Sue Harper (Guest)
Do we need to get somebody an expert to talk to us about equipment and how this works and everything?

1:12:1.40 --> 1:12:1.200
0700be24-25be-4d97-bd37-0ac775d39cec
Yes.

1:12:5.290 --> 1:12:5.530
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

1:12:8.30 --> 1:12:8.210
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

1:12:10.0 --> 1:12:10.700
0700be24-25be-4d97-bd37-0ac775d39cec
Go ahead, Stephanie.

1:12:12.340 --> 1:12:12.630
Smith, Stephanie
Yeah.

1:12:12.640 --> 1:12:13.450
Smith, Stephanie
No, I was just.

1:12:13.780 --> 1:12:18.500
Smith, Stephanie
I'm referring to my VM extension NW crops and soils program fields.

1:12:18.510 --> 1:12:29.270
Smith, Stephanie
A notebook I'm trying to remember the gentlemen's name that provide us provided us with information regarding planters and fluency agents, and talkin graphite.

1:12:29.640 --> 1:12:31.400
Smith, Stephanie
So, but I'm still looking.

1:12:31.410 --> 1:12:35.890
Smith, Stephanie
So I just I thought I could suggest somebody, but it's gonna take me a little bit or I can share with you later.

1:12:35.110 --> 1:12:41.110
0700be24-25be-4d97-bd37-0ac775d39cec
Well, yeah, maybe we ought to do is schedule another come talk to us.

1:12:41.170 --> 1:12:54.440
0700be24-25be-4d97-bd37-0ac775d39cec
She give us an update on the research he's doing, maybe for the September, October meeting and she could probably talk to that because the person who was talking about the planners, that was someone that works with her.

1:12:58.0 --> 1:12:59.440
0700be24-25be-4d97-bd37-0ac775d39cec
Let's let's get Heather back in.

1:13:1.530 --> 1:13:3.330
Smith, Stephanie
I think his name was Jeff Sanders.

1:13:4.940 --> 1:13:6.650
0700be24-25be-4d97-bd37-0ac775d39cec
He works for extension, yeah.

1:13:7.160 --> 1:13:7.340
Smith, Stephanie
Yeah.

1:13:22.0 --> 1:13:22.750
0700be24-25be-4d97-bd37-0ac775d39cec
OK.

1:13:22.920 --> 1:13:26.250
0700be24-25be-4d97-bd37-0ac775d39cec
So are we OK to move to the next bucket?

1:13:26.260 --> 1:13:32.730
0700be24-25be-4d97-bd37-0ac775d39cec
So these other two ones are what they say is you see this one basically duplicate for away.

1:13:32.740 --> 1:13:33.10
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

1:13:33.820 --> 1:13:35.530
0700be24-25be-4d97-bd37-0ac775d39cec
So basically I'll say the same thing.

1:13:35.540 --> 1:13:35.720
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

1:13:37.670 --> 1:13:39.230
0700be24-25be-4d97-bd37-0ac775d39cec
So we OK to move to the next pocket?

1:13:39.450 --> 1:13:39.860
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

1:13:39.900 --> 1:13:40.70
0700be24-25be-4d97-bd37-0ac775d39cec
OK.

1:13:41.250 --> 1:13:44.370
0700be24-25be-4d97-bd37-0ac775d39cec
So next bucket label adherence.

1:13:44.410 --> 1:13:48.90
0700be24-25be-4d97-bd37-0ac775d39cec
So as you can see, a lot of the existing publications.

1:13:51.130 --> 1:13:56.20
0700be24-25be-4d97-bd37-0ac775d39cec
Call out reading in here to pesticide label and see tag directions.

1:13:59.200 --> 1:14:24.220
0700be24-25be-4d97-bd37-0ac775d39cec
Access has follow plant, specifically plant back restrictions found on the scene tag and Minnesota Extension published BNP specifically say adhere to specified minimum planting depth, which is on those labels that which is why I put it in that bucket.

1:14:25.160 --> 1:14:32.290
0700be24-25be-4d97-bd37-0ac775d39cec
Umm, but so speak to me, that's already legally binding the pesticide label in.

1:14:32.330 --> 1:14:32.870
0700be24-25be-4d97-bd37-0ac775d39cec
Correct.

1:14:32.940 --> 1:14:39.360
0700be24-25be-4d97-bd37-0ac775d39cec
Well, the the whole thing about the treated seed label is kind of it's not undergoing changes right now.

1:14:41.540 --> 1:14:42.150
0700be24-25be-4d97-bd37-0ac775d39cec
EPA.

1:14:43.840 --> 1:14:55.670
0700be24-25be-4d97-bd37-0ac775d39cec
Proposed adding language to treated seed labels that reflects directions for the pesticide itself that's used.

1:14:56.460 --> 1:14:58.50
0700be24-25be-4d97-bd37-0ac775d39cec
So that's an area I think we can look into.

1:14:59.190 --> 1:15:1.460
0700be24-25be-4d97-bd37-0ac775d39cec
Uh, but you.

1:15:1.470 --> 1:15:2.340
0700be24-25be-4d97-bd37-0ac775d39cec
But you're right, Jonathan.

1:15:2.350 --> 1:15:7.260
0700be24-25be-4d97-bd37-0ac775d39cec
I mean, if it's, you know, it's the best I've labeled area to follow up beside label, right?

1:15:7.270 --> 1:15:10.520
0700be24-25be-4d97-bd37-0ac775d39cec
So that's the question whether it needs to be a BMP.

1:15:10.570 --> 1:15:11.600
0700be24-25be-4d97-bd37-0ac775d39cec
Well, it would be.

1:15:11.610 --> 1:15:17.160
0700be24-25be-4d97-bd37-0ac775d39cec
If there's additional language on the CD label, that's the seed labels, not a pest side.

1:15:17.170 --> 1:15:25.340
0700be24-25be-4d97-bd37-0ac775d39cec
Label the Seed label is the seed label and originally intended to provide information to the person who purchased.

1:15:25.350 --> 1:15:28.120
0700be24-25be-4d97-bd37-0ac775d39cec
To see what kind of seed and what can they expect.

1:15:28.630 --> 1:15:35.490
0700be24-25be-4d97-bd37-0ac775d39cec
But what's happening is EPA is trying to extend pesticide these directions to the seedling.

1:15:36.780 --> 1:15:44.990
0700be24-25be-4d97-bd37-0ac775d39cec
So the C tag isn't a pesticide label right now, but they're EPA's trying to.

1:15:45.220 --> 1:15:55.980
0700be24-25be-4d97-bd37-0ac775d39cec
So potentially you know BMP under Rule state rule you could say if you're using this kind of seed, you have to follow these directions.

1:15:56.390 --> 1:15:58.890
0700be24-25be-4d97-bd37-0ac775d39cec
They're not just advisory, they're now mandatory.

1:15:59.960 --> 1:16:4.470
0700be24-25be-4d97-bd37-0ac775d39cec
So I'm saying so the light, the seed label itself would become enforceable.

1:16:5.660 --> 1:16:6.600
0700be24-25be-4d97-bd37-0ac775d39cec
That's a potential.

1:16:9.340 --> 1:16:9.760
0700be24-25be-4d97-bd37-0ac775d39cec
PMP.

1:16:14.310 --> 1:16:18.190
0700be24-25be-4d97-bd37-0ac775d39cec
Jill, anything you want to add to that from your seed label knowledge?

1:16:20.690 --> 1:16:21.820
0700be24-25be-4d97-bd37-0ac775d39cec
Not really.

1:16:21.830 --> 1:16:28.500
0700be24-25be-4d97-bd37-0ac775d39cec
I think whatever the federal government is working on for those right, but it's not here yet.

1:16:30.970 --> 1:16:34.930
0700be24-25be-4d97-bd37-0ac775d39cec
This would put like our timetable would be sooner than that timetable, right.

1:16:34.970 --> 1:16:35.560
0700be24-25be-4d97-bd37-0ac775d39cec
OK.

1:16:35.650 --> 1:16:38.150
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah, there, right.

1:16:41.540 --> 1:16:44.270
0700be24-25be-4d97-bd37-0ac775d39cec
Where would there be anything?

1:16:44.500 --> 1:16:46.210
0700be24-25be-4d97-bd37-0ac775d39cec
My mind goes to like ohh like shoot.

1:16:46.220 --> 1:16:56.380
0700be24-25be-4d97-bd37-0ac775d39cec
You push something over here, like when you make say, OK, we make a recommendation that says everything on the seed tag label is just like a pesticide label.

1:16:56.420 --> 1:16:57.670
0700be24-25be-4d97-bd37-0ac775d39cec
And you know, have to follow it.

1:16:57.680 --> 1:17:3.390
0700be24-25be-4d97-bd37-0ac775d39cec
Is there anything on those labels that's like ohh yeah that we there's right.

1:17:3.400 --> 1:17:4.790
0700be24-25be-4d97-bd37-0ac775d39cec
So then, are we gonna end up?

1:17:5.940 --> 1:17:7.400
0700be24-25be-4d97-bd37-0ac775d39cec
Forcing things that yeah.

1:17:8.470 --> 1:17:9.870
0700be24-25be-4d97-bd37-0ac775d39cec
It's a question for clarity.

1:17:11.790 --> 1:17:14.990
0700be24-25be-4d97-bd37-0ac775d39cec
Up here and then chat room. Her.

1:17:15.180 --> 1:17:15.450
0700be24-25be-4d97-bd37-0ac775d39cec
Ohh.

1:17:15.460 --> 1:17:16.850
0700be24-25be-4d97-bd37-0ac775d39cec
Claire, go ahead. Sorry.

1:17:18.800 --> 1:17:19.40
Cutler, Clarice
Hi.

1:17:19.50 --> 1:17:19.440
Cutler, Clarice
Thanks.

1:17:19.450 --> 1:17:19.930
Cutler, Clarice
Yeah.

1:17:19.940 --> 1:17:30.580
Cutler, Clarice
I think I'm in favor of this one, and it's also reminding me of a comment from and work that Heather Darby, I believe, is doing just about.

1:17:32.630 --> 1:17:37.510
Cutler, Clarice
Education about what's on treated seeds.

1:17:37.520 --> 1:17:48.590
Cutler, Clarice
I think it was her comment then that a lot of folks will just umm, you know, not not know all the different treatments that are coming in on those seeds.

1:17:48.600 --> 1:17:59.50
Cutler, Clarice
And I have not looked at a seed tag before, but yeah if that's another way to convey it, maybe that's good.

1:17:59.60 --> 1:18:2.690
Cutler, Clarice
Or maybe it's a a separate BMP?

1:18:2.700 --> 1:18:10.840
Cutler, Clarice
Or maybe this isn't a BMP, but just kind of that outreach side of things that Heather is already doing with a smaller group of folks.

1:18:21.100 --> 1:18:21.480
0700be24-25be-4d97-bd37-0ac775d39cec
I can.

1:18:50.570 --> 1:18:52.430
0700be24-25be-4d97-bd37-0ac775d39cec
Find it a good example of the seed tag.

1:18:55.990 --> 1:18:57.10
0700be24-25be-4d97-bd37-0ac775d39cec
Do you have any good examples?

1:18:58.610 --> 1:19:2.260
0700be24-25be-4d97-bd37-0ac775d39cec
But I think you've just refers to read the label of the active ingredients.

1:19:2.690 --> 1:19:3.320
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

1:19:3.370 --> 1:19:9.220
0700be24-25be-4d97-bd37-0ac775d39cec
And you know it's guy, present germination inner material, those basic pieces.

1:19:12.380 --> 1:19:13.180
0700be24-25be-4d97-bd37-0ac775d39cec
To that PPE.

1:19:16.240 --> 1:19:17.670
0700be24-25be-4d97-bd37-0ac775d39cec
Some of them I ever.

1:19:20.70 --> 1:19:26.100
0700be24-25be-4d97-bd37-0ac775d39cec
Like if you have a bag of seed already, never any PPE required for handling that treatment.

1:19:26.450 --> 1:19:27.350
0700be24-25be-4d97-bd37-0ac775d39cec
I don't know that.

1:19:30.610 --> 1:19:58.150
0700be24-25be-4d97-bd37-0ac775d39cec
I mean when you refer to the here the minimum planting depth, I mean that kind of stuff comes back to agronomic practices of you know, I I know a grower is not gonna put cornet half an inch deep, you know just agronomically that's so you know, I mean those are fine for being impeached, but a lot of that kind of stuff is, you know, agronomic practices that are, you know, you want your corn at a certain depth.

1:19:58.220 --> 1:19:59.790
0700be24-25be-4d97-bd37-0ac775d39cec
So it means the same thing.

1:19:59.800 --> 1:20:9.970
0700be24-25be-4d97-bd37-0ac775d39cec
So as those are the primary, you know, through the seeds kind of like it's common sense for correct.

1:20:10.30 --> 1:20:10.470
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

1:20:10.480 --> 1:20:12.430
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah, maybe you could bring in some syntax.

1:20:15.10 --> 1:20:17.230
0700be24-25be-4d97-bd37-0ac775d39cec
Which yeah, I can get some Seatac.

1:20:17.240 --> 1:20:20.500
0700be24-25be-4d97-bd37-0ac775d39cec
They can't say we're actually even have any seed on the warehouse today.

1:20:20.510 --> 1:20:21.70
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah, right.

1:20:22.450 --> 1:20:26.960
0700be24-25be-4d97-bd37-0ac775d39cec
You're not carrying it over the fall, but yeah, we can certainly get them.

1:20:26.970 --> 1:20:32.210
0700be24-25be-4d97-bd37-0ac775d39cec
And you know, I mean a seed tag is not just one sheet anymore.

1:20:32.220 --> 1:20:35.190
0700be24-25be-4d97-bd37-0ac775d39cec
I mean, these are pretty long documents.

1:20:35.200 --> 1:20:43.170
0700be24-25be-4d97-bd37-0ac775d39cec
Try to put on something that you know a guy will have hundreds of them around, right?

1:20:46.710 --> 1:20:48.440
0700be24-25be-4d97-bd37-0ac775d39cec
OK, let's let's talk about that.

1:20:48.450 --> 1:20:50.620
0700be24-25be-4d97-bd37-0ac775d39cec
Maybe for the next meeting have some seed texture function.

1:20:50.630 --> 1:20:50.960
0700be24-25be-4d97-bd37-0ac775d39cec
Look at.

1:20:51.190 --> 1:20:52.290
0700be24-25be-4d97-bd37-0ac775d39cec
Yep, Yep.

1:20:53.660 --> 1:20:54.160
0700be24-25be-4d97-bd37-0ac775d39cec
We can get him.

1:21:15.820 --> 1:21:16.90
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

1:21:16.100 --> 1:21:20.410
0700be24-25be-4d97-bd37-0ac775d39cec
So Donna was just kind of touching on this one of.

1:21:24.60 --> 1:21:28.560
0700be24-25be-4d97-bd37-0ac775d39cec
Planting depth is kind of like the what growers are gonna do anyway for their.

1:21:33.170 --> 1:21:48.20
0700be24-25be-4d97-bd37-0ac775d39cec
Like normal common sense, agronomical agronomic practices, the more inclined to the the labeling of what to do if you have spill or if you have C surface app as you're trying to.

1:21:48.30 --> 1:22:4.800
0700be24-25be-4d97-bd37-0ac775d39cec
As you're handling that kind of stuff, to me is more pertinent than than the recommendation of ensuring

you know playing your seats at a certain depth, that it goes back to that disposal, and other piece that the label test site level will refer to.

1:22:15.490 --> 1:22:16.480
0700be24-25be-4d97-bd37-0ac775d39cec
Does anyone?

1:22:16.490 --> 1:22:18.460
0700be24-25be-4d97-bd37-0ac775d39cec
So if I mark this as as no.

1:22:18.470 --> 1:22:19.70
0700be24-25be-4d97-bd37-0ac775d39cec
Is anyone?

1:22:21.650 --> 1:22:23.100
0700be24-25be-4d97-bd37-0ac775d39cec
I don't think we need to be doing that.

1:22:23.170 --> 1:22:27.80
0700be24-25be-4d97-bd37-0ac775d39cec
OK, we're just still, I don't need that, OK? Everything.

1:22:27.90 --> 1:22:28.840
0700be24-25be-4d97-bd37-0ac775d39cec
Everything's maybe OK, fine.

1:22:29.670 --> 1:22:30.980
0700be24-25be-4d97-bd37-0ac775d39cec
Right now, I'll take it.

1:22:31.630 --> 1:22:36.800
0700be24-25be-4d97-bd37-0ac775d39cec
I I did say no to access rates because John, that was pretty convincing that that was gonna be hard to do.

1:22:36.890 --> 1:22:39.910
0700be24-25be-4d97-bd37-0ac775d39cec
But I can mark it as maybe maybe OK.

1:22:42.410 --> 1:22:50.580
0700be24-25be-4d97-bd37-0ac775d39cec
I same idea so this other one is plant back restrictions found on the seed tag or referenced elsewhere.

1:22:54.130 --> 1:22:55.310
0700be24-25be-4d97-bd37-0ac775d39cec
I don't know if that's much of an issue.

1:22:58.210 --> 1:22:58.620
0700be24-25be-4d97-bd37-0ac775d39cec
I do.

1:22:58.630 --> 1:22:59.830
0700be24-25be-4d97-bd37-0ac775d39cec
People replant there.

1:23:1.260 --> 1:23:1.710
0700be24-25be-4d97-bd37-0ac775d39cec
Umm.

1:23:1.940 --> 1:23:3.120
0700be24-25be-4d97-bd37-0ac775d39cec
Be able to stay in the corner.

1:23:3.200 --> 1:23:3.650
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

1:23:3.660 --> 1:23:13.320
0700be24-25be-4d97-bd37-0ac775d39cec
I mean, I'd say now that you know with what technology they're using plant, you know, replants are not
as big of an issue, but absolutely.

1:23:14.670 --> 1:23:21.230
0700be24-25be-4d97-bd37-0ac775d39cec
But when you say plant back restrictions you me that also refers to the next crop following crop after,
right?

1:23:21.240 --> 1:23:36.280
0700be24-25be-4d97-bd37-0ac775d39cec
So I I guess without some really knowing what the piece of that is you know because whenever you think
of a pesticide replant or plant back or restriction for rotation, typically I don't think of the same crop.

1:23:36.410 --> 1:23:40.190
0700be24-25be-4d97-bd37-0ac775d39cec
I think of the next seasons or what you're going to use different.

1:23:41.570 --> 1:23:43.810
0700be24-25be-4d97-bd37-0ac775d39cec
Sorry, I guess I'm not quite sure what they mean.

1:23:44.100 --> 1:23:46.690
0700be24-25be-4d97-bd37-0ac775d39cec
News or whatever, correct or right.

1:23:52.610 --> 1:23:56.280
0700be24-25be-4d97-bd37-0ac775d39cec
Are you aware of any plant back restrictions on neonicotinoids?

1:23:59.0 --> 1:24:0.390
0700be24-25be-4d97-bd37-0ac775d39cec
No, I mean it's in.

1:24:0.500 --> 1:24:2.130
0700be24-25be-4d97-bd37-0ac775d39cec
It's not typically something.

1:24:5.720 --> 1:24:13.410
0700be24-25be-4d97-bd37-0ac775d39cec
You know, this is a broad spectrum of it not being for the next, there's typically not a a negative impact on the next crop, right?

1:24:13.580 --> 1:24:19.170
0700be24-25be-4d97-bd37-0ac775d39cec
You know, so you know whether you talk about a flowering plant being next.

1:24:21.30 --> 1:24:32.330
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah, I guess if you think it's something like alfalfa would just typically when we think of plant back restrictions, it's when you go from like a corner to a soybean or corn to an alfalfa the following season.

1:24:33.290 --> 1:24:37.390
0700be24-25be-4d97-bd37-0ac775d39cec
But to be honest with you, you rarely ever when it comes to one of those.

1:24:39.380 --> 1:24:42.690
0700be24-25be-4d97-bd37-0ac775d39cec
It's going to a file, but we never see those flower, typically on purpose.

1:24:51.330 --> 1:24:54.730
0700be24-25be-4d97-bd37-0ac775d39cec
I guess we'll have knowing more about what that AST a.

1:24:55.850 --> 1:24:56.570
0700be24-25be-4d97-bd37-0ac775d39cec
Is referring to.

1:25:0.110 --> 1:25:5.140
0700be24-25be-4d97-bd37-0ac775d39cec
Give me when you just see if we can get anymore seatag examples that must be.

1:25:5.150 --> 1:25:7.190
0700be24-25be-4d97-bd37-0ac775d39cec
They're calling out that it's on the tag.

1:25:8.130 --> 1:25:8.800
0700be24-25be-4d97-bd37-0ac775d39cec
Ohh but.

1:25:12.160 --> 1:25:15.60
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah, I can see if I can dig into that more.

1:25:26.340 --> 1:25:31.420
0700be24-25be-4d97-bd37-0ac775d39cec
Alright, next I big chunk are the IBM ones.

1:25:31.430 --> 1:25:38.150
0700be24-25be-4d97-bd37-0ac775d39cec
There's definitely I can do a more weeding, and here there's probably some.

1:25:40.710 --> 1:25:51.920
0700be24-25be-4d97-bd37-0ac775d39cec
Repeat, particularly because some MC's are really broad, so like the Health Canada MRA, one is practice I PM right?

1:25:51.930 --> 1:25:55.500
0700be24-25be-4d97-bd37-0ac775d39cec
So that's like everything, right?

1:25:55.510 --> 1:26:2.470
0700be24-25be-4d97-bd37-0ac775d39cec
And then other ones get a little bit more specific. Umm.

1:26:5.310 --> 1:26:15.170
0700be24-25be-4d97-bd37-0ac775d39cec
And so honey Bee coalition is kind of like what Doctor Stoner has in the Connecticut one that when she was referencing it just don't use neonics.

1:26:15.230 --> 1:26:16.170
0700be24-25be-4d97-bd37-0ac775d39cec
Is season less?

1:26:16.180 --> 1:26:21.870
0700be24-25be-4d97-bd37-0ac775d39cec
There's specific pest problem that can be effectively managed with the onyxia treatment.

1:26:26.610 --> 1:26:35.510
0700be24-25be-4d97-bd37-0ac775d39cec
Match the use of with a few treatments, 2 locally appropriate levels of past incidents and likelihood of infestation.

1:26:37.360 --> 1:26:40.450
0700be24-25be-4d97-bd37-0ac775d39cec
Kind of a similar identified potential pests.

1:26:43.910 --> 1:26:46.260
0700be24-25be-4d97-bd37-0ac775d39cec
The Minnesota ones are slightly different.

1:26:46.270 --> 1:26:50.520
0700be24-25be-4d97-bd37-0ac775d39cec
Learn which crop production practices increase or reduce risk.

1:26:52.70 --> 1:26:55.170
0700be24-25be-4d97-bd37-0ac775d39cec
That should be attacked, not attach.

1:26:58.140 --> 1:26:59.500
0700be24-25be-4d97-bd37-0ac775d39cec
From standard reducing insects.

1:27:1.480 --> 1:27:2.520
0700be24-25be-4d97-bd37-0ac775d39cec
Keep records.

1:27:3.640 --> 1:27:12.60
0700be24-25be-4d97-bd37-0ac775d39cec
Of past investigations, investigations to help guide your decisions so that those were slightly different.

1:27:12.70 --> 1:27:18.740
0700be24-25be-4d97-bd37-0ac775d39cec
I mean, it's part of our PM but and go to outreach programs related to pollinators.

1:27:23.760 --> 1:27:24.70
0700be24-25be-4d97-bd37-0ac775d39cec
I don't know.

1:27:24.110 --> 1:27:30.690
0700be24-25be-4d97-bd37-0ac775d39cec
Just thoughts about I PM or any BMP's related to I PM topics.

1:27:36.120 --> 1:27:39.170
0700be24-25be-4d97-bd37-0ac775d39cec
Well, this I think we need to, Heather, to come back in and talk to us this.

1:27:41.290 --> 1:27:47.890
0700be24-25be-4d97-bd37-0ac775d39cec
I mean, that's why I think she's looking at in her research and she's now got several months of experience.

1:27:50.620 --> 1:27:54.490
0700be24-25be-4d97-bd37-0ac775d39cec
So I think this is something that we really need her to come back and talk to us about.

1:27:55.980 --> 1:28:47.280
0700be24-25be-4d97-bd37-0ac775d39cec
I you know, I do think there is some conflicting information in my mind when someone tells you what you're looking for, trigger an application, but yet you've been using neonics for a few years or there's history and you know, I I keep referring in my mind when Nelson made the comment of where he had to go on the farm to find issues that were sort of negating previous historical practices on the field and then the situation he was finding that he could find stand reductions that were drastic versus find other research that says that there isn't any but yet, you know, there's been historical neonics on those fields.

1:28:47.650 --> 1:28:54.650
0700be24-25be-4d97-bd37-0ac775d39cec
You know, I think you know, as some of these BMP's that or some of these recommendations have been made.

1:28:56.650 --> 1:29:3.200
0700be24-25be-4d97-bd37-0ac775d39cec
I think we really need to dig into that in my mind, as somebody who you know is gonna be asked, what do I do?

1:29:3.210 --> 1:29:4.520
0700be24-25be-4d97-bd37-0ac775d39cec
What's my next step?

1:29:4.710 --> 1:29:17.400
0700be24-25be-4d97-bd37-0ac775d39cec
I can't use these or if I'm restricted to them, you know, I can remember 15 years ago for, you know, these were pretty widespread and we were still using the stuff you dump in the boxes every time you fill the planner.

1:29:18.610 --> 1:29:25.310
0700be24-25be-4d97-bd37-0ac775d39cec
Replants were very, very, very common, you know, and now they are not.

1:29:25.780 --> 1:29:30.170
0700be24-25be-4d97-bd37-0ac775d39cec
So you know, to me, you know, it's hard.

1:29:30.220 --> 1:29:43.190
0700be24-25be-4d97-bd37-0ac775d39cec
It's hard to sometimes grasp some of the the the contradiction you hear, but yet what I've seen is you know the changes in technology we've adopted have had some pretty sequential gains for producers.

1:29:43.200 --> 1:30:1.130
0700be24-25be-4d97-bd37-0ac775d39cec
And so, you know, I I guess you just, I just kind of looked at some of those ipms and wonder how are we gonna dig through them and get to the root of some of the recommendations and not all of a sudden one year have farms that have a 30% replant.

1:30:3.40 --> 1:30:5.120
0700be24-25be-4d97-bd37-0ac775d39cec
You know, we talked about an economic impact.

1:30:6.980 --> 1:30:8.260
0700be24-25be-4d97-bd37-0ac775d39cec
So some of those things are pretty scary.

1:30:25.840 --> 1:30:31.660
0700be24-25be-4d97-bd37-0ac775d39cec
Any other kind of comments or umm, I things we wanna know more about?

1:30:33.230 --> 1:30:36.140
0700be24-25be-4d97-bd37-0ac775d39cec
When considering an IPO related CMP.

1:30:45.450 --> 1:30:46.130
0700be24-25be-4d97-bd37-0ac775d39cec
Go ahead when you too.

1:30:48.310 --> 1:30:59.900
Wendy Sue Harper (Guest)
It seemed to me that the definition of IPM was different between researchers and seed companies, and maybe we need to nail down what that is.

1:31:31.770 --> 1:31:32.430
0700be24-25be-4d97-bd37-0ac775d39cec
Go ahead, clear.

1:31:34.300 --> 1:31:49.820
Cutler, Clarice
And I'm just thinking again about how this assumes that you will have a non neuronic treated seed to choose umm, so this might need to be paired or caveated.

1:32:13.610 --> 1:32:23.590
Cutler, Clarice
And I remember Heather saying that there's not sufficient people in Vermont to do this scouting.

1:32:26.20 --> 1:32:26.670
Cutler, Clarice
UM.

1:32:29.780 --> 1:32:34.330
Cutler, Clarice
As timely as it needs to be or something to that effect.

1:32:48.0 --> 1:32:50.60
0700be24-25be-4d97-bd37-0ac775d39cec
And sorry, you guys aren't watching.

1:32:50.70 --> 1:32:53.430
0700be24-25be-4d97-bd37-0ac775d39cec
My dad's dying availability of like resource.

1:32:57.340 --> 1:32:58.700
0700be24-25be-4d97-bd37-0ac775d39cec
She's that's yeah.

1:33:16.950 --> 1:33:17.130
0700be24-25be-4d97-bd37-0ac775d39cec
OK.

1:33:19.700 --> 1:33:21.450
0700be24-25be-4d97-bd37-0ac775d39cec
Anything else I PM?

1:33:31.10 --> 1:33:37.280
0700be24-25be-4d97-bd37-0ac775d39cec
My next bucket, I came from a lot of they had a similar type.

1:33:37.550 --> 1:33:45.650
0700be24-25be-4d97-bd37-0ac775d39cec
Recommendation is about communication between or among beekeepers.

1:33:45.660 --> 1:33:56.330
0700be24-25be-4d97-bd37-0ac775d39cec
Applicators consultants umm and growers, so things that they're calling out hive locations, timing of planting and pesticide applications.

1:34:0.0 --> 1:34:0.300
0700be24-25be-4d97-bd37-0ac775d39cec
Go ahead.

1:34:0.310 --> 1:34:0.560
0700be24-25be-4d97-bd37-0ac775d39cec
See.

1:34:0.770 --> 1:34:2.100
0700be24-25be-4d97-bd37-0ac775d39cec
It's already a requirement.

1:34:2.190 --> 1:34:2.520
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

1:34:2.560 --> 1:34:9.160
0700be24-25be-4d97-bd37-0ac775d39cec
In our rule for 48 hour notice for application besides highly talked to see.

1:34:11.120 --> 1:34:13.210
0700be24-25be-4d97-bd37-0ac775d39cec
So there might be a way to.

1:34:15.650 --> 1:34:19.780
0700be24-25be-4d97-bd37-0ac775d39cec
Expand that to application of treatments EP.

1:34:19.790 --> 1:34:23.110
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah, this is the problem or.

1:34:34.460 --> 1:34:36.490
0700be24-25be-4d97-bd37-0ac775d39cec
That's it, right?

1:34:36.500 --> 1:34:37.120
0700be24-25be-4d97-bd37-0ac775d39cec
Are you still on?

1:34:42.20 --> 1:34:43.470
Decker, Brooke
Yes, Sir, I am on.

1:34:44.540 --> 1:34:44.800
0700be24-25be-4d97-bd37-0ac775d39cec
OK.

1:34:44.810 --> 1:34:54.980
0700be24-25be-4d97-bd37-0ac775d39cec
In terms of planting of seed, when corn and soybean seeds being planted, are there likely to be, he's in the area.

1:34:57.160 --> 1:34:57.570
Decker, Brooke
Who?

1:34:57.620 --> 1:35:1.180
Decker, Brooke
I don't have enough.

1:35:1.320 --> 1:35:2.410
Decker, Brooke
Yeah, I don't know.

1:35:2.420 --> 1:35:4.680
Decker, Brooke
I mean, bees will go anywhere they wanna go.

1:35:7.50 --> 1:35:7.200
Decker, Brooke
Yeah.

1:35:6.830 --> 1:35:17.420
0700be24-25be-4d97-bd37-0ac775d39cec
But in terms of the timing of the year and when I just, for example, migratory beekeepers, they gonna be back in the state when that's happening.

1:35:18.240 --> 1:35:19.490
Decker, Brooke
When it when is that like?

1:35:19.500 --> 1:35:20.940
Decker, Brooke
I don't know when our soybeans planted.

1:35:22.290 --> 1:35:22.830
0700be24-25be-4d97-bd37-0ac775d39cec
May.

1:35:23.830 --> 1:35:24.880
Decker, Brooke
Yeah, probably.

1:35:24.970 --> 1:35:29.170
Decker, Brooke
Yeah, probably a majority of the bees are back in the state by then.

1:35:30.310 --> 1:35:30.870
Decker, Brooke
Umm.

1:35:31.350 --> 1:35:36.380
Decker, Brooke
I mean, it's funny because there's like, I mean, there's bees that forage for different things, right?

1:35:36.390 --> 1:35:37.40
Decker, Brooke
There's Paul.

1:35:37.50 --> 1:35:42.300
Decker, Brooke
You know some that are going only after pollen and they might go after random dust.

1:35:42.310 --> 1:35:44.920
Decker, Brooke
But if it's a good, there's a lot of nectar.

1:35:44.930 --> 1:35:46.520
Decker, Brooke
They're probably gonna avoid that.

1:35:46.530 --> 1:35:50.120
Decker, Brooke
So it's just it's it's hard to tell exactly.

1:35:53.720 --> 1:35:54.350
Decker, Brooke
But they could.

1:35:54.360 --> 1:35:58.270
Decker, Brooke
There, that could be a potential time that bees could be exposed to a dust.

1:35:59.680 --> 1:35:59.920
0700be24-25be-4d97-bd37-0ac775d39cec
OK.

1:36:2.580 --> 1:36:2.900
0700be24-25be-4d97-bd37-0ac775d39cec
Wait.

1:36:3.450 --> 1:36:3.670
Decker, Brooke
Yep.

1:36:11.560 --> 1:36:16.450
0700be24-25be-4d97-bd37-0ac775d39cec
Uh, any other communication that's coming?

1:36:19.910 --> 1:36:20.90
0700be24-25be-4d97-bd37-0ac775d39cec
OK.

1:36:20.510 --> 1:36:22.640
0700be24-25be-4d97-bd37-0ac775d39cec
No, what the next one is done.

1:36:22.810 --> 1:36:33.700
0700be24-25be-4d97-bd37-0ac775d39cec
So obviously there's a lot of recommendations that fell under the reduce dust bucket, so.

1:36:37.170 --> 1:36:49.410
0700be24-25be-4d97-bd37-0ac775d39cec
Is there that much diff between that and the first BMP would discuss that first column or you talk about lubricants, or we'll talk about what the lubricants ohe initial piece of at the top.

1:36:49.480 --> 1:36:49.850
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

1:36:49.860 --> 1:37:0.460
0700be24-25be-4d97-bd37-0ac775d39cec
The reason why hold that out separately this bucket is because some of these ones they're talking about like.

1:37:3.110 --> 1:37:9.240
0700be24-25be-4d97-bd37-0ac775d39cec
Choosing to plant when weather conditions are favorable.

1:37:9.250 --> 1:37:12.110
0700be24-25be-4d97-bd37-0ac775d39cec
So less windy and compliant, right?

1:37:12.120 --> 1:37:12.330
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

1:37:13.920 --> 1:37:17.240
0700be24-25be-4d97-bd37-0ac775d39cec
Ah, this is Vermont here. Yeah.

1:37:19.450 --> 1:37:22.320
0700be24-25be-4d97-bd37-0ac775d39cec
So I guess that's why I separated it out, but I I think you're right.

1:37:22.330 --> 1:37:25.770
0700be24-25be-4d97-bd37-0ac775d39cec
You we could technically bring that fluency agent into this bucket.

1:37:25.840 --> 1:37:26.720
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah, you're right.

1:37:26.810 --> 1:37:30.440
0700be24-25be-4d97-bd37-0ac775d39cec
I guess I just pulled that one out because people pull out.

1:37:35.550 --> 1:37:35.900
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

1:37:35.910 --> 1:37:42.800
0700be24-25be-4d97-bd37-0ac775d39cec
So this one like some of them are are specific or reduced that's exposure pollinator habitat so.

1:37:45.640 --> 1:37:46.300
0700be24-25be-4d97-bd37-0ac775d39cec
Some of them.

1:37:47.330 --> 1:37:47.930
0700be24-25be-4d97-bd37-0ac775d39cec
Umm.

1:37:48.770 --> 1:37:49.120
0700be24-25be-4d97-bd37-0ac775d39cec
Alright.

1:37:49.130 --> 1:37:54.310
0700be24-25be-4d97-bd37-0ac775d39cec
Like if the wind is blowing towards flowering trees or.

1:37:56.330 --> 1:37:58.710
0700be24-25be-4d97-bd37-0ac775d39cec
Surface water, I think some say that.

1:38:1.850 --> 1:38:4.110
0700be24-25be-4d97-bd37-0ac775d39cec
This one calls out a specific reason.

1:38:4.120 --> 1:38:12.380
0700be24-25be-4d97-bd37-0ac775d39cec
Speed can move, so if it's more than 15 mph, the dust can move off.

1:38:12.390 --> 1:38:14.20
0700be24-25be-4d97-bd37-0ac775d39cec
Target and that's where Minnesota.

1:38:17.210 --> 1:38:19.880
0700be24-25be-4d97-bd37-0ac775d39cec
But also goes into the wood just when handling and loading.

1:38:25.870 --> 1:38:33.680
0700be24-25be-4d97-bd37-0ac775d39cec
The PM array has a pretty PMR was really good at doing like really like easy PM like really like overarching broad recommendations.

1:38:33.690 --> 1:38:36.960
0700be24-25be-4d97-bd37-0ac775d39cec
So there's this reduced stuff exhausted from planters.

1:38:38.790 --> 1:38:45.900
0700be24-25be-4d97-bd37-0ac775d39cec
Tell it after my everywhere, following the equipment directions, cleaning it, but then also calls out.

1:38:45.910 --> 1:38:49.110
0700be24-25be-4d97-bd37-0ac775d39cec
You could use deflector equipment to direct to the ground.

1:38:55.40 --> 1:38:55.340
0700be24-25be-4d97-bd37-0ac775d39cec
Umm.

1:39:2.80 --> 1:39:4.40
0700be24-25be-4d97-bd37-0ac775d39cec
The corn.

1:39:5.250 --> 1:39:9.50
0700be24-25be-4d97-bd37-0ac775d39cec
What type of research consortium?

1:39:12.220 --> 1:39:15.960
0700be24-25be-4d97-bd37-0ac775d39cec
Called out that.

1:39:16.190 --> 1:39:26.80
0700be24-25be-4d97-bd37-0ac775d39cec
So that's kind of what Brooke was just talking about a little bit, but so during typical corn planting windows, the most common honey before adding sites are often woody shrubs and trees.

1:39:27.850 --> 1:39:29.470
0700be24-25be-4d97-bd37-0ac775d39cec
So apples, crab apples, Naples.

1:39:31.900 --> 1:39:37.300
0700be24-25be-4d97-bd37-0ac775d39cec
So their recommendation is take extra care to avoid drift to those types of plants.

1:39:40.210 --> 1:39:51.730
0700be24-25be-4d97-bd37-0ac775d39cec
And then be attractive, pollen sources can be vulnerable to drift from this stuff if they are within 165 feet or 50 meters of the field being planted.

1:39:51.740 --> 1:39:59.190
0700be24-25be-4d97-bd37-0ac775d39cec
So again, there's a specific buffer if distance called out in that recommendation.

1:40:1.620 --> 1:40:2.230
0700be24-25be-4d97-bd37-0ac775d39cec
Go ahead bro.

1:40:2.480 --> 1:40:4.660
0700be24-25be-4d97-bd37-0ac775d39cec
I think broke 1st and then when he.

1:40:5.150 --> 1:40:6.400
Decker, Brooke
Yeah, this is thanks.

1:40:6.410 --> 1:40:10.0
Decker, Brooke
This relates to this exactly and we I think we might have talked about this.

1:40:10.10 --> 1:40:16.210
Decker, Brooke
Are these BMP's for a corn planters cause beekeepers could do the pollen substitute at this time as well.

1:40:17.820 --> 1:40:19.630
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah, that's further down in the list.

1:40:20.410 --> 1:40:20.740
Decker, Brooke
OK.

1:40:19.640 --> 1:40:21.850
0700be24-25be-4d97-bd37-0ac775d39cec
But yeah, we can talk about it now, yeah.

1:40:26.140 --> 1:40:26.510
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

1:40:26.520 --> 1:40:43.170
0700be24-25be-4d97-bd37-0ac775d39cec
So the corn Dust Research Consortium actually called out like beekeeper recommendations is you can supplement your hive with internal feeding during the time of corn planting and provide them with clean water so that they don't go out scrapbook.

1:40:43.220 --> 1:40:44.980
0700be24-25be-4d97-bd37-0ac775d39cec
That's where you remembering about, yeah.

1:40:43.440 --> 1:40:45.230
Decker, Brooke
Yeah, yeah, yeah.

1:40:45.240 --> 1:40:50.170
Decker, Brooke
So it's like in conjunction with that, you know, farmers can do one thing, but beekeepers can do another thing.

1:40:50.180 --> 1:40:57.340
Decker, Brooke
If there's, you know, right, there's reduced risk at that time if they feed in in the hive.

1:41:18.390 --> 1:41:19.180
0700be24-25be-4d97-bd37-0ac775d39cec
Go ahead when you too.

1:41:21.40 --> 1:41:22.810
Wendy Sue Harper (Guest)
I I believe it was John.

1:41:22.820 --> 1:41:29.50
Wendy Sue Harper (Guest)
Doctor John Tucker that also mentioned that dust on the surface of soil harms the soil biota.

1:41:29.500 --> 1:41:35.120
Wendy Sue Harper (Guest)
So that's why I didn't put that in my recommendations that I came up with.

1:41:36.350 --> 1:41:47.480
Wendy Sue Harper (Guest)
I had instead cleaning up dust at the surface of the soil, so I think somewhere there should just mentioned that there's an issue for so all organisms.

1:41:48.540 --> 1:41:52.250
Wendy Sue Harper (Guest)
I would be remiss, as the soil biologist position, not to say that.

1:41:52.260 --> 1:41:54.40
Wendy Sue Harper (Guest)
So that's why I'm saying it.

1:42:4.380 --> 1:42:9.210
0700be24-25be-4d97-bd37-0ac775d39cec
He was specifically timed out ground beetles, right or others.

1:42:34.110 --> 1:42:38.140
0700be24-25be-4d97-bd37-0ac775d39cec
I have a question just because I missed the field days.

1:42:38.180 --> 1:42:41.560
0700be24-25be-4d97-bd37-0ac775d39cec
For those of you who attended, so did they.

1:42:41.650 --> 1:42:47.930
0700be24-25be-4d97-bd37-0ac775d39cec
They had a planter that was modified or they weren't able to show the bug that was modified.

1:42:47.940 --> 1:42:51.660
0700be24-25be-4d97-bd37-0ac775d39cec
They showed the example of a type of planter wasn't modified.

1:42:52.210 --> 1:42:53.290
0700be24-25be-4d97-bd37-0ac775d39cec
OK, they weren't able to.

1:42:55.300 --> 1:42:58.20
0700be24-25be-4d97-bd37-0ac775d39cec
Find any way to modify my others?

1:42:58.30 --> 1:43:3.310
0700be24-25be-4d97-bd37-0ac775d39cec
They just had a planner that I was a bee friendly planter, quote unquote.

1:43:4.140 --> 1:43:8.890
0700be24-25be-4d97-bd37-0ac775d39cec
Umm, that supposedly had less it does, but it was still.

1:43:8.900 --> 1:43:9.290
0700be24-25be-4d97-bd37-0ac775d39cec
It was a little.

1:43:11.970 --> 1:43:13.540
0700be24-25be-4d97-bd37-0ac775d39cec
It wasn't a solution.

1:43:13.610 --> 1:43:19.330
0700be24-25be-4d97-bd37-0ac775d39cec
This work that way, they didn't have the they didn't have the answer, but at least it dust.

1:43:19.340 --> 1:43:19.900
0700be24-25be-4d97-bd37-0ac775d39cec
They just had.

1:43:20.710 --> 1:43:28.830
0700be24-25be-4d97-bd37-0ac775d39cec
Was it different type planter meaning like non backing like a think it was a back end was a vacuum.

1:43:28.840 --> 1:43:29.330
0700be24-25be-4d97-bd37-0ac775d39cec
I think it just.

1:43:31.580 --> 1:43:33.650
0700be24-25be-4d97-bd37-0ac775d39cec
They should be different place.

1:43:33.780 --> 1:43:34.270
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

1:43:34.280 --> 1:43:37.60
0700be24-25be-4d97-bd37-0ac775d39cec
And I think that is it.

1:43:37.70 --> 1:43:50.40
0700be24-25be-4d97-bd37-0ac775d39cec
Jeff had mentioned like you didn't really see how they got the name be friendly, it was just sort of a claim on the on the planter itself like printed on the planter itself.

1:43:50.650 --> 1:43:51.450
0700be24-25be-4d97-bd37-0ac775d39cec
So what?

1:43:51.500 --> 1:43:57.550
0700be24-25be-4d97-bd37-0ac775d39cec
What made it be friendly didn't seem to be a standout from other planters immediately.

1:43:58.820 --> 1:44:8.920
0700be24-25be-4d97-bd37-0ac775d39cec
And Heather looked long and hard, and he was long and hard for, like, a kiss like that had been mentioned in some of the Canadian literature, and they just were not able to source that.

1:44:8.930 --> 1:44:16.840
0700be24-25be-4d97-bd37-0ac775d39cec
And even calling manufacturers and manufacturers did not know what they were talking about or did not have something.

1:44:31.150 --> 1:44:31.350
0700be24-25be-4d97-bd37-0ac775d39cec
OK.

1:44:36.790 --> 1:44:39.500
0700be24-25be-4d97-bd37-0ac775d39cec
I have a couple more minutes before Doctor Mccart.

1:44:40.490 --> 1:44:40.950
0700be24-25be-4d97-bd37-0ac775d39cec
Umm.

1:44:41.110 --> 1:44:42.80
0700be24-25be-4d97-bd37-0ac775d39cec
See disposals.

1:44:42.90 --> 1:44:45.680
0700be24-25be-4d97-bd37-0ac775d39cec
This is one when you sue called out again.

1:44:45.690 --> 1:44:49.320
0700be24-25be-4d97-bd37-0ac775d39cec
Here Marie has kind of like the most broad one, so the proper cleanup and disposal.

1:44:52.840 --> 1:44:53.260
0700be24-25be-4d97-bd37-0ac775d39cec
Other.

1:44:55.700 --> 1:45:1.360
0700be24-25be-4d97-bd37-0ac775d39cec
One they are, they properly disposed to minimize exposure.

1:45:8.470 --> 1:45:11.60
0700be24-25be-4d97-bd37-0ac775d39cec
No, no, no, no, not some tells you what to do.

1:45:11.70 --> 1:45:13.260
0700be24-25be-4d97-bd37-0ac775d39cec
So umm plant it?

1:45:15.460 --> 1:45:22.720
0700be24-25be-4d97-bd37-0ac775d39cec
Plan on wanted treated seed in follow or other non cropped areas in accordance with seed treatment
product label.

1:45:32.160 --> 1:45:33.190
0700be24-25be-4d97-bd37-0ac775d39cec
Never compost.

1:45:33.200 --> 1:45:39.910
0700be24-25be-4d97-bd37-0ac775d39cec
I thought that that was the first one I had seen that Ohh Minnesota Extension BMP document.

1:45:41.120 --> 1:45:48.350
0700be24-25be-4d97-bd37-0ac775d39cec
Specifically, calls out never compost treated scene and that was the only one that I found that
specifically called out.

1:45:51.320 --> 1:45:55.210
0700be24-25be-4d97-bd37-0ac775d39cec
Also, they say never burn treated seed and so that is used in a home in the farm shop.

1:45:57.710 --> 1:46:0.80
0700be24-25be-4d97-bd37-0ac775d39cec
Those are just specific ones that we hadn't seen before.

1:46:2.110 --> 1:46:5.70
0700be24-25be-4d97-bd37-0ac775d39cec
So kind of thinking about.

1:46:7.180 --> 1:46:8.740
0700be24-25be-4d97-bd37-0ac775d39cec
See disposal.

1:46:11.500 --> 1:46:12.230
0700be24-25be-4d97-bd37-0ac775d39cec
Recommendations.

1:46:14.90 --> 1:46:14.520
0700be24-25be-4d97-bd37-0ac775d39cec
No.

1:46:14.760 --> 1:46:16.420
0700be24-25be-4d97-bd37-0ac775d39cec
So others see disposal issue.

1:46:16.430 --> 1:46:40.150
0700be24-25be-4d97-bd37-0ac775d39cec
I mean, people have leftover or and so typically so to be honest with you, the only time he ever needs to be disposed of as if it accidentally hits the ground and what you'll end up with is a little bit that gets some contamination with soil that then they don't dare put in the planter to plug it or that is really the only issue.

1:46:40.390 --> 1:46:50.640
0700be24-25be-4d97-bd37-0ac775d39cec
I guarantee you the value of the seed deters any wasting of the material because it is and it is very possible and happens all the time.

1:46:50.650 --> 1:46:54.820
0700be24-25be-4d97-bd37-0ac775d39cec
Carry over to the next year so they do open up a bag and they have something left.

1:46:54.870 --> 1:47:4.870
0700be24-25be-4d97-bd37-0ac775d39cec
It is for surely put in a very, very, very safe place in the back of the shop or your basement, or simply safe to be used for the following year.

1:47:6.260 --> 1:47:9.170
0700be24-25be-4d97-bd37-0ac775d39cec
So it's not much of a disposal correct it.

1:47:9.180 --> 1:47:22.190
0700be24-25be-4d97-bd37-0ac775d39cec
It literally is if something if it accidentally hits the ground, they will take whatever they can, but some of it will need to be discarded just because the contamination of the soil or whatever it lands.

1:47:22.200 --> 1:47:27.220
0700be24-25be-4d97-bd37-0ac775d39cec
Because if you get a rock or something that's not uniform, size can be an issue.

1:47:28.640 --> 1:47:41.870
0700be24-25be-4d97-bd37-0ac775d39cec
So if there's such a technology to sit clean or do something that I'm sure that could be a value to somebody, meaning it'll impact the plant, there's functionality as they put correct dirty seat.

1:47:41.920 --> 1:47:43.0
0700be24-25be-4d97-bd37-0ac775d39cec
That or moisture?

1:47:43.810 --> 1:47:45.150
0700be24-25be-4d97-bd37-0ac775d39cec
Yes, absolutely.

1:47:46.800 --> 1:47:49.140
0700be24-25be-4d97-bd37-0ac775d39cec
So then that PMP about.

1:47:51.240 --> 1:48:4.340
0700be24-25be-4d97-bd37-0ac775d39cec
Unwanted seen is that practical to even ask somebody if they had a fashion, you know, half a pound of unwanted feed it have carried over.

1:48:4.470 --> 1:48:6.520
0700be24-25be-4d97-bd37-0ac775d39cec
I mean it's it's just it's it's carried over.

1:48:6.530 --> 1:48:12.830
0700be24-25be-4d97-bd37-0ac775d39cec
I mean the stuff, as you saw from these guys $300.00 for £50, do that on a per pound price.

1:48:23.520 --> 1:48:25.190
0700be24-25be-4d97-bd37-0ac775d39cec
I wonder now what I'm.

1:48:28.850 --> 1:48:38.50
0700be24-25be-4d97-bd37-0ac775d39cec
Trying to look for, I guess like the disposal in my mind, I was thinking up one that might be of more relevance is.

1:48:40.700 --> 1:48:50.180
0700be24-25be-4d97-bd37-0ac775d39cec
The seed bag, like a, you know, like the used the empty bag of like, properly disposed them.

1:48:51.130 --> 1:48:52.460
0700be24-25be-4d97-bd37-0ac775d39cec
That, and I don't know.

1:48:52.470 --> 1:48:54.150
0700be24-25be-4d97-bd37-0ac775d39cec
If not, feel like I.

1:48:56.770 --> 1:48:58.560
0700be24-25be-4d97-bd37-0ac775d39cec
Saw that somewhere?

1:48:58.570 --> 1:49:0.240
0700be24-25be-4d97-bd37-0ac775d39cec
Or maybe it's in the Connecticut one.

1:49:0.250 --> 1:49:1.890
0700be24-25be-4d97-bd37-0ac775d39cec
So because it's just reading it this morning.

1:49:7.730 --> 1:49:10.0
0700be24-25be-4d97-bd37-0ac775d39cec
Of whether that's slightly more relevant.

1:49:10.10 --> 1:49:10.570
0700be24-25be-4d97-bd37-0ac775d39cec
It's the seat.

1:49:10.580 --> 1:49:11.480
0700be24-25be-4d97-bd37-0ac775d39cec
Like you don't.

1:49:11.530 --> 1:49:13.760
0700be24-25be-4d97-bd37-0ac775d39cec
It's we're talking about proper disposable.

1:49:13.770 --> 1:49:15.240
0700be24-25be-4d97-bd37-0ac775d39cec
It's just proper disposal of.

1:49:17.980 --> 1:49:26.900
0700be24-25be-4d97-bd37-0ac775d39cec
Filter I I don't know where it is right now on here, but like if you're if you have some sort of filter on your planter, they're saying like don't just Chuck that right.

1:49:26.910 --> 1:49:28.90
0700be24-25be-4d97-bd37-0ac775d39cec
Like what's on that filter?

1:49:28.100 --> 1:49:39.200
0700be24-25be-4d97-bd37-0ac775d39cec
And then also that use seed bag has potentially has dust in it that contain was that one of the sides.

1:49:39.210 --> 1:49:42.760
0700be24-25be-4d97-bd37-0ac775d39cec
And I wonder what that that general receipt disposal.

1:49:42.990 --> 1:49:44.440
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah, just add another why?

1:49:44.450 --> 1:49:45.230
0700be24-25be-4d97-bd37-0ac775d39cec
We'll talk about that.

1:49:49.300 --> 1:49:51.870
0700be24-25be-4d97-bd37-0ac775d39cec
And what time do we need to get ready for Scott?

1:49:53.170 --> 1:49:54.630
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah, we can wrap up now.

1:49:57.390 --> 1:49:57.840
0700be24-25be-4d97-bd37-0ac775d39cec
Umm.

1:50:0.700 --> 1:50:1.950
Smith, Stephanie
Hey, Morgan, it's Stephanie.

1:50:2.890 --> 1:50:3.50
0700be24-25be-4d97-bd37-0ac775d39cec
Thank.

1:50:2.320 --> 1:50:6.730
Smith, Stephanie
I was just thinking of and I don't know if I revised reading somewhere.

1:50:6.740 --> 1:50:16.60
Smith, Stephanie
I think amongst the many documents that you're referencing here, but it cleaning up equipment in between, you know, just maintenance of equipment and wash water.

1:50:16.70 --> 1:50:17.390
Smith, Stephanie
And I don't know to what extent.

1:50:19.440 --> 1:50:19.960
0700be24-25be-4d97-bd37-0ac775d39cec
At here.

1:50:19.430 --> 1:50:21.400
Smith, Stephanie
That yeah.

1:50:21.440 --> 1:50:22.20
Smith, Stephanie
Yeah, you have it.

1:50:22.30 --> 1:50:23.380
Smith, Stephanie
OK, alright.

1:50:22.120 --> 1:50:24.820
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah, that was that is a bucket, yeah.

1:50:23.430 --> 1:50:25.60
Smith, Stephanie
I wasn't sure if that was in there.

1:50:25.130 --> 1:50:26.120
Smith, Stephanie
It was in the same vein.

1:50:27.470 --> 1:50:28.330
0700be24-25be-4d97-bd37-0ac775d39cec
Yep, Yep.

1:50:30.530 --> 1:50:32.940
0700be24-25be-4d97-bd37-0ac775d39cec
Umm, OK, so next steps for this.

1:50:32.950 --> 1:50:39.980
0700be24-25be-4d97-bd37-0ac775d39cec
So this I'll send out an email to members with the links to this on the team site.

1:50:40.50 --> 1:50:53.970
0700be24-25be-4d97-bd37-0ac775d39cec
So my thinking our homework can be before September, and if you'd rather just look at it and send it to me separately in email, that's totally fine.

1:50:53.980 --> 1:51:3.860
0700be24-25be-4d97-bd37-0ac775d39cec
But you should be able to if you from teams you should be able to just add your own just like I'm doing now and here like just throw in your thoughts in there you can.

1:51:3.870 --> 1:51:7.850
0700be24-25be-4d97-bd37-0ac775d39cec
It doesn't have to keep going, more columns, more columns or needed.

1:51:8.120 --> 1:51:11.310
0700be24-25be-4d97-bd37-0ac775d39cec
I'll add a couple more comments spots.

1:51:11.350 --> 1:51:17.460
0700be24-25be-4d97-bd37-0ac775d39cec
So we can kind of try and gather our thoughts a little bit more about these existing ones.

1:51:18.430 --> 1:51:25.120
0700be24-25be-4d97-bd37-0ac775d39cec
Umm, if you're so inclined, I'm also fine.

1:51:25.130 --> 1:51:26.350
0700be24-25be-4d97-bd37-0ac775d39cec
So like this is Wendy.

1:51:26.360 --> 1:51:33.780
0700be24-25be-4d97-bd37-0ac775d39cec
Shoes are in this tab for the IB BMP, so that's what's populated right now into this tab.

1:51:34.220 --> 1:51:43.580
0700be24-25be-4d97-bd37-0ac775d39cec
I I am more than happy to have Members add into this as as they're thinking more.

1:51:43.630 --> 1:51:45.920
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah, go ahead and see what my suggestion is there.

1:51:45.930 --> 1:51:47.820
0700be24-25be-4d97-bd37-0ac775d39cec
Somebody has an idea to send it to you in writing?

1:51:47.950 --> 1:51:50.220
0700be24-25be-4d97-bd37-0ac775d39cec
OK, rather than add it to you don't want that.

1:51:50.230 --> 1:51:50.460
0700be24-25be-4d97-bd37-0ac775d39cec
OK.

1:51:50.470 --> 1:51:50.660
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

1:51:50.670 --> 1:51:52.760
0700be24-25be-4d97-bd37-0ac775d39cec
Just other effective gets confusing.

1:51:52.850 --> 1:51:53.280
0700be24-25be-4d97-bd37-0ac775d39cec
OK.

1:51:53.630 --> 1:51:56.10
0700be24-25be-4d97-bd37-0ac775d39cec
But can they do the comments on the existing the comment?

1:51:56.20 --> 1:51:56.800
0700be24-25be-4d97-bd37-0ac775d39cec
OK, sure.

1:51:56.810 --> 1:52:4.370
0700be24-25be-4d97-bd37-0ac775d39cec
But I think it would be better for you to be the gatekeeper bugs for modifying the list.

1:52:4.460 --> 1:52:8.870
0700be24-25be-4d97-bd37-0ac775d39cec
OK, that way you know could have two different wordings and say the same thing.

1:52:9.660 --> 1:52:10.70
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah.

1:52:10.120 --> 1:52:11.600
0700be24-25be-4d97-bd37-0ac775d39cec
OK, I'll be the gatekeeper.

1:52:11.30 --> 1:52:12.190
Roy Beckford
So, so sent.

1:52:11.610 --> 1:52:13.760
0700be24-25be-4d97-bd37-0ac775d39cec
I'll go ahead.

1:52:13.430 --> 1:52:14.60
Roy Beckford
I'm curious.

1:52:17.770 --> 1:52:18.0
0700be24-25be-4d97-bd37-0ac775d39cec
So.

1:52:14.180 --> 1:52:19.220
Roy Beckford
Send the comments to who exactly should be to you or Steve who?

1:52:20.370 --> 1:52:26.240
0700be24-25be-4d97-bd37-0ac775d39cec
So you can send so comments you can directly add on to this sheet right?

1:52:26.250 --> 1:52:26.570
Roy Beckford
OK.

1:52:30.240 --> 1:52:30.500
Roy Beckford
Umm.

1:52:26.690 --> 1:52:37.240
0700be24-25be-4d97-bd37-0ac775d39cec
If it's a specific recommendation, like an AIB like I think we should have a BMP recommendation of this, then send it to me, Morgan Griffith.

1:52:37.880 --> 1:52:38.250
Roy Beckford
Right.

1:52:39.950 --> 1:52:44.50
0700be24-25be-4d97-bd37-0ac775d39cec
And I'll be the gatekeeper of those specific things.

1:52:44.630 --> 1:52:44.870
Roy Beckford
OK.

1:52:46.70 --> 1:52:46.540
0700be24-25be-4d97-bd37-0ac775d39cec
Thanks, ray.

1:52:47.610 --> 1:52:50.830
0700be24-25be-4d97-bd37-0ac775d39cec
And I will communicate that in the email.

1:52:50.840 --> 1:52:55.700
0700be24-25be-4d97-bd37-0ac775d39cec
So you can have like a it do this do that?

1:52:57.30 --> 1:52:57.380
0700be24-25be-4d97-bd37-0ac775d39cec
Cool.

1:52:57.390 --> 1:52:59.480
0700be24-25be-4d97-bd37-0ac775d39cec
Thanks guys for participating in that.

1:52:59.530 --> 1:53:3.890
0700be24-25be-4d97-bd37-0ac775d39cec
And I want to checker.

1:53:6.410 --> 1:53:8.160
0700be24-25be-4d97-bd37-0ac775d39cec
People, I don't know.

1:53:8.170 --> 1:53:8.860
0700be24-25be-4d97-bd37-0ac775d39cec
Indian.

1:53:9.250 --> 1:53:10.90
0700be24-25be-4d97-bd37-0ac775d39cec
Not yet, Hun.

1:53:15.90 --> 1:53:16.150
0700be24-25be-4d97-bd37-0ac775d39cec
Let me just make sure.

1:53:20.210 --> 1:53:20.910
0700be24-25be-4d97-bd37-0ac775d39cec
I don't have any.

1:53:27.780 --> 1:53:30.40
0700be24-25be-4d97-bd37-0ac775d39cec
Like troubleshooting announce from whom I don't right now.

1:53:39.480 --> 1:53:39.970
0700be24-25be-4d97-bd37-0ac775d39cec
I don't know.

1:53:39.980 --> 1:53:43.350
0700be24-25be-4d97-bd37-0ac775d39cec
So we have we have 4 minutes until he might show up that time.

1:53:43.360 --> 1:53:45.490
0700be24-25be-4d97-bd37-0ac775d39cec
OK, I'll wait to hear from Australia.

1:53:45.540 --> 1:53:47.590
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah, alright.

1:53:47.600 --> 1:53:49.200
0700be24-25be-4d97-bd37-0ac775d39cec
Well, thanks everybody for that discussion.

1:53:49.210 --> 1:53:49.830
0700be24-25be-4d97-bd37-0ac775d39cec
We're gonna.

1:53:50.0 --> 1:53:50.770
0700be24-25be-4d97-bd37-0ac775d39cec
That'll be the.

1:53:51.400 --> 1:53:55.830
0700be24-25be-4d97-bd37-0ac775d39cec
So basically that spreadsheet and any ideas people have will be the discussion for the next meeting.

1:53:57.920 --> 1:53:58.650
0700be24-25be-4d97-bd37-0ac775d39cec
I think so.

1:53:58.660 --> 1:54:4.700
0700be24-25be-4d97-bd37-0ac775d39cec
Unless and unless I can turn around and get Heather, I sent an email earlier.

1:54:4.740 --> 1:54:12.250
0700be24-25be-4d97-bd37-0ac775d39cec
OK, so we looking for possibly someone to talk about lubricants or flow agents.

1:54:12.260 --> 1:54:13.40
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah. Yeah.

1:54:13.50 --> 1:54:14.170
0700be24-25be-4d97-bd37-0ac775d39cec
But I know if somebody's.

1:54:14.180 --> 1:54:15.820
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah, we could see what we can find.

1:54:15.910 --> 1:54:17.840
0700be24-25be-4d97-bd37-0ac775d39cec
OK. Umm.

1:54:21.240 --> 1:54:32.170
0700be24-25be-4d97-bd37-0ac775d39cec
And or Seatac that kind of two things that we're, yeah, I can work on the hang tags and then we can see if we can't find somebody who has some understanding was slower agent outside of Telegraph Rd.

1:54:42.250 --> 1:54:42.590
0700be24-25be-4d97-bd37-0ac775d39cec
OK.

1:54:43.0 --> 1:54:43.340
0700be24-25be-4d97-bd37-0ac775d39cec
Thank you.

1:54:49.340 --> 1:54:49.730
Roy Beckford
So.

1:54:49.740 --> 1:54:54.850
Roy Beckford
So I guess Steve, but I don't know if you know this yet, you might have done some research on this or some investigation.

1:54:55.440 --> 1:55:5.90
Roy Beckford
I'm I'm doing enough to Vermont not to know whether our solid waste facilities take in untreated waste seeds.

1:55:6.380 --> 1:55:7.590
0700be24-25be-4d97-bd37-0ac775d39cec
Hmm, good question.

1:55:8.710 --> 1:55:9.20
0700be24-25be-4d97-bd37-0ac775d39cec
I don't know.

1:55:12.880 --> 1:55:13.400
0700be24-25be-4d97-bd37-0ac775d39cec
Hey, Stephanie.

1:55:14.730 --> 1:55:14.950
Smith, Stephanie
Yeah.

1:55:16.10 --> 1:55:16.550
0700be24-25be-4d97-bd37-0ac775d39cec
Maybe that's not.

1:55:16.560 --> 1:55:17.110
0700be24-25be-4d97-bd37-0ac775d39cec
You could look into.

1:55:18.340 --> 1:55:19.30
Smith, Stephanie
Yeah, not.

1:55:27.560 --> 1:55:27.680
Roy Beckford
Yes.

1:55:27.760 --> 1:55:30.240
0700be24-25be-4d97-bd37-0ac775d39cec
Before even more untreated to see.

1:55:32.870 --> 1:55:33.510
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah. Anything.

1:55:19.40 --> 1:55:35.530
Smith, Stephanie
And just to make sure, it was whether or not the solid waste facilities taken excess treated seed to dispose of it, yeah or on untreated umm any seed OK?

1:55:35.890 --> 1:55:53.760
Smith, Stephanie
Because I actually I had a question as well, which I will ask are solid waste facilities, whether or not around this is a question for us is an agency is whether or not pesticide treated seeds would, you know, would be hazardous waste or not hazardous waste, but would need to be accepted for the program.

1:55:54.420 --> 1:56:1.780
Smith, Stephanie
Umm that we currently operate at the Agency for disposal of unused or unwanted pesticides, but.

1:56:2.230 --> 1:56:2.370
0700be24-25be-4d97-bd37-0ac775d39cec
Yes.

1:56:4.110 --> 1:56:6.350
Smith, Stephanie
But that's our that's for us to figure out.

1:56:7.310 --> 1:56:8.560
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah, good enough.

1:56:10.770 --> 1:56:11.650
0700be24-25be-4d97-bd37-0ac775d39cec
OK, perfect.

1:56:11.690 --> 1:56:14.980
0700be24-25be-4d97-bd37-0ac775d39cec
Good morning, doctor mccart.

1:56:14.990 --> 1:56:16.150
0700be24-25be-4d97-bd37-0ac775d39cec
Thanks for joining us.

1:56:16.160 --> 1:56:16.840
0700be24-25be-4d97-bd37-0ac775d39cec
Can you hear us?

1:56:18.190 --> 1:56:18.870
Scott McArt (Guest)
Good morning.

1:56:18.880 --> 1:56:19.410
Scott McArt (Guest)
How are you guys doing?

1:56:20.770 --> 1:56:21.120
0700be24-25be-4d97-bd37-0ac775d39cec
Good.

1:56:21.320 --> 1:56:21.560
Samantha Alger
But.

1:56:23.40 --> 1:56:27.650
0700be24-25be-4d97-bd37-0ac775d39cec
We're just wrapping up waiting for you to join.

1:56:27.720 --> 1:56:30.100
0700be24-25be-4d97-bd37-0ac775d39cec
So I think that the floor is yours.

1:56:32.230 --> 1:56:33.290
Scott McArt (Guest)
Ohh wow alright.

1:56:35.760 --> 1:56:36.460
0700be24-25be-4d97-bd37-0ac775d39cec
The.

1:56:36.370 --> 1:56:36.590
Samantha Alger
Well.

1:56:35.860 --> 1:56:36.850
Scott McArt (Guest)
Well, let's see.

1:56:36.860 --> 1:56:46.950
Scott McArt (Guest)

I I I just popped in so I don't know exactly what you guys have been talking about, but it sounds like it's sounds like it's been interesting if you're already talking about how to dispose of of pesticide treated seed.

1:56:48.260 --> 1:56:54.690
0700be24-25be-4d97-bd37-0ac775d39cec
Well, I can give you a yeah, we're basically where we're at is we've heard a lot of information.

1:56:54.880 --> 1:57:10.920
0700be24-25be-4d97-bd37-0ac775d39cec
And so we're in the very beginning brainstorming of we have to kind of make a recommendation for, umm, BMP's for treated seeds for neonics treated seeds.

1:57:10.980 --> 1:57:26.620
0700be24-25be-4d97-bd37-0ac775d39cec
And so this is kind of we're just we're in our brainstorming of very beginning part of that of what should be what is an issue, what needs to be called out, what shouldn't be and where do we have gaps and what we've heard already so.

1:57:28.170 --> 1:57:29.340
Scott McArt (Guest)
OK, sounds good.

1:57:29.990 --> 1:57:35.310
Scott McArt (Guest)
Alright, well I have some slides and I have to figure out how to share those.

1:57:37.70 --> 1:57:38.620
Scott McArt (Guest)
Ohh, let's see.

1:57:38.630 --> 1:57:40.270
Scott McArt (Guest)
How do we do that on teams?

1:57:41.250 --> 1:57:44.760
0700be24-25be-4d97-bd37-0ac775d39cec
There is like right next to like the big Red leave button.

1:57:44.910 --> 1:57:46.880
0700be24-25be-4d97-bd37-0ac775d39cec
There's a square with an up arrow.

1:57:48.160 --> 1:57:48.940
Scott McArt (Guest)
Ah, there we go.

1:57:48.950 --> 1:57:49.540
Scott McArt (Guest)
Share.

1:57:49.830 --> 1:57:51.220
Scott McArt (Guest)
Alright, let's see if I can use that.

1:57:56.780 --> 1:58:0.20
Scott McArt (Guest)
Alright, so I think I'm sharing my screen now.

1:58:2.200 --> 1:58:2.510
Scott McArt (Guest)
Alright.

1:58:2.520 --> 1:58:3.860
Scott McArt (Guest)
Can you guys see those slides?

1:58:4.770 --> 1:58:5.410
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah, yeah.

1:58:6.740 --> 1:58:7.560
Scott McArt (Guest)
Hey, perfect.

1:58:7.570 --> 1:58:8.110
Scott McArt (Guest)
Alright, good.

1:58:9.990 --> 1:58:11.680
Scott McArt (Guest)
Alright, so perfect.

1:58:11.690 --> 1:58:13.570
Scott McArt (Guest)
Well anyways, thanks for having me this morning.

1:58:17.190 --> 1:58:17.340
Samantha Alger
But.

1:58:13.580 --> 1:58:28.370
Scott McArt (Guest)
It is 5 in the morning here, so I apologize if I if my brain isn't, you know, fully functional yet, but I'll try to get it to the point where it's at least functional enough and I I what I put together was was a bunch of slides.

1:58:29.260 --> 1:58:30.250
Scott McArt (Guest)
I think it's OK.

1:58:30.260 --> 1:58:36.350
Scott McArt (Guest)
Good, good to hear that you are in the brainstorming stage and not in sort of like the very, very detailed stage.

1:58:36.500 --> 1:58:41.150
Scott McArt (Guest)
What I thought I would do is talk generally about risk to pollinators.

1:58:41.160 --> 1:58:59.950
Scott McArt (Guest)
Just so you understand where the data are gonna be coming from and the context for those data for the field crop section that I'll talk about, then we'll dig into the field crops, I exposures and risk to bees and also economic benefits for the analysis that we put together for New York State.

1:59:0.270 --> 1:59:3.500
Scott McArt (Guest)
Then I'll broaden out to the to the broader literature.

1:59:3.950 --> 1:59:11.740
Scott McArt (Guest)
You know that's relevant for field crops, areas and then we'll talk about at the end if there's time, if we don't get to it, that's fine.

1:59:11.750 --> 1:59:25.210
Scott McArt (Guest)
But if if we do get to it, it's just a couple things that I think are particularly relevant to what sort of like the limits of scientific understanding I on the topic of of pesticide risk to bees in general.

1:59:25.380 --> 1:59:26.120
Scott McArt (Guest)
So what can we?

1:59:26.240 --> 1:59:27.850
Scott McArt (Guest)
Can't we say so?

1:59:27.860 --> 1:59:29.250
Scott McArt (Guest)
Hopefully that will be useful.

1:59:29.440 --> 1:59:30.910
Scott McArt (Guest)
I I if there's.

1:59:30.920 --> 1:59:38.70
Scott McArt (Guest)
If there's anything that you want to dwell on while we're while I'm going through this presentation, please just interrupt me and we can dwell on whatever.

1:59:38.80 --> 1:59:40.510
Scott McArt (Guest)
Whatever it is that you want to dwell on, all right.

1:59:42.180 --> 1:59:42.810
0700be24-25be-4d97-bd37-0ac775d39cec
Yeah. Thanks.

1:59:42.730 --> 1:59:44.640
Scott McArt (Guest)
OK, OK.

1:59:44.650 --> 1:59:47.70
Scott McArt (Guest)
So anyways, we'll start with pesticide risk to bees.

1:59:47.670 --> 1:59:53.980
Scott McArt (Guest)
I I and I like to start all my presentations by by highlighting all the people that are doing all this work.

1:59:54.160 --> 1:59:58.360
Scott McArt (Guest)
Because sometimes I unfortunately forget to tell or forget to thank them at the end.

1:59:58.370 --> 2:0:7.710
Scott McArt (Guest)
So I now I put all my slides in the beginning to thank them, but really we have a great team that's working on pesticides in the lab.

2:0:7.790 --> 2:0:13.480
Scott McArt (Guest)
Angelica Sanchez is a postdoc who's back in Ithaca doing a lot of great work on this.

2:0:13.490 --> 2:0:16.930
Scott McArt (Guest)
Christina's how is the technician in our core facility?

2:0:17.860 --> 2:0:20.90
Scott McArt (Guest)
Who is processing a lot of these samples?

2:0:20.140 --> 2:0:22.690
Scott McArt (Guest)
Wayne Anderson, who's under the waterfall there.

2:0:22.800 --> 2:0:24.210
Scott McArt (Guest)
He's our pesticide chemist.

2:0:24.400 --> 2:0:26.270
Scott McArt (Guest)
We actually stole him from Pfizer.

2:0:26.280 --> 2:0:29.690
Scott McArt (Guest)
We've brought him back from industry and academia and he's really talented.

2:0:30.480 --> 2:0:36.360
Scott McArt (Guest)
Aaron Iverson is a former postdoc who did a bunch of work on the B bio assay side of things.

2:0:36.370 --> 2:0:41.70
Scott McArt (Guest)
So dosing's with pesticides, as you can see him doing in the in the lab there.

2:0:41.180 --> 2:0:43.770
Scott McArt (Guest)
And Diana D'souza is also a former postdoc.

2:0:43.780 --> 2:0:45.720
Scott McArt (Guest)
She now she went to the dark side.

2:0:45.730 --> 2:0:46.270
Scott McArt (Guest)
I guess so.

2:0:46.280 --> 2:0:48.80
Scott McArt (Guest)
She's now working for industry.

2:0:48.90 --> 2:0:48.760
Scott McArt (Guest)
She's uh.

2:0:48.810 --> 2:0:54.20
Scott McArt (Guest)
She's working for BASF, BASF on on pesticide risk to pollinators.

2:0:54.710 --> 2:1:3.300
Scott McArt (Guest)
You know, from the industry standpoint now, so really we we have a good group that has its hands both in academic or academia.

2:1:3.850 --> 2:1:13.200
Scott McArt (Guest)
We've obviously worked with government, or at least at the state level of New York State government in the past, and we have some good representation from industry in our lab too.

2:1:13.310 --> 2:1:16.390
Scott McArt (Guest)
So really the three main entities that are relevant to this topic?

2:1:17.940 --> 2:1:25.690
Scott McArt (Guest)
OK, so to get us started, this is really the reason this is what gets bees in trouble is they're messy, OK?

2:1:26.510 --> 2:1:28.640
Scott McArt (Guest)
And you can see the pollen all over this be.

2:1:29.190 --> 2:1:31.370
Scott McArt (Guest)
Why does this get bees in or B's in trouble?

2:1:31.380 --> 2:1:31.870
Scott McArt (Guest)
Trouble.

2:1:31.880 --> 2:1:43.300
Scott McArt (Guest)
Well, it turns out that by being messy, they're really good at pollinators, so they transfer pollen to, you know, to about, well, either within or among species of plants.

2:1:44.230 --> 2:1:46.640
Scott McArt (Guest)
And this makes them excellent pollinators.

2:1:46.650 --> 2:1:54.580
Scott McArt (Guest)
They're responsible for pollinating about 87% of land plants that are either partially or wholly reliant on animals for pollination.

2:1:55.970 --> 2:2:1.500
Scott McArt (Guest)
If we think about agriculture, you know, agriculture has a lot of plants that are also reliant on pollination.

2:2:2.690 --> 2:2:6.820
Scott McArt (Guest)
These are some of the main crops in New York State that are reliant on pollinators.

2:2:7.50 --> 2:2:9.40
Scott McArt (Guest)
So we're called the Big Apple state for a reason.

2:2:9.50 --> 2:2:12.660
Scott McArt (Guest)
It's worth about $320 million every year in New York.

2:2:12.670 --> 2:2:16.320
Scott McArt (Guest)
Soybeans are next, at least in terms of gross value.

2:2:17.30 --> 2:2:22.40
Scott McArt (Guest)
I I our next most important pollinator dependent crop beans.

2:2:22.50 --> 2:2:23.580
Scott McArt (Guest)
Squash, blueberries, cherries.

2:2:23.590 --> 2:2:29.600
Scott McArt (Guest)
You know, a whole host of these, you know, high volume, high value fruits and vegetables are dependent on pollination.

2:2:30.820 --> 2:2:32.700
Scott McArt (Guest)
So obviously apples.

2:2:32.710 --> 2:2:39.910
Scott McArt (Guest)
Well, I don't know about obviously, but if you didn't know, apples are almost 100% reliant on pollinators to be able to produce fruit.

2:2:40.160 --> 2:2:43.580
Scott McArt (Guest)
Soybeans, very little reliance on pollinators.

2:2:43.590 --> 2:2:53.310
Scott McArt (Guest)
So we estimate somewhere between 5 and 20% increase in yield overall across all the varieties of soybeans that are grown in New York State are reliant on pollinators.

2:2:53.540 --> 2:3:5.60
Scott McArt (Guest)
So even though soybean is the value of soybean is pretty high, it's reliance on to pollinators makes the IT makes the value of pollinators much less for soybean compared to Apple.

2:3:5.910 --> 2:3:18.620
Scott McArt (Guest)
So if you total all of that up and factor in the reliance on pollinators for all of these fruits and vegetables in New York State, we estimate that they contribute about $400 million in services annually in the state.

2:3:19.620 --> 2:3:32.350
Scott McArt (Guest)
So obviously, you know, pollinators are important for, you know, pollinating natural systems, but they're also economically important for for, you know, producing some of these high value fruits and vegetables that are state produces.

2:3:32.360 --> 2:3:34.890
Scott McArt (Guest)
And I know Vermont produces quite a few of these as well.

2:3:36.610 --> 2:3:48.770
Scott McArt (Guest)
Unfortunately, in New York State, uh, while I'm really not just in New York State, but throughout the throughout the entire US, when I'm showing you in this map and then also throughout the world, pollinators are experiencing some pretty drastic.

2:3:49.660 --> 2:3:52.270
Scott McArt (Guest)
I declines is what we're calling them.

2:3:52.720 --> 2:4:1.90
Scott McArt (Guest)
So in New York State, we experience about 40 to 68% of honeybee colony losses every single year since 2006.

2:4:1.380 --> 2:4:5.230
Scott McArt (Guest)
Last year it was 45% of colonies were lost.

2:4:5.660 --> 2:4:12.630
Scott McArt (Guest)
The state typically has about 100,000 colonies in it at any given time, so that means 45,000 colonies died last year.

2:4:13.470 --> 2:4:14.760
Scott McArt (Guest)
How is Vermont doing?

2:4:14.810 --> 2:4:16.780
Scott McArt (Guest)
Unfortunately, a little bit worse than New York.

2:4:16.790 --> 2:4:30.440
Scott McArt (Guest)

So last year cording to the the at least the be informed partnership data, this is our our major national extension effort on trying to understand colony losses and factors for colony losses throughout the United States.

2:4:30.990 --> 2:4:36.270
Scott McArt (Guest)
According to the Informed Partnership data, Vermont lost 71% of its colonies last year.

2:4:37.110 --> 2:4:42.560
Scott McArt (Guest)
Umm, that is not really great, obviously considered unsustainable by beekeepers.

2:4:45.120 --> 2:5:5.590
Scott McArt (Guest)
In New York State, we have done a really great what I would call a really great pollinator protection plan and put a lot of investment, not only in trying to fix current problems with pollinators, but also put a lot of effort into research and also monitoring of those pollinators.

2:5:6.120 --> 2:5:11.750
Scott McArt (Guest)
This is the product of one of the things that came out of our state pollinator protection plan.

2:5:12.180 --> 2:5:17.970
Scott McArt (Guest)
It's called the Empire State Native Pollinator Survey, which was conducted between 2017 and 2021.

2:5:17.980 --> 2:5:53.870
Scott McArt (Guest)
And then was published the results of this was were published last year, and this was taken on by our New York Natural Heritage Program where they went and did a contemporary survey of all of the the wild pollinators that were fairly abundant in New York State and conspired historical records to the contemporary survey over those four years and found with the headline here that I'm showing on the right using conservative criteria, 38% of New York's native pollinators are risk of extra patient from New York.

2:5:54.20 --> 2:6:15.640
Scott McArt (Guest)
So this is not just managed honeybee colonies that are experiencing these declines, but it's also our native pollinators, not just bees, but some of the other, you know, pictures that you see in this in this booklet as well, The Beatles, the maws, the butterflies, et cetera, that are also at risk of, you know, going locally extinct from our state of New York.

2:6:17.910 --> 2:6:20.80
Scott McArt (Guest)
Alright, so doom and gloom, right?

2:6:20.90 --> 2:6:22.660
Scott McArt (Guest)
So pollinators unfortunately are not doing all that well.

2:6:23.110 --> 2:6:25.560
Scott McArt (Guest)
Why is it that they're not doing all that well?

2:6:25.730 --> 2:6:29.700
Scott McArt (Guest)
If we understand why they're not doing all that well, potentially we can do something about it.

2:6:29.850 --> 2:6:33.280
Scott McArt (Guest)
We can make some targeted efforts so we know.

2:6:33.670 --> 2:6:41.40
Scott McArt (Guest)
Unfortunately, it's not just one of these silver bullet things where OK, here's the problem, and we're gonna fix that particular problem.

2:6:41.150 --> 2:6:45.540
Scott McArt (Guest)
What we do know is that it's lots of things, so it's pests and pathogens.

2:6:45.550 --> 2:6:46.790
Scott McArt (Guest)
It's climate change.

2:6:46.800 --> 2:6:49.790
Scott McArt (Guest)
It's lack loss or lack of habitat.

2:6:49.910 --> 2:6:53.820
Scott McArt (Guest)
It's inadequate management practices, especially for these managed bees.

2:6:54.630 --> 2:6:58.600
Scott McArt (Guest)
You know that are taken care of by humans and sometimes not taken care of.

2:6:58.610 --> 2:7:0.640
Scott McArt (Guest)
Quite as well as they could be, but humans.

2:7:0.910 --> 2:7:4.780
Scott McArt (Guest)
And then there's also this controversial topic of pesticides.

2:7:4.790 --> 2:7:20.340
Scott McArt (Guest)
I would say this is this is the one that receives the most press and also seems to be the most controversial one of the main reasons that's so controversial, as we'll go through in the talk today is simply because there's not a lot of data on this topic.

2:7:20.800 --> 2:7:36.550
Scott McArt (Guest)
There, there certainly are a lot of studies out there, but also I'll show you why I say that they're there's not a lot of data on the reasons for that, which are unfortunately well, but something that we deal with at least in, in my lab on a day to day basis.

2:7:36.940 --> 2:7:42.10
Scott McArt (Guest)
So this is this afternoon's talk for you guys and this very early morning morning talk for me.

2:7:42.180 --> 2:7:43.800
Scott McArt (Guest)
We'll talk about pesticides this morning.

2:7:45.580 --> 2:7:47.40
Scott McArt (Guest)
All right, so here is the outline for the talk.

2:7:47.860 --> 2:7:55.650
Scott McArt (Guest)
I what I said at initially is that first we're gonna try to just give you guys a a broad sense of where are we coming from on this.

2:7:55.700 --> 2:8:1.790
Scott McArt (Guest)
This concept of risk to bees, so we're gonna define what risk is what?

2:8:1.800 --> 2:8:9.10
Scott McArt (Guest)
What is pesticide risk to be is then we'll talk a little bit about when there's risk and when there isn't risk to be used.

2:8:9.520 --> 2:8:14.710
Scott McArt (Guest)
And then we'll focus, you know, we'll drill in on benefits and risk it field crops settings.

2:8:15.200 --> 2:8:19.270
Scott McArt (Guest)
We'll talk about that from our own standpoint, but also what the broader literature shows.

2:8:20.410 --> 2:8:24.640
Scott McArt (Guest)
And then if we're, if there's time, we'll talk about what do we, at least that.

2:8:24.650 --> 2:8:26.180
Scott McArt (Guest)
What do I think we need to know better.

2:8:26.190 --> 2:8:27.840
Scott McArt (Guest)
So where is exposure coming from?

2:8:27.850 --> 2:8:35.20
Scott McArt (Guest)
One of this big these big topics that sounds pretty simple, just trying to understand where pesticide exposure is coming from.

2:8:35.190 --> 2:8:40.360
Scott McArt (Guest)
But it's actually pretty complicated, and if we don't have time to get there, that's totally fine.

2:8:40.370 --> 2:8:42.920
Scott McArt (Guest)
We'll, we'll we'll dwell on field crops.

2:8:44.0 --> 2:8:51.90
Scott McArt (Guest)
Alright, so before I go on and and talk about risk, any any questions on background?

2:8:54.840 --> 2:9:3.740
Scott McArt (Guest)
Or anything that you guys want clarifications on that that you didn't understand since it's I have a 5:00 AM brain and I'm trying to talk to an afternoon brain of of an audience.

2:9:8.630 --> 2:9:9.70
Scott McArt (Guest)
Alright.

2:9:7.910 --> 2:9:10.430
0700be24-25be-4d97-bd37-0ac775d39cec
I think get nods.

2:9:10.440 --> 2:9:10.790
0700be24-25be-4d97-bd37-0ac775d39cec
You're OK.

2:9:12.60 --> 2:9:12.590
Scott McArt (Guest)
OK.

2:9:12.640 --> 2:9:14.480
Scott McArt (Guest)
Well, that's two thumbs up.

2:9:14.490 --> 2:9:17.620
Scott McArt (Guest)
I'm I'm happy that my brain is at least functioning enough that you guys understand me.

2:9:18.910 --> 2:9:20.550
Scott McArt (Guest)
Alright, so let's define risk.

2:9:22.130 --> 2:9:22.460
Scott McArt (Guest)
OK.

2:9:22.470 --> 2:9:24.310
Scott McArt (Guest)
So risk is actually pretty easy to divine.

2:9:25.160 --> 2:9:29.680
Scott McArt (Guest)
It's simply the combination of exposure and toxicity, OK.

2:9:32.40 --> 2:9:37.150
Scott McArt (Guest)
Toxicity, I would say that we have a relatively good understanding of this.

2:9:37.220 --> 2:9:40.790
Scott McArt (Guest)
For honey bees, I for most pesticides.

2:9:40.800 --> 2:9:43.270
Scott McArt (Guest)
So honey bee LD 50s for most pesticides.

2:9:44.260 --> 2:9:49.550
Scott McArt (Guest)
Umm LD 50s are what is required during the pesticide registration process.

2:9:49.560 --> 2:9:57.250
Scott McArt (Guest)
So if a company wants to produce a pesticide and and bring that to market, it has to pass a risk assessment process through the EPA.

2:9:57.600 --> 2:10:2.850
Scott McArt (Guest)
That registration process requires that LD 50s are done on honey bees.

2:10:2.860 --> 2:10:5.640
Scott McArt (Guest)
So honey bees are our model Organism for all pollinators.

2:10:6.590 --> 2:10:7.880
Scott McArt (Guest)
Umm, it will be 50.

2:10:7.890 --> 2:10:11.820
Scott McArt (Guest)
Is is simply the lethal dose for 54% of organisms.

2:10:11.950 --> 2:10:41.950
Scott McArt (Guest)
So if you have something within a small quantity that kills a lot of bees, or a lot of honey bees, that means it has a LD50 value that is particularly troubling if you have something that is a small dose or even a large dose that doesn't kill a lot of bees, then that's a pretty good LD50 value, means it's not very toxic to these, so I've already hinted at this, but I obviously those quantities of of the pesticide that contribute to the LD 50, that's your exposure.

2:10:43.470 --> 2:10:54.900
Scott McArt (Guest)
So I would say we have actually a relatively poor understanding for most pesticides and most application contexts of what exposure to pollinators actually is.

2:10:55.180 --> 2:11:5.0
Scott McArt (Guest)
And there's a good reason for that, because during the pesticide registration process, it is not required for companies to actually go out in the real world.

2:11:5.10 --> 2:11:18.650
Scott McArt (Guest)
And really look at exposure assessments, most of the exposure assessments, if they actually are required, so that's a higher tier risk assessment are done either in controlled field trials or they're done in one or two crops.

2:11:18.840 --> 2:11:53.120
Scott McArt (Guest)
They're not done in all of the crops and all of the different landscapes where where pesticides will be applied and then perhaps the more important reason that we don't know much about exposure is once a pesticide is brought to market and has passed the registration process, there is a 0 requirement from the EPA for a company to do follow-up studies to see if what the, you know, what the prediction is or was of the pesticide in terms of exposure based on these trials that were done actually pans out in the real world.

2:11:53.610 --> 2:12:2.720
Scott McArt (Guest)
And that is what I would consider a major problem with the EPA's risk assessment process right now is that there's no follow up.

2:12:2.830 --> 2:12:8.130
Scott McArt (Guest)
So once a pesticide is actually brought to market and is being used, it's just considered totally fine.

2:12:8.140 --> 2:12:16.190
Scott McArt (Guest)
There's no follow up to what to see what goes on in the real world, what who is actually doing that work, to see what goes on in the real world.

2:12:16.530 --> 2:12:23.560
Scott McArt (Guest)
It's analytical labs like ours, so I have a lab, a pesticide analytical facility in our lab.

2:12:23.610 --> 2:12:27.100
Scott McArt (Guest)
There are some private labs, and there's also some government labs.

2:12:27.610 --> 2:12:31.340
Scott McArt (Guest)
They are unfortunately extremely expensive and who pays for it?

2:12:31.410 --> 2:12:38.580
Scott McArt (Guest)
But it's the clients, it's people who send samples to our lab, like beekeepers, government agencies, etc.

2:12:40.120 --> 2:12:40.890
Scott McArt (Guest)
OK.

2:12:41.60 --> 2:12:45.210
Scott McArt (Guest)
But anyways, so you know not to get too often on a on a sidetrack here.

2:12:45.340 --> 2:12:49.370
Scott McArt (Guest)
If we just define risk, it's simply the product of exposure and toxicity.

2:12:49.980 --> 2:12:55.630
Scott McArt (Guest)
So let's work through risk using this hazard quotient approach.

2:12:55.640 --> 2:13:4.780
Scott McArt (Guest)
So a hazard quotient is something that is oftentimes used by regulatory agencies and academics in the risk assessment literature, also used by industry as well.

2:13:7.610 --> 2:13:12.380
Scott McArt (Guest)
I've already worked through this a little bit in in in words, but let's actually put it in writing here.

2:13:12.390 --> 2:13:20.900
Scott McArt (Guest)
So wait, what I'm showing you here is basically a risk assessment for a typical fungicide.

2:13:21.70 --> 2:13:24.940
Scott McArt (Guest)
So we know that toxicity is on the right here.

2:13:25.50 --> 2:13:36.870
Scott McArt (Guest)
The node that the toxicity of fungicides is not very high, so it would take about 100 micrograms of particular fungicide to kill 50% of bees.

2:13:36.880 --> 2:13:38.320
Scott McArt (Guest)
That's what I'm showing you.

2:13:38.330 --> 2:13:47.300
Scott McArt (Guest)
There is the LD50 for a typical fungicide, and we also know that fungicides are the typically the highest exposures to be used during crop pollination settings.

2:13:47.310 --> 2:13:54.0
Scott McArt (Guest)
So it wouldn't be uncommon for be to be exposed to 1000 parts per billion of a fungicide during crop pollination.

2:13:55.170 --> 2:13:59.830
Scott McArt (Guest)
So if we divide 1000 by 100, we get a hazard.

2:13:59.840 --> 2:14:12.320
Scott McArt (Guest)
Quotients of 10, or if we put that hazard quotient value in biological terms, it's about 0.1% of an LD50, so this is a very tiny fraction of an LD50.

2:14:12.330 --> 2:14:19.210
Scott McArt (Guest)
This means this exposure to this particular pesticide, which is not particular, it's toxic, poses very little risk to bees.

2:14:20.510 --> 2:14:29.260
Scott McArt (Guest)
Conversely, if a bee is in a crop pollination setting, again is exposed to 1000 parts per billion of Amida Clopyralid and you know Nick, it's annoyed.

2:14:29.270 --> 2:14:30.520
Scott McArt (Guest)
Insecticide.

2:14:30.590 --> 2:14:40.730
Scott McArt (Guest)
You can now see that the value on the right here changes quite a bit, so it only takes 04 micrograms of a metoclopramide to kill 50% of bees.

2:14:40.740 --> 2:14:42.130
Scott McArt (Guest)
That's its LD50 value.

2:14:43.610 --> 2:14:52.380
Scott McArt (Guest)
If we then do the math, we see that that has a quotient value is 250,000, or in biological terms 2500% of an LD50.

2:14:52.600 --> 2:14:57.840
Scott McArt (Guest)
So this is now very risky to bees to be exposed to that quantity of imidacloprid.

2:14:59.690 --> 2:15:6.430
Scott McArt (Guest)
But of course, that basically never happens that a a bee is exposed to 1000 parts per billion of metoclopramide.

2:15:6.790 --> 2:15:14.450
Scott McArt (Guest)
But it is sometimes that bees and I'll show you data for this later, that sometimes bees actually are exposed to 40 parts per billion of metoclopramide.

2:15:14.710 --> 2:15:17.110
Scott McArt (Guest)
This is a realistic exposure to a metoclopramide.

2:15:17.710 --> 2:15:28.100
Scott McArt (Guest)
Unfortunately, in some agricultural contexts, but this translates too as a hazard quotient of 10,000, or in biological terms, 100% of an LD50.

2:15:28.110 --> 2:15:31.310
Scott McArt (Guest)
So this is the LD50 value for a medical operative.

2:15:31.320 --> 2:15:34.550
Scott McArt (Guest)
If AB is exposed to 40 parts per billion, all right.

2:15:35.520 --> 2:15:45.140
Scott McArt (Guest)
The nice thing about the hazard quotient approach is not that we can just do this for individual pesticides, but we can also sum these up.

2:15:45.150 --> 2:16:0.0
Scott McArt (Guest)
So we make the assumption here that each pesticide that AB is exposed to, and you know pollen that might be contaminated by 15 different pesticides, we make the assumption here that each pesticide is simply additive.

2:16:0.60 --> 2:16:11.810
Scott McArt (Guest)
There's no interactions like drug, drug interactions, pesticide, pesticide interactions also occur, but we make the assumption here with hazard Quotient that there are no interactions and everything is additive.

2:16:12.740 --> 2:16:32.340
Scott McArt (Guest)
Whether or not that's a good assumption or not, we can talk about later, but what this does provide is that the capability of assessing risk in an environmental sample that does contain a lot of different pesticides, which unfortunately is the norm, that is, that really is the rule rather than the exception that bees are Co exposed to pesticides.

2:16:33.790 --> 2:16:53.690
Scott McArt (Guest)
So for for example, if this was a contaminated pollen and it had 1000 parts per billion of this fungicide and 40 parts per billion of imidacloprid in it, what we could say is the overall risk of this sample is simply 10,000 + 10 or 100.1% of an LD50.

2:16:53.780 --> 2:16:55.240
Scott McArt (Guest)
Be all right.

2:16:57.160 --> 2:17:3.530
Scott McArt (Guest)
OK, so that's defining risk and I promise that's gonna be the only math that I show actually.

2:17:3.540 --> 2:17:9.120
Scott McArt (Guest)
Sorry, there's gonna be one more equation later on, but don't worry, it's even simpler than the division that we just did.

2:17:10.370 --> 2:17:11.700
Scott McArt (Guest)
So that's defining risk.

2:17:11.740 --> 2:17:15.140
Scott McArt (Guest)
Now we'll talk about a little a little bit about when there's risk and when there isn't.

2:17:16.980 --> 2:17:19.290
Scott McArt (Guest)
And I can actually summarize this in one slide.

2:17:20.290 --> 2:17:30.150
Scott McArt (Guest)
Rarely during day-to-day beekeeping is there high risk to bees, but unfortunately it's actually fairly common during crop pollination.

2:17:31.150 --> 2:17:39.680
Scott McArt (Guest)
OK, so if the beekeeper is out there or if you're just out there and you're backyard, it's pretty rare that there's going to be high pesticide risk to bees.

2:17:40.90 --> 2:17:52.340
Scott McArt (Guest)
But if you start getting towards those crop pollination contexts, and that includes field crops that I'll show you in a little bit, it unfortunately can be fairly common that there is pesticide risk to bees.

2:17:54.10 --> 2:17:59.500
Scott McArt (Guest)
OK, so let's work through an example with Apple first, and then we'll get into field crops.

2:18:0.50 --> 2:18:10.700
Scott McArt (Guest)
OK, so when I first started at Cornell, all the beekeepers came to me and they said, Scott, the pesticides are killing in these in in when we bring the bees into at New York, Apple pollination.

2:18:11.590 --> 2:18:16.480
Scott McArt (Guest)
And I said, OK, well, unfortunately, there's actually a lot, not a lot of data on this.

2:18:16.850 --> 2:18:18.820
Scott McArt (Guest)
Why don't we go out and really test this?

2:18:18.830 --> 2:18:25.520
Scott McArt (Guest)
Why don't we see what pesticides the bees are being exposed to and then calculate things through?

2:18:25.530 --> 2:18:32.230
Scott McArt (Guest)
Would that hazard quotient to see what risk would be predicted from all the pollen that the bees are gathering during apple pollination?

2:18:33.130 --> 2:18:44.760
Scott McArt (Guest)
So we set up a a pretty ambitious I I guess this is, you know, when you start a job, you maybe are your

your eyes are a little bit bigger than you know what you what you think you can or what you can actually can accomplish.

2:18:44.770 --> 2:18:54.380
Scott McArt (Guest)
But we we decided to actually mimic commercial apple pollination and 30 orchards simultaneously, which was a really big project, but it also provided some really nice data.

2:18:55.280 --> 2:18:57.210
Scott McArt (Guest)
So we mimic commercial apple pollination.

2:18:57.220 --> 2:18:59.810
Scott McArt (Guest)
We brought 4 colonies into each of 30 orchards.

2:18:59.820 --> 2:19:1.910
Scott McArt (Guest)
It was 120 honeybee colonies total.

2:19:2.220 --> 2:19:4.410
Scott McArt (Guest)
And then we collected pollen.

2:19:4.420 --> 2:19:13.610
Scott McArt (Guest)
As you can see up in the upper left here, we collected pollen during or the pollen at the bees we're bringing back in to their colonies during the apple pollination.

2:19:13.620 --> 2:19:21.510
Scott McArt (Guest)
In each of these orchards, we brought that pollen back to our lab and we extracted it.

2:19:21.520 --> 2:19:28.710
Scott McArt (Guest)
So this is David Sosa, my former technician, now lab manager, extracting the pollen, getting the pesticides out of there.

2:19:28.860 --> 2:19:33.850
Scott McArt (Guest)
And then my former chemist Wayne has taken over for him.

2:19:34.140 --> 2:19:35.270
Scott McArt (Guest)
This is Nico Ebert.

2:19:35.280 --> 2:19:36.110
Scott McArt (Guest)
So this is Niko.

2:19:36.120 --> 2:19:45.20
Scott McArt (Guest)
On our machine, this is our LCMS worth about twice as much as my house, which allows us to look at the all the pesticides in pollen.

2:19:47.320 --> 2:19:48.950
Scott McArt (Guest)
Uh, and I did put this slide in here.

2:19:48.960 --> 2:19:54.580
Scott McArt (Guest)
So Wayne is our new chemist Wayne Anderson, and we do have this open for the public.

2:19:54.700 --> 2:20:1.10
Scott McArt (Guest)
So we have done samples for New York State, we've done samples for actually several other state governments.

2:20:1.180 --> 2:20:10.400
Scott McArt (Guest)
I can't remember if we've done them for Vermont yet or not, but if you guys have samples in the future that you're interested in sending through a lab, please, please feel free.

2:20:10.410 --> 2:20:13.640
Scott McArt (Guest)
Just to contact us, we process about 1500 samples a year.

2:20:15.580 --> 2:20:17.550
Scott McArt (Guest)
OK, So what I'm going to show you here.

2:20:17.560 --> 2:20:23.890
Scott McArt (Guest)
This is a pesticide panel for one pollen sample taken from 1 orchard.

2:20:24.380 --> 2:20:40.170
Scott McArt (Guest)
OK, so this is orchard N all of this is obviously anonymous because we don't wanna call out individual growers, but so this was uh, you know, one pollen sample from this initial study in 2016, as you can see, there's 17 pesticides in the sample.

2:20:41.480 --> 2:20:43.270
Scott McArt (Guest)
Most of them are fungicides.

2:20:43.340 --> 2:20:49.920
Scott McArt (Guest)
This should not come as any surprise for anyone who who grows apples in the northeast.

2:20:50.0 --> 2:20:57.890
Scott McArt (Guest)
Fungicides are sprayed during bloom because we have a lot of fungal pathogens, that's a fairly wet area of the United States.

2:20:58.320 --> 2:21:2.620
Scott McArt (Guest)
So this one pyrimethamine or Deco or Scala?

2:21:2.630 --> 2:21:10.180
Scott McArt (Guest)
This was actually I'm this was sprayed the day before we showed up and took these pollen samples in this orchard.

2:21:10.190 --> 2:21:13.290
Scott McArt (Guest)
That probably contributes to the fact that there's 10 parts per million.

2:21:13.780 --> 2:21:30.580
Scott McArt (Guest)
I I of this particular residue in the pollen, but also you can see that there's quite a few other fungicides either in somewhat high amounts for blue pyram or trace amounts down here, SO42 parts per billion per pen bacon is all.

2:21:31.530 --> 2:21:42.150
Scott McArt (Guest)
So 10 fungicides in total, but what was surprising to me from this first initial study is that we almost always found insecticides in the samples as well.

2:21:42.720 --> 2:21:53.830
Scott McArt (Guest)
Insecticides are not sprayed or we're not sprayed during bloom on any of the orchards that we worked in, so any of these 30 orchards, but we almost always found insecticides in the sample.

2:21:54.380 --> 2:22:1.570
Scott McArt (Guest)
In this particular pollen sample, we found two neonicotinoid insecticides, so thiamethoxam at 56 parts per billion.

2:22:1.920 --> 2:22:10.230
Scott McArt (Guest)
That should already raise your eyebrows given what I introduced as the LD 50 for metoclopramide, which is another neonicotinoid insecticide.

2:22:10.460 --> 2:22:17.620
Scott McArt (Guest)
We found clothianidin at 5 parts per billion, and then an organophosphate insecticide called pyrophosphate 32 parts per billion.

2:22:19.170 --> 2:22:31.500
Scott McArt (Guest)
And then typically what we find in most samples, when we when we do actually crop pollination or just anyone you know who gives us samples is there's almost always trace amounts of herbicides.

2:22:31.630 --> 2:22:35.860
Scott McArt (Guest)
It's never very high, but there's always trace amounts of room besides in here.

2:22:35.950 --> 2:22:45.10
Scott McArt (Guest)
So in this one, we had atrazine, which we find in pretty much every single sample we look for, but also a few other active ingredients here as well.

2:22:46.90 --> 2:22:51.160
Scott McArt (Guest)
And I should say that I it's very likely that we would have found glyphosate.

2:22:51.200 --> 2:22:55.390
Scott McArt (Guest)
That's always comes up and question and answer is, you know, why aren't you guys showing the glyphosate as well?

2:22:55.780 --> 2:22:58.190
Scott McArt (Guest)
We simply don't screen for glyphosate.

2:22:58.200 --> 2:23:3.310
Scott McArt (Guest)
It requires a completely different extraction process and a completely different analytical process.

2:23:3.650 --> 2:23:8.870
Scott McArt (Guest)
We don't do that in our lab just because it would be too specialized for glyphosates.

2:23:8.880 --> 2:23:17.920
Scott McArt (Guest)
We'd like to do the multi residue panel instead, but people who do screen for glyphosate almost always bind it and samples simply because it's used almost everywhere.

2:23:20.120 --> 2:23:24.770
Scott McArt (Guest)
OK, so let's put those exposures in a risk context.

2:23:24.940 --> 2:23:29.990
Scott McArt (Guest)
So what I'm showing you here now across the X axis, these are all of our 30 orchards.

2:23:30.300 --> 2:23:40.260
Scott McArt (Guest)
And then on the Y axis, instead of just looking at the types of pesticides and the quantity, the pesticides, what we've now done is we've computed that hazard quotient, right.

2:23:40.270 --> 2:23:49.0
Scott McArt (Guest)
So we've taken into account LD 50 values for the toxicity of each of those pesticides, and we've summarized all of them together.

2:23:49.710 --> 2:23:52.80
Scott McArt (Guest)
So this bar right here for Orchard end.

2:23:52.140 --> 2:23:57.60
Scott McArt (Guest)
This is the total risk from all seventeen of those pesticides.

2:23:57.430 --> 2:23:58.90
Scott McArt (Guest)
Alright.

2:23:58.250 --> 2:24:4.960
Scott McArt (Guest)
And you can see it comes out to a little less than 40% or, sorry, a little less than 50% of an LD50.

2:24:5.780 --> 2:24:10.360
Scott McArt (Guest)
I'm sorry, a little less than 50% of an LD50 in terms of risk.

2:24:10.690 --> 2:24:13.360
Scott McArt (Guest)
OK sorry my brain is still not quite there.

2:24:13.410 --> 2:24:15.970
Scott McArt (Guest)
It's still only 530 or whatever it is in the morning.

2:24:16.920 --> 2:24:35.730
Scott McArt (Guest)
Umm this is convenient because the US EPA gives us a cut off where they they say that 40% of an LD50 is considered acute contact exposure level of concern, and the European Food Safety Authority give us a slightly more conservative cutoff.

2:24:35.740 --> 2:24:38.470
Scott McArt (Guest)
It's just a difference of an opinion between the two agencies.

2:24:39.180 --> 2:24:58.380
Scott McArt (Guest)
They say that 20% of an LD50 is considered an acute contact exposure level of concern, so by acute they mean something very short term of that risk to these, this is not sort of considered long term risk, but only in those first couple days that you would be exposed to something.

2:24:58.390 --> 2:25:15.940
Scott McArt (Guest)
This is, you know, like a really big risk for just a short term exposure and two out of the 30 orchards you can see are above this US EPA, the queue contact exposure level of concern, five of the orchards were above the FSA Qaeda contact exposure level of concern.

2:25:16.370 --> 2:25:20.480
Scott McArt (Guest)
I remember seeing these data and thinking OK, I think this makes sense.

2:25:20.790 --> 2:25:28.390
Scott McArt (Guest)
Some orchards you know might be doing something a little bit wrong and exposing these to high levels of pesticides that are risky.

2:25:29.270 --> 2:25:30.800
Scott McArt (Guest)
There's a good tail here.

2:25:30.870 --> 2:25:36.40
Scott McArt (Guest)
So you know, I would say over 50% of orchards are doing quite well in this figure.

2:25:36.310 --> 2:25:52.270
Scott McArt (Guest)
And then there's, you know, some that are kind of middle of the road where, yeah, maybe it's a, you know, it's not great for bees if they're in there for 10 days of pollination, but at least for on a day to day basis, they're not to be an exposed to pesticides that are going to be causing acute lethal problems for them.

2:25:53.890 --> 2:25:56.260
Scott McArt (Guest)
Unfortunately, I was.

2:25:56.310 --> 2:25:56.760
Scott McArt (Guest)
I was. Yeah.

2:25:56.770 --> 2:26:4.590
Scott McArt (Guest)
So anyway, stupid just before I go on I-2 out of the 30 orchards were above and five out of 3230 orchards were above for FSA, so we all raised that.

2:26:5.780 --> 2:26:20.500
Scott McArt (Guest)
Unfortunately, I was wrong from that first year of of data, so we have done though that analysis across we've scaled it back to 20 orchards and now I'm showing you bars for 20 orchards here.

2:26:21.230 --> 2:26:31.800
Scott McArt (Guest)
Umm, we scaled it back to 20 orchards, but we did that for five years in a row to really try and understand year to year variation in pesticide risk to bees.

2:26:31.810 --> 2:26:39.820
Scott McArt (Guest)
During New York Apple pollination and unfortunately that first year was the most conservative year that we had.

2:26:39.830 --> 2:26:47.200
Scott McArt (Guest)
There were only two two orchards that were above 2 out of the 30 orchards that were above this US EPA level of concern.

2:26:47.870 --> 2:26:50.220
Scott McArt (Guest)
What I'm showing you here is 2019.

2:26:50.470 --> 2:26:54.980
Scott McArt (Guest)
This was one of our worst years and here we have nine out of 20.

2:26:57.90 --> 2:26:57.300
0700be24-25be-4d97-bd37-0ac775d39cec
No.

2:26:55.40 --> 2:26:59.660
Scott McArt (Guest)
It's almost 50% of orchards were above this US EPA level of concern.

2:27:0.490 --> 2:27:4.20
Scott McArt (Guest)
You can see sometimes this particular orchard was literally off the charts.

2:27:4.30 --> 2:27:6.700
Scott McArt (Guest)
This is about 400% of LD50.

2:27:7.130 --> 2:27:17.90
Scott McArt (Guest)
When I came back to pick up the bees from this particular orchard that the hives were dead, you know it could have been lots of things that that killed the hive.

2:27:17.100 --> 2:27:23.490
Scott McArt (Guest)
But given the fact that we were finding this level of pesticides, I think it's very likely you know that the pesticides actually just killed those hives.

2:27:24.430 --> 2:27:24.710
Scott McArt (Guest)
Umm.

2:27:25.130 --> 2:27:28.970
Scott McArt (Guest)
And we've also followed hives after taking them out out of pollination.

2:27:29.500 --> 2:27:43.390
Scott McArt (Guest)
I sometimes we do find that there are some associations between how well the hives do, either in terms of survival or productivity in relation to the pesticides that they're exposed to during pollination.

2:27:44.280 --> 2:27:51.30
Scott McArt (Guest)
Alright, So what I would say here is that there's a year to year variation like I have this out.

2:27:51.40 --> 2:27:51.190
Scott McArt (Guest)
Yeah.

2:27:51.200 --> 2:27:51.750
Scott McArt (Guest)
Here we go.

2:27:52.180 --> 2:27:53.130
Scott McArt (Guest)
There's what.

2:27:53.140 --> 2:27:53.950
Scott McArt (Guest)
Sorry, sorry.

2:27:53.960 --> 2:27:55.390
Scott McArt (Guest)
I'll go with the first bullet point first.

2:27:55.400 --> 2:27:56.250
Scott McArt (Guest)
There's similar risk.

2:27:56.260 --> 2:28:0.350
Scott McArt (Guest)
We what I'm showing you is Apple, but we find similar risk in Michigan.

2:28:0.360 --> 2:28:9.990
Scott McArt (Guest)
Blueberry, New Jersey Blueberry, New York Strawberry, Oregon, Apple and California almond, where
we've done quite a bit of this pollination exposure assessment work.

2:28:10.240 --> 2:28:22.860
Scott McArt (Guest)
We also find that there's year to year variation, but on average somewhere between 20 and 40% of
orchards exceed the EPA or FSA acute contact exposure level of concern.

2:28:23.130 --> 2:28:41.180
Scott McArt (Guest)
When we look at the pollen that those bees are bringing back in or we actually test the bees themselves
for the pesticides that they're being exposed to, what I would say, and this is my opinion on this, is that I
I I think that this tells us that we actually do have a problem.

2:28:41.290 --> 2:28:47.900
Scott McArt (Guest)
You know, if these regulatory agencies are setting these cut offs and we are fairly regularly exceeding
those cut offs.

2:28:48.190 --> 2:28:52.440
Scott McArt (Guest)
I think by definition that that actually is a problem that needs to be addressed.

2:28:55.470 --> 2:29:11.260
Scott McArt (Guest)
OK, so that's using Hazard Quotient as the metric of risk, but I I want to dwell on that a little bit because
toxicity basically you know the way we've defined toxicity is whether the bee dies.

2:29:12.480 --> 2:29:17.150
Scott McArt (Guest)
I think there's an open question of whether with that actually should be the measure of toxicity.

2:29:17.160 --> 2:29:21.890
Scott McArt (Guest)
So should LD 50 be the measure of toxicity when you're performing a risk assessment?

2:29:23.270 --> 2:29:24.420
Scott McArt (Guest)
Why is that?

2:29:24.790 --> 2:29:29.0
Scott McArt (Guest)
Well, the problem that we're experiencing this is how I introduce the whole talk.

2:29:29.10 --> 2:29:33.40
Scott McArt (Guest)
The problem is that we we're experiencing changes in pollinator populations.

2:29:33.490 --> 2:29:41.100
Scott McArt (Guest)
So these native bees and native pollinators are being lost from particular areas because they're populations are declining.

2:29:42.60 --> 2:29:45.700
Scott McArt (Guest)
OK, what governs population dynamics?

2:29:45.710 --> 2:29:47.380
Scott McArt (Guest)
And this is the second equation.

2:29:47.390 --> 2:29:51.120
Scott McArt (Guest)
Don't worry, that's the only math I I will show for the remainder of the talk here.

2:29:51.590 --> 2:29:52.480
Scott McArt (Guest)
But what governance?

2:29:52.490 --> 2:29:53.460
Scott McArt (Guest)
Population dynamics.

2:29:54.490 --> 2:30:0.710
Scott McArt (Guest)
It's not only decks which is the D and this equation, but it's also births, right?

2:30:1.350 --> 2:30:3.220
Scott McArt (Guest)
This is fairly intuitive.

2:30:3.230 --> 2:30:6.220
Scott McArt (Guest)
You know you have more children in your family.

2:30:6.230 --> 2:30:7.400
Scott McArt (Guest)
Your family grows.

2:30:7.990 --> 2:30:11.970
Scott McArt (Guest)
Unfortunately, if you're more of your grandparents die, your family shrinks.

2:30:12.90 --> 2:30:18.180
Scott McArt (Guest)
It's the same for pollinator population, so if there are more bees that are born, they're populations grow.

2:30:18.190 --> 2:30:24.150
Scott McArt (Guest)
If there are fewer bees that die, their populations don't dwindle quite as much.

2:30:31.640 --> 2:30:32.170
0700be24-25be-4d97-bd37-0ac775d39cec
The.

2:30:26.70 --> 2:30:37.210
Scott McArt (Guest)
What's in particularly relevant on the topic of Unix and the topic of pesticides is that they the pesticides they impact the ability of these to reproduce before killing those bees.

2:30:37.530 --> 2:30:42.130
Scott McArt (Guest)
So this is a this particular sublethal response is especially important.

2:30:42.960 --> 2:31:18.210
Scott McArt (Guest)
OK, so in this context, what we decided to do as well, actually we were told to do this from from our state government in New York, we were asked to do this is to do a comprehensive risk assessment of neonicotinoids insecticides in the state that went beyond what EPA does has done, which has focused largely just on these lethal responses to pesticides and start bringing in these sublethal responses to try and understand what risk is across all application context in which neonicotinoids and are used.

2:31:18.970 --> 2:31:20.980
Scott McArt (Guest)
So this was a really large project.

2:31:20.990 --> 2:31:25.260
Scott McArt (Guest)
It took us about two years to gather all the literature and summarize it.

2:31:25.970 --> 2:31:26.970
Scott McArt (Guest)
We have published this.

2:31:26.980 --> 2:31:33.110
Scott McArt (Guest)
This is available to the public I at the website that you can see the URL below where I'm happy to share it.

2:31:33.120 --> 2:31:47.80
Scott McArt (Guest)
You know, after the talk here as well, it ended up being 432 page risk benefit analysis where we did side-by-side analysis of economic benefits and risks of pollinators in these five major application contexts that neonics are used.

2:31:47.210 --> 2:31:54.660
Scott McArt (Guest)
So field crops, which we'll talk about today and then also fruit crops, vegetables, ornamentals, turf and landscape management.

2:31:54.670 --> 2:31:57.20
Scott McArt (Guest)
And then once and also conservation and forestry.

2:31:59.620 --> 2:32:3.310
Scott McArt (Guest)
OK, so let's dig into what we found on field crops.

2:32:4.910 --> 2:32:6.350
Scott McArt (Guest)
So we'll start with risk.

2:32:6.760 --> 2:32:7.260
Scott McArt (Guest)
Umm.

2:32:7.820 --> 2:32:11.330
Scott McArt (Guest)
In as part of this analysis, we did the systematic literature review it.

2:32:11.340 --> 2:32:12.710
Scott McArt (Guest)
So yeah, people have always offered?

2:32:12.720 --> 2:32:13.210
Scott McArt (Guest)
Authorized.

2:32:13.220 --> 2:32:13.530
Scott McArt (Guest)
Asked me.

2:32:13.740 --> 2:32:14.750
Scott McArt (Guest)
What was in this analysis?

2:32:14.760 --> 2:32:23.100
Scott McArt (Guest)
It's basically just a giant literature review where we then took that literature and tried to make a quantitative analysis of it at the end.

2:32:23.810 --> 2:32:30.920
Scott McArt (Guest)

But we did this systematic literature review of 327 peer reviewed studies on the pollinator risk side of things.

2:32:31.470 --> 2:32:36.120
Scott McArt (Guest)
This was the entire neonicotinoid insecticide literature for bees.

2:32:36.130 --> 2:32:41.380
Scott McArt (Guest)
As of 2020, there have been, you know, at least a few dozen studies published since then.

2:32:41.390 --> 2:32:44.70
Scott McArt (Guest)
But as of 2020, this is this was the state of the art.

2:32:45.10 --> 2:32:54.550
Scott McArt (Guest)
Umm, that included 169 pollinator exposure assessments for the three main active ingredients that were concerned about with neonicotinoid insecticides.

2:32:54.560 --> 2:32:57.170
Scott McArt (Guest)
That's clothianidin, and medical corporate environment thyroxine.

2:32:57.860 --> 2:33:10.150
Scott McArt (Guest)
And then we compared that to the lowest observes effects concentrations or the low each for each neonet that's been shown to impact Physiology, behavior, and then what I'm underlining here reproduction.

2:33:10.920 --> 2:33:25.190
Scott McArt (Guest)
So these are the sublethal responses that we looked at Physiology impacts on things like gene expression and zyme activity, cellular respiration, et cetera, behaviors, things like foraging efficiency, grooming, learning and motor function.

2:33:25.200 --> 2:33:34.60
Scott McArt (Guest)
And then this key response reproduction are mostly fecundity, but also some survival of new Queens that are produced in honeybee colonies.

2:33:34.530 --> 2:33:47.130
Scott McArt (Guest)
OK, So what we did is we compared the exposures that we found in the literature to the the concentrations that are known to have impacts on each of these metrics for each of those active ingredients.

2:33:48.350 --> 2:33:51.40
Scott McArt (Guest)
What does that look like in a quantitative sense?

2:33:51.750 --> 2:34:5.620
Scott McArt (Guest)
What I'm showing you here is I'll fill in the graph in a second with the actual data, but just to explain what this is, here is the impact on behavior, Physiology and reproduction on the X axis and then the Y axis.

2:34:5.630 --> 2:34:6.610
Scott McArt (Guest)
This is gonna.

2:34:6.620 --> 2:34:11.230
Scott McArt (Guest)
I'm gonna show you field crops exposures as a proportion of the lowek right.

2:34:11.240 --> 2:34:19.40
Scott McArt (Guest)
A proportion of this lowest observed effects concentration that is known to have an impact on behavior and on behavior, Physiology, or reproduction.

2:34:20.280 --> 2:34:33.410
Scott McArt (Guest)
So if the data fall below the line, that means by definition there's no risk so that you are unlikely to see an impact on behavior, Physiology, or reproduction from the exposure that was found in the literature.

2:34:34.510 --> 2:34:46.240
Scott McArt (Guest)
Conversely, if the data fall above the the dotted red line, that's greens by definition there is risk, so there would be predicted to be an impact on on reproduction, Physiology or behavior.

2:34:47.770 --> 2:34:49.140
Scott McArt (Guest)
How did the data fall out?

2:34:49.470 --> 2:34:51.620
Scott McArt (Guest)
A little bit all over the place, right.

2:34:51.630 --> 2:35:8.690
Scott McArt (Guest)
So it's not the in field crops settings, these are always exposed to really bad levels of pesticides of these neonics or insecticides, but it's not that they aren't exposed to potentially bad levels of the unit stride insecticides either.

2:35:9.910 --> 2:35:18.780
Scott McArt (Guest)

Overall, across all of these exposures, we find that about 75% of exposures in and around field crops settings.

2:35:18.790 --> 2:35:29.410
Scott McArt (Guest)
So this is corn and soybean primarily, a couple wheat, uh, I exposures in here, but about 75% of exposures would be predicted to have impacts on honey bee Physiology.

2:35:29.880 --> 2:35:45.730
Scott McArt (Guest)
Little over half, 58%, would be predicted to have impacts on honeybee behavior and a little over 1/3 having an impact on reproduction in this key response that can govern population dynamics that bees alright.

2:35:46.900 --> 2:35:50.90
Scott McArt (Guest)
Why are we particularly concerned about field crops?

2:35:50.620 --> 2:35:57.470
Scott McArt (Guest)
Well, we know that most neonicotinoid insecticide usage in the United States is on field crops seed treatments.

2:35:57.880 --> 2:36:19.330
Scott McArt (Guest)
So you can see the the the painted seeds, the red seeds on the right here, that's typically you know, just to to provide some warning that there that those seeds have been coded with some sort of I I I you know pesticide oftentimes a neonicotinoid insecticide compared to the seeds on the left here which are untreated.

2:36:20.460 --> 2:36:28.690
Scott McArt (Guest)
This photo is a photo I actually took myself on the way back from one of our Apple studies during corn planting in New York.

2:36:28.860 --> 2:36:30.910
Scott McArt (Guest)
You can probably see this in Vermont as well.

2:36:30.920 --> 2:36:35.370
Scott McArt (Guest)
Typically, when corn and soybean are planted, it's done on a dry day.

2:36:35.440 --> 2:36:38.590
Scott McArt (Guest)
So you know the tractors aren't getting bogged down in mud.

2:36:38.600 --> 2:36:44.780
Scott McArt (Guest)

It's done in early spring and oftentimes, unfortunately, there's a giant plume of dust that's kicked up behind it.

2:36:45.280 --> 2:36:54.50
Scott McArt (Guest)
We know from the literature that this plume of dust is typically laden with neonicotinoid insecticides, so that's one major exposure route is just this.

2:36:54.60 --> 2:36:58.790
Scott McArt (Guest)
This plume of dust that's kicked up and a lot of that the seed treatment is abraded off.

2:36:59.380 --> 2:37:0.210
Scott McArt (Guest)
There are.

2:37:0.620 --> 2:37:16.900
Scott McArt (Guest)
There are newer technologies that will limit the amount of neonicotinoid insecticide that's on that dust we found in New York State that those technologies are very poorly adopted by most field crops growers, and we can also talk about other routes of exposure.

2:37:16.910 --> 2:37:18.630
Scott McArt (Guest)
But it's not just this dust.

2:37:18.980 --> 2:37:23.380
Scott McArt (Guest)
It turns out that neonicotinoid insecticides are very environmentally persistent.

2:37:23.610 --> 2:37:31.290
Scott McArt (Guest)
They will stay in these fields for months, potentially up to years, so the half life of the Yonex is quite long.

2:37:31.300 --> 2:37:36.380
Scott McArt (Guest)
When they're in soils and they're water soluble, which means that they move within soils.

2:37:36.390 --> 2:37:51.80
Scott McArt (Guest)
So as the as the field becomes inundated with water, they can move around within the field, they can go outside of the field, they can leach outside of the field, and because they're water soluble, that means they're they're systemic in plants.

2:37:51.720 --> 2:38:5.490
Scott McArt (Guest)
So if for example the the neonicotinoid leeches into wildflowers surrounding fields, they can be taken up by those wildflowers, almost kind of like a nutrient taken up, and they can be expressed in pollen and nectar.

2:38:5.500 --> 2:38:9.910
Scott McArt (Guest)
And bees can be exposed and the pollen and nectar in the wildflower surrounding field.

2:38:9.920 --> 2:38:16.70
Scott McArt (Guest)
So the movement is very high and the environmental persistence is very high, which contributes a lot to their their risk.

2:38:17.330 --> 2:38:20.940
Scott McArt (Guest)
OK, so anyways, just to get back to this graph on the right here.

2:38:21.570 --> 2:38:34.540
Scott McArt (Guest)
What we know is that somewhere between 79 and 79 and 100% of field corn throughout the United States is planted with neonicotinoid seed treatments and the majority of soybeans somewhere.

2:38:34.590 --> 2:38:36.390
Scott McArt (Guest)
We don't really have good estimates for this.

2:38:37.120 --> 2:38:42.670
Scott McArt (Guest)
That's a whole separate topic for why we don't have good estimates for this, because the government doesn't actually track this.

2:38:43.320 --> 2:39:5.440
Scott McArt (Guest)
I I in the United States, but we what we know is that somewhere a little bit above or very likely above 50% of soybeans are planted with neonicotinoid seed treatments that's shown in the pie graph here or not the pie graph the the the big sliver here where corn is in red or maize and soybeans are in orange.

2:39:5.450 --> 2:39:11.120
Scott McArt (Guest)
Here you can see up till 2012 when we actually were taking data on this as a country.

2:39:11.590 --> 2:39:18.260
Scott McArt (Guest)
This was growing as a huge proportion of the neonicotinoids that were used in the United States.

2:39:18.910 --> 2:39:39.830
Scott McArt (Guest)
We don't have data since 2012 on this because unfortunately we stopped taking data as a country and we stand, we'll still haven't started taking data, but from what we do understand from people who have tried to dig in to grow a records, you know, seed distribution records et cetera, is that it's likely has followed these trends since then.

2:39:39.970 --> 2:39:46.10
Scott McArt (Guest)
So that has continued usage has continued to go up and the biggest slice is likely maize and soybean.

2:39:48.170 --> 2:40:7.730
Scott McArt (Guest)
OK, so up until again 2012 when we were taking systematic data on this, we could see that this was really having huge implications for the toxic loading to the environment expressed in LD50 equivalents for bees.

2:40:8.420 --> 2:40:17.840
Scott McArt (Guest)
So what you can see here is there a lot of red in the middle of the United States and some in Western New York here as well, where we do a lot of field crops growing.

2:40:18.500 --> 2:40:33.130
Scott McArt (Guest)
But you can see here that basically this adoption of neonicotinoids that occurred between 1997 when things started to take off with NEO next slides and up through 2012, things started to get a lot more red here.

2:40:33.260 --> 2:40:40.690
Scott McArt (Guest)
That means that there's over A10 fold increase in toxic equivalents that were applied to the environment.

2:40:40.730 --> 2:40:58.230
Scott McArt (Guest)
Those soils now are receiving a lot more pesticide in terms of its biological activity, especially in the Corn Belt area, largely due to this adoption again of neonicotinoid insecticides and this usage of seed treatments on coordinate soybean.

2:41:0.350 --> 2:41:5.140
Scott McArt (Guest)
OK, so that's the pesticide risk side of things.

2:41:5.770 --> 2:41:9.640
Scott McArt (Guest)
I have been fairly active on this topic within New York State.

2:41:10.70 --> 2:41:11.880
Scott McArt (Guest)
We've, you know, produced this report.

2:41:11.890 --> 2:41:19.380
Scott McArt (Guest)
I've talked into or spoken with several legislature folks, several folks from our Department of Agriculture and Markets.

2:41:19.890 --> 2:41:26.460
Scott McArt (Guest)
Here is just a photo of me giving public testimony to the New York's Data Assembly in September of 2021.

2:41:27.230 --> 2:41:38.270
Scott McArt (Guest)
What's been interesting to me on this topic is that industry is actively trying to cloud the waters on the scientific information that's disseminated.

2:41:38.380 --> 2:41:50.110
Scott McArt (Guest)
So there's there's quite a bit of misinformation on, you know, both through sort of routes of various communications directly from industry or indirectly from industry.

2:41:50.320 --> 2:41:56.90
Scott McArt (Guest)
But also I was surprised to see them actually try to take down this report in public testimony as well.

2:41:57.60 --> 2:41:59.210
Scott McArt (Guest)
So you're the bear representative.

2:41:59.220 --> 2:42:2.430
Scott McArt (Guest)
This is a direct quote from right before I got up and spoke.

2:42:2.480 --> 2:42:6.890
Scott McArt (Guest)
The Cornell report is fundamentally flawed because it doesn't consider exposure when assessing risk.

2:42:7.880 --> 2:42:10.90
Scott McArt (Guest)
That's just flat untrue.

2:42:10.380 --> 2:42:11.670
Scott McArt (Guest)
So I've I've showed you.

2:42:11.740 --> 2:42:18.870
Scott McArt (Guest)
You know, in this risk assessment that we pulled together that every single data point actually considers exposure when assessing risk.

2:42:20.180 --> 2:42:22.190
Scott McArt (Guest)
Umm, this has been interesting.

2:42:22.480 --> 2:42:25.710
Scott McArt (Guest)
I guess for me to experience, but it's also not new, right?

2:42:25.720 --> 2:42:33.530
Scott McArt (Guest)
So I industry has a long reputation of trying to cloud scientific information on these controversial topics.

2:42:33.600 --> 2:42:35.810
Scott McArt (Guest)
This occurred with the tobacco industry.

2:42:35.920 --> 2:42:38.210
Scott McArt (Guest)
It occurred with lead and gasoline.

2:42:38.220 --> 2:42:46.260
Scott McArt (Guest)
It's carrying a clown climate change right now where, you know, fossil fuel industry folks are trying to discredit scientists, climate change scientists.

2:42:46.270 --> 2:42:54.100
Scott McArt (Guest)
And it certainly happens with or the pesticide industry trying to discredit scientists who are working on pesticide.

2:42:54.230 --> 2:43:1.800
Scott McArt (Guest)
It's been new to me since this is the new new sort of a new thing that I'm experiencing, but it's certainly not new to industry tactics.

2:43:3.280 --> 2:43:3.670
Scott McArt (Guest)
Umm.

2:43:3.840 --> 2:43:6.980
Scott McArt (Guest)
And we'll get back to that in a second, alright.

2:43:6.990 --> 2:43:8.900
Scott McArt (Guest)
So that was pesticide risk.

2:43:8.950 --> 2:43:11.860
Scott McArt (Guest)
What about economic benefits?

2:43:12.210 --> 2:43:30.470
Scott McArt (Guest)

I would say the thing that that I've observed as this has sort of played out in New York in terms of potential new regulations and really getting the conversation started among farmers is not just pesticide risk to bees, which I think some people have a curiosity in, but don't really know what to do about.

2:43:30.730 --> 2:43:38.860
Scott McArt (Guest)
But it's actually economic benefits to farmers, which I think has caught year of of people uh on both sides of the aisle.

2:43:38.910 --> 2:43:52.950
Scott McArt (Guest)
So you know, both growers and and certainly beekeepers are very interested in this as well, but also industry and government agencies have been more interested in this data than the pesticide risk data.

2:43:54.280 --> 2:44:7.430
Scott McArt (Guest)
So what do we find in terms of economic benefits of, you know, using neonicotinoid seed treatments in corn across all of the different studies that we looked at on this topic, I, which are a lot of studies, right?

2:44:7.440 --> 2:44:12.50
Scott McArt (Guest)
So 273 studies here that found no difference.

2:44:12.420 --> 2:44:18.370
Scott McArt (Guest)
43 trials that did find a significant positive effect and then 14 trials that found it negative effect.

2:44:18.380 --> 2:44:23.910
Scott McArt (Guest)
So this is over 300 studies I that were that we're looking at this particular topic.

2:44:24.670 --> 2:44:33.670
Scott McArt (Guest)
I'm only 13% of them actually found a positive effect of using neonicotinoids seed treatments compared to an untreated control plot.

2:44:34.520 --> 2:44:34.940
Scott McArt (Guest)
All right.

2:44:35.80 --> 2:44:36.640
Scott McArt (Guest)
And that's a positive effect on yield.

2:44:39.300 --> 2:44:44.350
Scott McArt (Guest)
Because see, treatments typically don't just have a neonicotinoid insecticide on them.

2:44:44.360 --> 2:44:46.790
Scott McArt (Guest)
Oftentimes, they'll also have a fungicide on them.

2:44:47.220 --> 2:45:2.310
Scott McArt (Guest)
You can also use that fungicide treated seed as the control, so not just a naked seed but as a seed that has all those other treatments on it, just excluding the neonicotinoid on it and we find largely the same results across the peer review literature.

2:45:2.380 --> 2:45:8.140
Scott McArt (Guest)
So about 11% of trials then find a positive benefit of adding that neonicotinoid.

2:45:8.650 --> 2:45:10.680
Scott McArt (Guest)
I'm on to the seed in terms of yield.

2:45:12.130 --> 2:45:13.400
Scott McArt (Guest)
We can also look at the seeds.

2:45:13.410 --> 2:45:18.230
Scott McArt (Guest)
Can those treated seeds can compared to another insecticide?

2:45:18.490 --> 2:45:27.770
Scott McArt (Guest)
So using for example like an anthranilic diamide or a pyrethroid insecticide as opposed to the neonicotinoid insecticide.

2:45:28.30 --> 2:45:29.580
Scott McArt (Guest)
And we find this about the same thing.

2:45:29.910 --> 2:45:35.520
Scott McArt (Guest)
So there's a positive effect of neonicotinoid insecticides and 16% of trials.

2:45:35.830 --> 2:45:44.400
Scott McArt (Guest)
And then if we can also compare those neonicotinoid treated seeds compared to an insect side applied to the soil during planting.

2:45:44.410 --> 2:45:52.920
Scott McArt (Guest)
So this is not a a seed treatment, but now something you're putting into the soil at the time of planting and then comparing that to the new unit.

2:45:53.250 --> 2:46:1.800
Scott McArt (Guest)
Seed treatment and there we only find a positive effect of the neonicotinoid insecticide on yield in 10 trials, 313 trials.

2:46:1.810 --> 2:46:3.660
Scott McArt (Guest)
Find no difference at 17 trials.

2:46:3.670 --> 2:46:9.370
Scott McArt (Guest)
Find that there's actually the other insecticide performs better overall.

2:46:9.380 --> 2:46:15.860
Scott McArt (Guest)
What I think the the literature shows on this topic for corn is a lot of that Gray area, right?

2:46:15.920 --> 2:46:25.80
Scott McArt (Guest)
So what I've already showed you for corn is somewhere between 79 and 100% of growers in the United States are using neonicotinoid treated seeds.

2:46:26.0 --> 2:46:37.370
Scott McArt (Guest)
But the vast majority of these are resulting in no difference in yield if we actually or this make some simple assumptions about how much a neonicotinoid insecticide costs.

2:46:37.420 --> 2:46:37.720
Scott McArt (Guest)
Sorry.

2:46:37.730 --> 2:46:41.510
Scott McArt (Guest)
So there actually is an economic cost to have it using these neonicotinoids.

2:46:41.660 --> 2:46:43.670
Scott McArt (Guest)
Insecticides on this, on the seeds as well.

2:46:45.30 --> 2:46:57.800
Scott McArt (Guest)
If we factor in that those economics and look at the change in the expected net income per acre for farmers, we find that there's no difference compared to using untreated seeds across all of these trials.

2:46:58.970 --> 2:47:10.330
Scott McArt (Guest)
There's a small but significant benefit of using a neonicotinoid treated seen compared to just a fungicide treated seed, so you know there's still a lot of Gray area here.

2:47:10.340 --> 2:47:20.970
Scott McArt (Guest)
As you can see, but it turns out that it least in these trials there was, in some circumstances are relatively large benefit for some growers and that resulted in this small but significant benefit overall.

2:47:21.910 --> 2:47:30.940
Scott McArt (Guest)
And then we find that there's again, there's no economic benefit compared to other using other sea treatments or soil applied insecticides for for these areas over here.

2:47:31.370 --> 2:47:37.260
Scott McArt (Guest)
So what? What I'm saying here is, you know, these economic benefits, this is at the population level.

2:47:37.530 --> 2:47:44.780
Scott McArt (Guest)
So statistically, there's very little chance that there's going to be a significant economic benefit.

2:47:45.50 --> 2:47:51.750
Scott McArt (Guest)
What this does not mean that there is that there aren't economic benefits for some growers, right?

2:47:51.760 --> 2:48:5.80
Scott McArt (Guest)
So within this slice of green, that's right here, there is going to be a proportion, a small proportion of where those growers that will experience an economic benefit, but it's less than 10% of growers, OK.

2:48:6.260 --> 2:48:9.0
Scott McArt (Guest)
And I think they're actually, that's the important point, right.

2:48:9.10 --> 2:48:22.350
Scott McArt (Guest)
So whenever I talk to policymakers on this, it's it's always, you know, it always comes to the fact that yes, there is going to be an economic benefit for some growers, but it's gonna be a very tiny fraction of those growers.

2:48:22.640 --> 2:48:26.310
Scott McArt (Guest)
There in lies the the tricky part on this particular topic.

2:48:27.710 --> 2:48:28.20
Scott McArt (Guest)
OK.

2:48:28.30 --> 2:48:30.500
Scott McArt (Guest)
What do we find for soybean seed treatments?

2:48:30.950 --> 2:48:34.540
Scott McArt (Guest)
Almost the exact same thing that we find for for corn.

2:48:34.800 --> 2:48:45.410
Scott McArt (Guest)
So here there's a lot of Gray again, so there's no difference in yields for growers who use an untreated control plot compared to this neonicotinoid insecticide.

2:48:45.420 --> 2:48:56.970
Scott McArt (Guest)
The vast majority of of of of farms and fields that have been have had these side by side assessments have found that there's no economic or sorry, there's no improvement in yield.

2:48:57.520 --> 2:49:5.230
Scott McArt (Guest)
There is sometimes an improvement in yield, so 18% in this untreated control versus the giant sector side.

2:49:5.900 --> 2:49:26.500
Scott McArt (Guest)
If you would go over to here, this is a non insecticidal seed treatment now, so this is the fungicide treated seeds that things are being compared against a little bit less so around 9% some experience a yield benefit and then compared to non unicast noid, foliar, insecticides umm even less so.

2:49:26.570 --> 2:49:44.420
Scott McArt (Guest)
So basically I those non neonicotinoid foliar insecticides are are doing a better job in 19 for sorry 19 of the trials, there's no difference in the vast majority of 246 trials and then 13 trials, there's actually a benefit, a yield benefit from the Unix, my insecticides.

2:49:44.870 --> 2:49:56.380
Scott McArt (Guest)
Again, if we go back to the cost of Yonex, the economic cost and look at in the pocket of a farmer, what does it actually mean in terms of what they're getting out of this?

2:49:56.450 --> 2:49:59.100
Scott McArt (Guest)
We actually find that there's a significant loss.

2:49:59.200 --> 2:50:3.940
Scott McArt (Guest)
An economic loss comparing to using untreated seeds.

2:50:4.110 --> 2:50:10.470
Scott McArt (Guest)
So more farmers will lose money if they're using neonicotinoid insecticide, then we'll gain money.

2:50:10.730 --> 2:50:17.600
Scott McArt (Guest)
But again, there is this tiny fraction in here within the green of people that will experience an economic benefit.

2:50:17.850 --> 2:50:21.780
Scott McArt (Guest)
So it's not again, it's not to say that no one here is experiencing not economic benefit.

2:50:21.790 --> 2:50:36.10
Scott McArt (Guest)
It's just a very small number of farms or experienced in economic benefit and actually more farms are experiencing an economic loss by using your negative nitrated seeds slightly different for using the fungicide treads, so it's treated seeds.

2:50:36.20 --> 2:50:39.310
Scott McArt (Guest)
So about the about the same, the small but significant benefit.

2:50:40.330 --> 2:50:49.700
Scott McArt (Guest)
So a tiny fraction of their, you know, of that green slice actually is experiencing pretty significant and economic benefit and that's driving the overall trend.

2:50:50.250 --> 2:51:4.460
Scott McArt (Guest)
And then there is some economic benefit to using neonicotinoid treated seeds here compared to other insecticides as well, again because some fraction of this trial's experience, a really substantial yield benefit and economic benefit.

2:51:6.380 --> 2:51:9.470
Scott McArt (Guest)
OK, so we published that study in 2020.

2:51:9.580 --> 2:51:27.460
Scott McArt (Guest)
That was the review of all the literal up until that point, just after we had published that study, two very large studies came out on this exact same topic of of yield and economic benefits to farmers in that were published in Quebec and Ontario.

2:51:28.640 --> 2:51:39.220
Scott McArt (Guest)
So the first one is by Genevieve Library and she published a study a four year study that looked at 84 corn and soybean sites.

2:51:39.750 --> 2:51:51.90
Scott McArt (Guest)

I I and did this paired seed treated versus controlled fields analysis so it basically just like we were looking at what she found is largely similar to what we found.

2:51:51.100 --> 2:52:5.520
Scott McArt (Guest)
So less than 5% of sites actually experience a positive yield response for using neonicotinoid treated seeds and the financial cost of using neonics always outweigh the economic benefit across all 84 paired sites that she looked at.

2:52:6.470 --> 2:52:8.880
Scott McArt (Guest)
I was in Quebec, in Ontario.

2:52:8.890 --> 2:52:11.950
Scott McArt (Guest)
Jocelyn Smith studied an even or or or.

2:52:11.960 --> 2:52:18.160
Scott McArt (Guest)
She published an even bigger study, so again a four year study of paired seed treated versus control fields.

2:52:18.750 --> 2:52:23.500
Scott McArt (Guest)
She looked at 129 corn sites and 39 or sorry 31 soybean sites.

2:52:23.990 --> 2:52:33.240
Scott McArt (Guest)
Of those 129 corn sites, 8% of sites experience a positive yield response and 6% of the sites experience a pose yield positive yield response.

2:52:33.250 --> 2:52:42.760
Scott McArt (Guest)
And the soybean sites, so again, it's all very similar to what we've found these these sort of tiny fraction of sites actually experience a yield benefit.

2:52:43.300 --> 2:52:52.570
Scott McArt (Guest)
When she looked at finances, she found that the financial cost of Munix only was recouped in 3% of the fields, either corn or soybean fields.

2:52:52.780 --> 2:52:53.90
Scott McArt (Guest)
OK.

2:52:54.530 --> 2:53:27.470
Scott McArt (Guest)
And actually this I think largely encapsulates what I would agree with her on this topic that these data highlighted an opportunity for reducing input costs, environmental loading and non target effects

without adverse outcomes for Ontario producers certainly doesn't mean all producers right 3% of fields right here actually did experience an economic benefit and somewhere around that in in our, in our data it shows that there is an economic benefit for somewhere around you know 3 to 5% of of fields.

2:53:27.480 --> 2:53:42.480
Scott McArt (Guest)
If we believe all of these scientific studies, but in, you know, 95 to 97% of fields, there is not an economic benefit and there actually is a financial cost in terms of you using neonics and some proportion of those fields as well.

2:53:45.110 --> 2:54:2.950
Scott McArt (Guest)
OK, so summarizing all of that data on field crops for coordinate soybean in terms of risk to pollinators and then would again what I would especially say is that yield data, which I'm sure anyone who's listening to me is sort of has some their eyes popping out of their head right now.

2:54:2.980 --> 2:54:6.470
Scott McArt (Guest)
Saying, my God, almost no one is benefiting from these things.

2:54:6.720 --> 2:54:15.610
Scott McArt (Guest)
This has actually moved the dial on this topic, and the New York State Legislature, so this is called the birds and bees bill that's in the New York State.

2:54:16.430 --> 2:54:21.240
Scott McArt (Guest)
It is now past the Senate and the Assembly has been delivered to Governor Hochul.

2:54:21.250 --> 2:54:27.380
Scott McArt (Guest)
She's I I think making a decision sometime within the next few months or whether she actually wants to.

2:54:28.120 --> 2:54:32.570
Scott McArt (Guest)
I I you know, either sign or veto this bill.

2:54:32.660 --> 2:54:41.570
Scott McArt (Guest)
The main part of this bill includes a phasing out of neonicotinoid seed treatments on corn and soybean seeds in New York State.

2:54:42.740 --> 2:54:57.870
Scott McArt (Guest)
One thing that I'm not showing you here is that there are viable replacements for neonicotinoid insecticides, so you know I think the data very clearly show that we probably actually just don't need these on the vast majority of farms probably don't even need an insecticide.

2:54:58.100 --> 2:55:7.140
Scott McArt (Guest)
That's applied during, at least at planting on farms, but it's not every farm that doesn't need an insecticide that doesn't need some protection.

2:55:7.400 --> 2:55:12.530
Scott McArt (Guest)
Certainly there is some small proportion of farms that it would benefit from having protection.

2:55:13.290 --> 2:55:22.990
Scott McArt (Guest)
Umm Anthranilic diamide are thought to be a very viable replacement, so those are sort of like a a new neonicotinoid insecticide.

2:55:23.0 --> 2:55:24.140
Scott McArt (Guest)
They're systemic.

2:55:24.230 --> 2:55:29.0
Scott McArt (Guest)
They target very similar insect pests, the same ones in field crops settings.

2:55:29.10 --> 2:55:36.80
Scott McArt (Guest)
Here they are much less toxic to pollinators, so they have that desirable attribute.

2:55:36.270 --> 2:55:40.800
Scott McArt (Guest)
But it's not like they're non toxic, so they still have some risk associated with them.

2:55:41.230 --> 2:55:42.810
Scott McArt (Guest)
The one hang up with anthrax.

2:55:43.520 --> 2:55:46.330
Scott McArt (Guest)
Anthranilic Diamide right now compared to NEO next.

2:55:46.450 --> 2:55:48.150
Scott McArt (Guest)
Is there a little bit more expensive?

2:55:48.160 --> 2:55:55.810
Scott McArt (Guest)
So with current economics, my understanding is it's somewhere around three times as expensive as a neonicotinoid seed to seed treatment.

2:55:56.20 --> 2:55:59.370
Scott McArt (Guest)
That's still quite a bit less or it's very it's not quite a bit.

2:55:59.380 --> 2:56:7.770
Scott McArt (Guest)
It's a very tiny fraction of an overall budget for a farm for a year, but it still is a little bit more than anyonic.

2:56:7.780 --> 2:56:8.390
Scott McArt (Guest)
It's noid.

2:56:8.720 --> 2:56:31.250
Scott McArt (Guest)
In terms of what a farmer would pay for in terms of putting that on their seed, there are not quite as available as neonics simply because they're not used right now as much as as neonicotinoid insecticides and also when I talked to economist on this, what they say is once they start being used more, they're price is going to drop quite a bit.

2:56:31.260 --> 2:56:38.50
Scott McArt (Guest)
So even though they're three times as expensive right now, it likely will not be three times as expensive if they start to be used more.

2:56:38.440 --> 2:56:40.780
Scott McArt (Guest)
But as of right now, it's a little bit more expensive.

2:56:42.950 --> 2:56:43.480
Scott McArt (Guest)
OK.

2:56:43.490 --> 2:56:48.380
Scott McArt (Guest)
So are there going to be restrictions on on neonics in New York State?

2:56:48.450 --> 2:56:49.600
Scott McArt (Guest)
I don't know where.

2:56:49.610 --> 2:56:51.0
Scott McArt (Guest)
That's not my role to play.

2:56:51.10 --> 2:56:56.440
Scott McArt (Guest)
I'm simply providing the the data, so hopefully make some informed decisions on this topic.

2:56:57.70 --> 2:57:6.860
Scott McArt (Guest)
What I can say is that in my interactions with police, policymakers pretty much every one of them has quickly recognized missed industry misinformation.

2:57:7.140 --> 2:57:18.350
Scott McArt (Guest)
And I've been really proud to have worked in New York State on this particular topic because I think we have some really smart policymakers who are listening to data and they're also listening to their constituents.

2:57:18.360 --> 2:57:24.190
Scott McArt (Guest)
So they're listening to field crops, growers and other farmers out there, but they're also listening to beekeepers.

2:57:24.200 --> 2:57:29.20
Scott McArt (Guest)
And they're making very balanced decisions on this topic where you really have to weigh apples and oranges.

2:57:30.290 --> 2:57:30.680
Scott McArt (Guest)
Umm.

2:57:31.100 --> 2:57:44.360
Scott McArt (Guest)
But then I guess you know a little bit more broadly what I hope I pointed out to you guys is that the EPA relies largely on death or LD50 as the definition of toxicity during pesticide registration.

2:57:44.590 --> 2:57:47.780
Scott McArt (Guest)
And I don't think this is actually the best way to go about things.

2:57:47.790 --> 2:57:56.30
Scott McArt (Guest)
I think it's a very limited way to perform risk assessments for bees and try to take that information to it into account in.

2:57:57.950 --> 2:58:19.570
Scott McArt (Guest)
Weighing again these apples and oranges in terms of risk in terms of I of certain settings, we need to be looking beyond LD 50s and This is why we spend a lot of time looking at those sub leaf all responses in our report to New York and then finally one thing you know again this is maybe a little bit beyond the scope of what we're want to consider here.

2:58:20.0 --> 2:58:32.640
Scott McArt (Guest)

But I think it's really important for this risk assessment process is that there are no requirements by the EPA to us for industry or anyone producing a pesticide to assess real world exposure after releasing a product.

2:58:34.260 --> 2:58:53.130
Scott McArt (Guest)
This occurs commonly in the Pharmaceutical industry, so you know if a drug is released for humans to to, you know, to use, there's always a study that is done by industry to follow up and see whether that drug actually is having the effects or the limited non target effects that we think it is.

2:58:53.440 --> 2:58:54.560
Scott McArt (Guest)
So everyone knows this.

2:58:54.770 --> 2:58:55.860
Scott McArt (Guest)
Who has gone through COVID?

2:58:55.870 --> 2:58:59.310
Scott McArt (Guest)
I'm sure you all remember AstraZeneca and they were.

2:58:59.350 --> 2:59:8.620
Scott McArt (Guest)
They released their vaccine for Kovid and then immediately about a week after they released their vaccine, they said actually we need to pull this back.

2:59:8.970 --> 2:59:11.570
Scott McArt (Guest)
There's some evidence that it might be causing blood clots.

2:59:12.250 --> 2:59:19.540
Scott McArt (Guest)
I or and potentially some other non target effects that might pose more of a risk to humans than than actually getting COVID.

2:59:20.260 --> 2:59:21.740
Scott McArt (Guest)
So they pulled that back.

2:59:21.820 --> 2:59:28.20
Scott McArt (Guest)
The reason they pulled that back is because they were the ones that were actually doing these follow up studies.

2:59:28.30 --> 2:59:31.440
Scott McArt (Guest)
It was not the FDA that was doing the follow up study.

2:59:31.450 --> 2:59:44.720
Scott McArt (Guest)
It was industry themselves that simply does not exist in the pesticide world right now, and it severely limits what we know about exposures in the real world, which severely limits what we know about risk, unfortunately.

2:59:47.220 --> 2:59:49.690
Scott McArt (Guest)
OK, so let's see, how are we doing on time?

2:59:50.100 --> 2:59:50.870
Scott McArt (Guest)
Ohh, we're actually.

2:59:50.880 --> 2:59:51.800
Scott McArt (Guest)
I think we're a little bit over.

2:59:51.810 --> 3:0:2.130
Scott McArt (Guest)
So why don't we, why don't we stop right there and and I'm happy to take any questions if you guys are still with me and have any.

3:0:7.860 --> 3:0:9.270
Scott McArt (Guest)
Personally, and how do I stop?

3:0:11.630 --> 3:0:12.470
Scott McArt (Guest)
Stop sharing.

3:0:12.530 --> 3:0:12.910
Scott McArt (Guest)
There we go.

3:0:15.120 --> 3:0:15.670
Scott McArt (Guest)
OK.

3:0:15.980 --> 3:0:16.620
Scott McArt (Guest)
Is that working OK?

3:0:22.920 --> 3:0:23.370
Scott McArt (Guest)
Great.

3:0:23.550 --> 3:0:26.240
Scott McArt (Guest)
So, are there any questions you guys want to cover?

3:0:34.770 --> 3:0:36.610
Scott McArt (Guest)
It looks like Morgan and Steve maybe.

3:0:43.220 --> 3:0:45.510
Scott McArt (Guest)
Our room audio is finicky, says Morgan.

3:0:45.820 --> 3:0:47.980
Scott McArt (Guest)
OK, actually can't talk.

3:0:50.830 --> 3:0:53.570
Scott McArt (Guest)
And if if audio is bad, please feel free.

3:0:53.580 --> 3:0:54.950
Scott McArt (Guest)
You can either write the question.

3:0:54.960 --> 3:0:59.80
Scott McArt (Guest)
I think there's some way to write questions here or or you can also just email me later.

3:0:59.210 --> 3:0:59.810
Scott McArt (Guest)
That's also fine.

3:1:2.910 --> 3:1:6.470
Scott McArt (Guest)
While Morgan gets that sorted out, Steve, did you want to ask a question?

3:1:14.630 --> 3:1:15.240
Dwinell, Steve
Can you hear me?

3:1:15.250 --> 3:1:15.750
Dwinell, Steve
Can you hear me?

3:1:15.320 --> 3:1:16.20
Scott McArt (Guest)
No, Steve.

3:1:16.70 --> 3:1:16.690
Scott McArt (Guest)
Steve is there.

3:1:15.760 --> 3:1:16.740
Dwinell, Steve
Can you hear me? Hear me?

3:1:16.990 --> 3:1:19.390
Dwinell, Steve
Hear me. Go.

3:1:19.400 --> 3:1:19.570
Dwinell, Steve
I'm.

3:1:18.890 --> 3:1:20.60
Scott McArt (Guest)
Yes, I can hear you.

3:1:19.660 --> 3:1:20.420
Dwinell, Steve
Can you hear me now?

3:1:20.70 --> 3:1:21.830
Scott McArt (Guest)
See you. Yep.

3:1:22.180 --> 3:1:24.400
Dwinell, Steve
You have to unmute your speaker to hear him.

3:1:28.0 --> 3:1:28.710
Dwinell, Steve
OK, let's try that.

3:1:28.720 --> 3:1:29.200
Dwinell, Steve
Can you hear me?

3:1:30.650 --> 3:1:31.200
Scott McArt (Guest)
Again hello.

3:1:31.770 --> 3:1:32.500
Dwinell, Steve
OK, great.

3:1:32.550 --> 3:1:35.770
Dwinell, Steve
I don't know if anybody else can hear or saying yeah, just two points really.

3:1:35.780 --> 3:1:36.960
Dwinell, Steve
That's the question is one is.

3:1:37.270 --> 3:1:40.980
Dwinell, Steve
I just wanna and I make sure you understand.

3:1:40.990 --> 3:1:48.160
Dwinell, Steve
No, we have a different survey that we do includes a lot more beekeepers and our colony loss figures for 20.

3:1:48.310 --> 3:1:52.710
Dwinell, Steve
The last well I have therefore was 26% not 71%.

3:1:54.680 --> 3:1:55.270
Scott McArt (Guest)
Yeah, there's a.

3:1:54.10 --> 3:2:5.290
Dwinell, Steve
The uh be informed partnership only sampled, I think 200 colonies and we have one that's like 12,000 colonies and it was like 26% and the sort of the normal.

3:2:7.380 --> 3:2:10.530
Dwinell, Steve
Expected level due to my pressures 22%.

3:2:11.80 --> 3:2:17.70
Dwinell, Steve
So I just don't wanna leave folks with the impression that all our bees in Vermont are dying, because that's not what our data chefs.

3:2:17.420 --> 3:2:18.170
Dwinell, Steve
That's number one.

3:2:18.280 --> 3:2:26.110
Dwinell, Steve
And #2 your comment about EPA not following up on environmental exposure, I believe they do that.

3:2:26.120 --> 3:2:33.920
Dwinell, Steve
I can't pull up the exact study, but they do have a way of doing that and they do a data call in.

3:2:35.700 --> 3:2:36.720
Dwinell, Steve
Well, we have two ways of doing.

3:2:36.730 --> 3:2:39.880
Dwinell, Steve
One is a data call in from the registrant.

3:2:40.730 --> 3:2:41.80
Dwinell, Steve
Uh.

3:2:41.90 --> 3:2:48.720
Dwinell, Steve
Where they take that kind of information into account and they use it specially, especially when it comes to pollinators, they do a lot of that for pollinators.

3:2:49.310 --> 3:2:58.20
Dwinell, Steve
And then the second thing is they have a mechanism for reporting of ecological exposure incidents.

3:2:58.230 --> 3:3:3.460
Dwinell, Steve
They have a mechanism, in fact, pesticide registrants are required to report it when they become aware of it.

3:3:7.980 --> 3:3:8.320
Scott McArt (Guest)
Yeah.

3:3:8.330 --> 3:3:8.500
Scott McArt (Guest)
Yeah.

3:3:3.470 --> 3:3:8.510
Dwinell, Steve
So just want to bring that up too, so yeah.

3:3:8.510 --> 3:3:9.50
Scott McArt (Guest)
No, it's good.

3:3:9.60 --> 3:3:9.630
Scott McArt (Guest)
Good points.

3:3:9.640 --> 3:3:12.270
Scott McArt (Guest)
So it's just to address both of those points.

3:3:12.280 --> 3:3:14.270
Scott McArt (Guest)
So first of all you have to be informed partnership.

3:3:14.280 --> 3:3:16.70
Scott McArt (Guest)
It was a sampling I I looked into this.

3:3:16.80 --> 3:3:18.600
Scott McArt (Guest)
It was 1400 colonies that were assessed.

3:3:19.220 --> 3:3:28.890
Scott McArt (Guest)
So it's a bigger sample size than and then I then what you would indicated, but it is a small number of beekeepers that were from the from the be informed partnership.

3:3:29.340 --> 3:3:41.330
Scott McArt (Guest)
I typically introduced most of my talks with that because or would it be in four partnership data just because I can cover large geographic regions, but great to hear that Vermont has a bigger survey of beekeeper.

3:3:41.340 --> 3:3:45.310
Scott McArt (Guest)
Certainly if you have a bigger sample size, you can get a better understanding of losses.

3:3:46.200 --> 3:4:4.10
Scott McArt (Guest)
20% is pretty low, so typically across the country, regardless of of what I, I survey you're looking at, it's typically around 30% on average over the last 30% losses on average over the last, you know 15 years or so.

3:4:4.740 --> 3:4:7.860
Scott McArt (Guest)
Umm but yeah, 20% is great or or is very low.

3:4:7.870 --> 3:4:15.370
Scott McArt (Guest)
That's very good, if that's what you guys are doing in terms of what the EPA collects in terms of of pesticide data.

3:4:15.380 --> 3:4:19.130
Scott McArt (Guest)
Yes, they absolutely have data callins.

3:4:19.240 --> 3:4:32.330
Scott McArt (Guest)
So for example, all the data that I've shown I've shared with the EPA, what I'm what the important point that I'm trying to get across is in terms of added data is the industry is not producing any of that data.

3:4:32.810 --> 3:4:53.820
Scott McArt (Guest)
Taxpayer dollars are producing that data, so all of our funding on this topic comes from, you know, government agencies that comes from, you know, things like NSF, USDA, I NIH, which is all taxpayer money, which is funding studies that I don't need to do right as an academic.

3:4:53.830 --> 3:4:55.690
Scott McArt (Guest)
I'm just doing this out of curiosity.

3:4:56.450 --> 3:5:1.200
Scott McArt (Guest)
Industry is not required to produce any data once they've actually released their product.

3:5:1.270 --> 3:5:2.850
Scott McArt (Guest)
That's the important point that I'm trying to make.

3:5:1.760 --> 3:5:5.160
Dwinell, Steve
Have that, but yeah, but that's what I'm saying.

3:5:10.230 --> 3:5:10.870
Scott McArt (Guest)
Not not.

3:5:5.730 --> 3:5:10.920
Dwinell, Steve
They do require the registrar to produce data as part of the reregistration.

3:5:12.660 --> 3:5:13.70
Scott McArt (Guest)
Gotcha.

3:5:12.90 --> 3:5:13.80
Dwinell, Steve
Well, we can get into.

3:5:13.90 --> 3:5:13.660
Dwinell, Steve
I'll send you.

3:5:13.80 --> 3:5:14.790
Scott McArt (Guest)
As part as reregistration.

3:5:14.800 --> 3:5:15.250
Scott McArt (Guest)
Sure.

3:5:15.300 --> 3:5:15.750
Scott McArt (Guest)
Yes.

3:5:15.840 --> 3:5:17.440
Scott McArt (Guest)
Yeah, but but not in terms.

3:5:13.670 --> 3:5:25.790
Dwinell, Steve
I'll right and also specific well we I've got a different understanding of that, but I'll I'll see what I could find to send you so you can see what I'm talking about.

3:5:27.410 --> 3:5:27.570
Scott McArt (Guest)
To.

3:5:30.710 --> 3:5:30.970
Dwinell, Steve
OK.

3:5:30.680 --> 3:5:31.20
Scott McArt (Guest)
Alright.

3:5:30.200 --> 3:5:31.540
Roy Beckford
Alright, let me let me jump in.

3:5:31.640 --> 3:5:32.450
Roy Beckford
Let me jump in.

3:5:32.460 --> 3:5:32.800
Roy Beckford
I want.

3:5:31.920 --> 3:5:33.690
Dwinell, Steve
Yeah, yeah.

3:5:33.310 --> 3:5:34.200
Roy Beckford
I'll Scott.

3:5:34.210 --> 3:5:35.690
Roy Beckford
Thanks for a great presentation.

3:5:35.700 --> 3:5:36.440
Roy Beckford
I really enjoy that.

3:5:37.20 --> 3:5:44.400
Roy Beckford
Ohh, and I think there's quite a bit of alignment between what you're talking about and what what we are actually working on as well.

3:5:44.870 --> 3:5:51.880
Roy Beckford
Umm, but I I was fascinated with your your slides on the LD50, and particularly that one earlier.

3:5:51.890 --> 3:5:58.870
Roy Beckford
We showed the Hazard quotient information or or piece of information on that.

3:5:59.650 --> 3:6:16.130
Roy Beckford
I felt like and this is a question I felt like you were strongly insinuating that risk is more than mortality, that it has a direct impact for auto on productivity or behavior.

3:6:16.780 --> 3:6:19.120
Roy Beckford
Am I right or did I ask that clearly enough?

3:6:21.230 --> 3:6:21.730
Scott McArt (Guest)
Yeah, sure.

3:6:21.740 --> 3:6:24.630
Scott McArt (Guest)
So I think risk can be defined in many different ways.

3:6:24.640 --> 3:6:39.710
Scott McArt (Guest)
Hopefully that that came across and the talk risk is, you know again simply a combination of exposure and toxicity and exposure is gonna occur in different ways and in various application contexts.

3:6:39.720 --> 3:6:43.670
Scott McArt (Guest)
But that measure of toxicity, I think is really important to consider.

3:6:43.680 --> 3:6:45.990
Scott McArt (Guest)
What measure it is that we're considering.

3:6:46.500 --> 3:6:58.620
Scott McArt (Guest)
So again, if we bring this into the human health world, let's say so for a particular drug that we were releasing, we only consider the effects of of that drug on killing humans.

3:6:58.970 --> 3:7:3.0
Scott McArt (Guest)
That was our measure of toxicity that would be considered unacceptable, right?

3:7:3.460 --> 3:7:13.660
Scott McArt (Guest)
Because for the simple, for the simple reason that you know what if it gives us cancer that doesn't directly kill us, but it certainly contributes to something that might have a profound impact on our lives.

3:7:14.370 --> 3:7:24.500
Scott McArt (Guest)
Umm, what I'm trying to say, or hopefully this came across in the talk is the problem that we're trying to address is changes in pollinator populations.

3:7:25.170 --> 3:7:30.280
Scott McArt (Guest)
Death is one thing that's important for changes in pollinator populations.

3:7:30.350 --> 3:7:42.980
Scott McArt (Guest)
But reproduction is the other important thing, and we know that neonicotinoid insecticides and other pesticides start to impact the ability of bees to reproduce before they start killing them.

3:7:43.370 --> 3:7:54.600
Scott McArt (Guest)
So therefore, if we're only considering impact on death, we're missing a major portion of risk that's relevant to changes in population dynamics of pollinators.

3:8:0.880 --> 3:8:1.190
Roy Beckford
OK.

3:8:1.200 --> 3:8:1.540
Roy Beckford
Thank you.

3:8:3.710 --> 3:8:3.920
Scott McArt (Guest)
Sure.

3:8:7.830 --> 3:8:8.390
Scott McArt (Guest)
Just further.

3:8:9.470 --> 3:8:10.80
Scott McArt (Guest)
All right.

3:8:10.170 --> 3:8:10.710
Scott McArt (Guest)
Anyone else?

3:8:18.30 --> 3:8:18.660
Scott McArt (Guest)
All right.

3:8:18.270 --> 3:8:18.860
Dwinell, Steve
I don't think so.

3:8:19.50 --> 3:8:19.580
Scott McArt (Guest)
Well, thanks.

3:8:18.870 --> 3:8:21.470
Dwinell, Steve
I think everyone has and and thank you very much.

3:8:21.480 --> 3:8:29.920
Dwinell, Steve
That was a appreciate you joining us from across the world and early in the morning and thank you very much.

3:8:29.930 --> 3:8:33.460
Dwinell, Steve
And if we have Morgan, do you have a copy of this presentation?

3:8:33.930 --> 3:8:34.360
Dwinell, Steve
Not yeah.

3:8:34.400 --> 3:8:35.860
Dwinell, Steve
OK, you can't speak.

3:8:35.940 --> 3:8:36.730
Dwinell, Steve
Yeah.

3:8:36.780 --> 3:8:37.390
Dwinell, Steve
Slide.

3:8:37.680 --> 3:8:38.400
Dwinell, Steve
Yeah.

3:8:38.480 --> 3:8:39.890
Dwinell, Steve
Yeah, send me send, send the slides.

3:8:38.920 --> 3:8:39.960
Scott McArt (Guest)
Yep, happy son slides.

3:8:39.900 --> 3:8:48.580
Dwinell, Steve
The Morgan and then if we have any additional, we're in the process of developing their recommended BMP's and if questions come up, we may uh.

3:8:48.590 --> 3:8:49.940
Dwinell, Steve
Ask additional question?

3:8:52.250 --> 3:8:52.810
Scott McArt (Guest)
Sounds great.

3:8:52.860 --> 3:8:54.240
Dwinell, Steve
Telling the public right.

3:8:54.450 --> 3:8:54.920
Dwinell, Steve
Yeah.

3:8:54.930 --> 3:8:56.730
Dwinell, Steve
So it's now we have a few minutes.

3:8:56.740 --> 3:8:59.400
Dwinell, Steve
If you wanna stay on, Doctor McCarthy are certainly welcome.

3:8:59.630 --> 3:9:6.0
Dwinell, Steve
We have a few minutes for public comment, so we have one hand up CM.

3:9:12.770 --> 3:9:13.190
Dwinell, Steve
You did.

3:9:14.260 --> 3:9:14.850
Cm
Could you hear me?

3:9:15.580 --> 3:9:16.540
Dwinell, Steve
Yes, yes.

3:9:16.820 --> 3:9:17.130
Scott McArt (Guest)
So.

3:9:17.290 --> 3:9:21.0
Cm
Charles Brass calling in Umm Scott.

3:9:21.10 --> 3:9:25.760
Cm
One of the things you mentioned, uh, that wasn't really considered.

3:9:25.770 --> 3:9:33.490
Cm
It seems like another math equation is due you mentioned that pollinators were contributing to soybean production 8 to 28% or something like that.

3:9:34.800 --> 3:9:39.290
Cm
And they're also killing the bees that are benefiting their production.

3:9:40.70 --> 3:9:40.500
Dwinell, Steve
Brands.

3:9:39.300 --> 3:9:49.780
Cm
So where does that end up as a you know, is that benefit analysis you're you're you're diminishing their your.

3:9:51.630 --> 3:10:0.60
Cm

A pollinator that's produced, you know, contributing to your crop and not making any gain by using these chemicals in the 1st place.

3:10:0.70 --> 3:10:1.680
Cm
So I'll go off from there.

3:10:3.620 --> 3:10:5.670
Scott McArt (Guest)
Yeah, that's a that's a complicated question.

3:10:5.680 --> 3:10:19.30
Scott McArt (Guest)
It's a good question and a complicated question too, so it's been assumed up until about a decade ago that that pollinators just simply aren't contributing to increases in yield in soybean.

3:10:20.600 --> 3:10:22.240
Scott McArt (Guest)
And there's good evidence for this.

3:10:22.250 --> 3:10:23.650
Scott McArt (Guest)
Yeah, or good reason.

3:10:23.660 --> 3:10:24.610
Scott McArt (Guest)
Sorry, there's not good evidence.

3:10:24.620 --> 3:10:25.620
Scott McArt (Guest)
There's good reason for this.

3:10:25.630 --> 3:10:31.780
Scott McArt (Guest)
You know most of most varieties are selfing I you know, you, you, they they reproduce perfectly fine.

3:10:32.110 --> 3:10:34.860
Scott McArt (Guest)
You know with without pollinators.

3:10:35.550 --> 3:10:57.680
Scott McArt (Guest)
But over the last decade, using new varieties of varieties that are actually used in the agriculture throughout much of the world, I people have been finding that it's actually way underestimated how much pollination by by, especially bees, will increase the size of of the soybean fruit so that so yield in soybeans.

3:10:58.570 --> 3:11:3.340
Scott McArt (Guest)
Estimates vary between 5 and 20% increase, so you know 5% increase.

3:11:3.350 --> 3:11:6.750
Scott McArt (Guest)
Not huge, but 20% increase in yield is actually quite large.

3:11:9.210 --> 3:11:14.540
Scott McArt (Guest)
So yeah, I would say that this is an emerging topic over the next decade.

3:11:14.550 --> 3:11:32.480
Scott McArt (Guest)
I expect that there's going to be quite a bit of work done on trying to understand, you know, how much yield really you you would do get from from benefits from pollination and whether we could actually even introduce managed pollinators into soybean fields to ensure good production.

3:11:33.790 --> 3:11:40.880
Scott McArt (Guest)
I exposures definitely occur to neonicotinoid insecticides and and other pesticides during soybean production.

3:11:41.310 --> 3:11:46.560
Scott McArt (Guest)
One of the interesting things that, and This is why I'm saying it's sort of complicated as well.

3:11:46.630 --> 3:11:58.500
Scott McArt (Guest)
One of the interesting things that has been coming out on this topic is that if there's a really good forage item, so if the bees have a really good diet, they got a lot of good food.

3:11:59.230 --> 3:12:5.30
Scott McArt (Guest)
They're able to tolerate pesticide exposures more than if they don't.

3:12:6.390 --> 3:12:9.780
Scott McArt (Guest)
The best work that's been done on this topic is an oil seed rape.

3:12:10.190 --> 3:12:20.480
Scott McArt (Guest)
So things like canola oil, we don't produce a lot of that in in the northeastern United States, but you're in Australia where I am and and some other places, there's a lot of canola production.

3:12:21.30 --> 3:12:38.960
Scott McArt (Guest)
There a lot of neonicotinoid pesticide exposure occurs, but it's also a massive I, you know, amount of

food that's available for for the bees and some of that food seems to, you know, improve things like immune function.

3:12:38.970 --> 3:12:41.220
Scott McArt (Guest)
It just you know, I mean it's kind of like us, right?

3:12:41.230 --> 3:12:50.100
Scott McArt (Guest)
We eat really well and we function very well, so the bees are able to tolerate higher pesticide levels when they're consuming that food.

3:12:51.10 --> 3:13:14.760
Scott McArt (Guest)
There is a suspicion that that might be occurring for soybean as well because it occurs in other crops, but no work that I'm aware of has been done that's actually looked at, you know, how tolerant bees are becoming to pesticide exposures that are in soybean compared to other crops when they have this added nutritional resource as well.

3:13:15.170 --> 3:13:20.600
Scott McArt (Guest)
So again, I'm sorry to make it an even more complicated, but it is a complicated topic.

3:13:21.80 --> 3:13:23.450
Scott McArt (Guest)
Pesticide exposures don't occur in a vacuum.

3:13:24.140 --> 3:13:38.130
Scott McArt (Guest)
There's other things that are going on as well and and that nutritional benefit you know, may whether it completely offsets pesticides or just contributes to them not being as harmed as they would be by those pesticides.

3:13:38.140 --> 3:13:39.160
Scott McArt (Guest)
I think as an open question.

3:13:47.200 --> 3:13:47.570
Dwinell, Steve
OK.

3:13:47.770 --> 3:13:48.210
Scott McArt (Guest)
All right.

3:13:47.580 --> 3:13:50.10
Dwinell, Steve
Any other, any other public comments?

3:13:54.270 --> 3:13:55.840
Dwinell, Steve
They don't see any other hands with again.

3:13:55.850 --> 3:13:56.720
Dwinell, Steve
Thank you, Scott.

3:13:56.730 --> 3:14:3.30
Dwinell, Steve
Thank you everybody for hanging on past our scheduled meeting time.

3:14:3.190 --> 3:14:8.90
Dwinell, Steve
And as we discussed more, anything you want to say no for next meeting.

3:14:8.100 --> 3:14:8.840
Dwinell, Steve
Bye.

3:14:8.850 --> 3:14:9.890
Dwinell, Steve
You'll be sending this then?

3:14:9.900 --> 3:14:11.750
Dwinell, Steve
Yeah, just keep a lookout on your emails.

3:14:12.540 --> 3:14:16.990
Dwinell, Steve
We'll kind of communicate our next steps for yeah, September and any questions.

3:14:17.180 --> 3:14:21.60
Dwinell, Steve
Yep, any information you need, Morgan, is available.

3:14:22.640 --> 3:14:22.940
Dwinell, Steve
OK.

3:14:22.950 --> 3:14:23.710
Dwinell, Steve
Thank you everybody.

3:14:24.140 --> 3:14:25.270
Dwinell, Steve
Thank you, Scott, so much.

3:14:24.710 --> 3:14:25.430
Scott McArt (Guest)
Thanks for having me.

3:14:26.330 --> 3:14:26.900
Scott McArt (Guest)
So you guys later.

3:14:26.110 --> 3:14:28.40
Dwinell, Steve
Turn off. Bye.