Jan. 21, 2021 Cotton meeting transcript

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Hi, welcome to the 2021 Arkansas cotton production meeting.

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My name is Bill Robertson, extension cotton agronomist with the University of Arkansas System Division of a cooperative extension service.

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And I'll serve as your host today. Thanks for joining us for the 2021 virtual version of our cotton production meetings.

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We've got a great program and we'll be ready to answer your production questions at the end of the program.

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The session is being recorded and will be posted on the same location where you registered.

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Before we get started, we'd like to thank Cotton Inc. for their support of our research and education program, our extension programs.

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Today's program counts as two and a half see use for C.C. A's and Arkansas ag consultants.

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The CEU’s there's a half a credit for nutrient management, half a credit for crop management, and one and a half credits for APM.

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Please remember that to receive full credit, you'll need to stay for the full event using your unique log-in.

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So at the completion of the program, we will automatically submit CEU’s for all attendees supervised their latest numbers.

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So to get your CEU’s, all you need to do is stay on for the full session.

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But as a side note, the CEU's will not be submitted until all the programs have been conducted.

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So the soybean program is the early February, so it may be in February before your CEU’s show up.

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If you have any questions, please send email to Jerry Clemens. That's j c l e m o n s at UAEX dot EDU.

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If you have any questions. So ,we'd like to welcome those of you who have attended our in-person production meetings in the past.

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And thank you for working with us on this new program format, as well as our traditional programs that we used in the past.

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For those of you who are new to our production meetings, we hope this event is informative and helpful.

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We miss seeing you face-to-face. And we hope to be able to do that again.

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But we've worked hard to make this event one that we hope you'll find helpful as you fine-tune your 2021 game plans for cotton.

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We've got five presentations to share today with updates from our extension specialist after each presentation.

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We'll take a question or two. But once all the presentations are over, we'll have a Q&A session to get to your questions.

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So, go ahead and use the Q&A box just to make questions. It's located at the bottom of your screen today.

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I'll be your first presenter and I'll be discussing variety selection.

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Hi, I'm Bill Robertson, cotton extension agronomist with the University of Arkansas System Division of Ag, Cooperative Extension Service.

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Before I began, I really need to acknowledge my crew and thank them.

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That's Amanda

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Free, Joe McAlee and Whitney Haigwood and also want to thank Cotton Inc. for their support and in both financially of my program.

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And I certainly do appreciate all the help I get from the cotton state support committee.

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If we step back and look at last year, see how we come out in 2020,

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we were down a little bit on acres and we've been on a steady stream of increased acres for the last few years.

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We were down about 90,000 acres from last year. They had us pegged it at harvest and five hundred twenty thousand acres gone in August.

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We had an exceptional crop. I really thought our predicted yields are going to be somewhere around thirteen hundred pounds.

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NASS still has is it about twelve hundred pounds? And again, that would put us at an all-time record high yield of 15 pounds from last year.

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Our production were down about little over two and a thousand bales from last year.

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You know, if we look at kind of what people are thinking about for next year, I hear people talk about as low as is.

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You know, I think we're going to be down. The low number down is about 10 percent down.

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The hard number down is 30 percent down. And, you know, with the way commodity prices are going and cotton is kind of taking a job,

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but it's really kind of following the coattails of some of the other commodities.

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But I really feel like we're probably going to be down somewhere in the 15 to 20 percent range on acres planted in 2021.

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Now, if we look and, you know, we talk about the issues on trying to be profitable in crop production for won't be profitable,

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the cotton production, I really think they our Number one limiting factor is, is soil health is soil structure.

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And so if you're not looking at cover crops or thinking about cover crops, I'd like you to think about getting cover crops on your radar screen.

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Here, we're going to talk about varieties, you know, kind of when to plant, plant populations.

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But being profitable in cotton is more than just plant in or out right varieties and all that.

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Our fertility programs, you know, we can get as close as we can to the farm for our strategy using rat at the right time,

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at the right place and the right source. When we match those sayings as best we can to the needs of the cotton crop,

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we can be more efficient with a fertility program and cut back on our rates in in and be kind of a win-win for everybody.

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Plant growth regulators. Got to be timely on those. We've got some varieties like a 1646.

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It's pretty aggressive. So we have to be really aggressive on our own or plant growth regulators.

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And, you know, sixteen, forty six is plantedg on about half the acres in Arkansas this year.

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And we were pretty aggressive on those. And I think that had an impact on our variety testing program data, especially at our county level.

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We got several folks on the program the day there and we talking about pest management.

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So we’ll skip past that and go onto irrigation, you know, most year we got to be ready to irrigate.

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Mother Nature don't give us rain in the middle of June. We're gonna have to be ready.

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To irrigate about the 18th or the 20th You know, that's why some of the years when we get some some good rainfall about that middle of June,

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that really goes a long ways toward giving us kind of our some of our record breaking yields.

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And when we make a crop, we need to try to do it in three weeks of effective bloom and effective bloom.

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Is that period from first flower to cut out three weeks, three weeks.

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So effectively and we can make the cotton that we want to make and then when we get to effective bloom or cut out,

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cut out, defines are less effective about population or our last money boll.

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Those with less, those are going to contribute significantly to you and profit and when need Terminator.

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We need a time or termination of our insecticides and other things based on our last money bolls and get our harvest stay

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down so we can get pickers in the field a middle of September so we can get our cotton crop out in a timely fashion.

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Let's look more about property selection and in look at kind of an overall strategy.

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Our recommendation is to look at about 10, maybe 15 percent of your acres and new varieties.

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You know, we've got, you know, some Bollgard three varieties that are coming along.

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I think Gus is going to talk about the need to switch to bulk our three varieties.

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So we need to be looking at those in varieties that do good in our first year program, graduate those to our second year program.

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We've got some makers that we need to budget toward those that really two thirds every farm needs to be in varieties

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that you know how they're going to work for you. And those are the ones we need to go with.

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When do we plant a recommendation is a 68 degree temperature mid morning.

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So 10 o'clock in the morning at our planning day for three days in a row.

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And on top of that, I like to have a favorable, favorable five day forecast.

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You know, the thing I like to use is looking at heat units five days after we put a planner or anvil.

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And I really like to have at least 25 heat units after after planning for that to happen.

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But, you know, I've heard Gus say many times that, you know, our recommendations and rock carved in stone, it's place to get us started.

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And I think this really fits well. And we're trying to figure out when to get the planter in the field in April.

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But it kind of is. And how when we get into May, how it just got to pull our ears back and go.

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You know, there's soon as we get into a situation, don't know what to do.

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That was kind of something to happen this year. Most of you all remember early part of May, got a cold front come through and turn off really cold.

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Well, we planted early and in Poinsett County

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That's that night is when that cold front come through. It rained that night.

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It turned off cold. We had zero heat units, five days extra planning.

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So I just knew this is going to be a great test to see, you know, what impact zero heat units five days explaining would do to our crop.

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Man, you know, when we took a stand counts, it took a little longer for the cotton to come up.

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We had overnight, you know, across all twelve varieties, we had over 90 percent of the seed we planted in the field come up is just unbelievable.

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Look at our yields. We had some of the best yields and in points that county.

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So. So, again, you know, we got a there's a lot of things going on.

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I think really our saving grace on that cold front came through it rained at night.

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Our humidity dropped down. It pushed all the clouds, all the moisture out.

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And so our sun came out. It was really cold winds that on that dark soil, it soaked that sunshine up.

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I didn't have any soil temperature data that we collected out there,

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but I really felt our soil temperature data was really good bit above our air temperature.

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And I think that's what saved us on that . We got a.

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You just got to roll with the flow and decide on agriculture, there's not many things that look like the picture in a book,

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and it's certainly one of those that did not look like the picture in a book and what our recommendations say sometimes.

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When we look at plant population, I think this pretty well covers the gamut from most people,

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where the seed dropped from thirty two thousand up to about forty nine thousand sea drop per acre when we plant.

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So when we planted that test in and points it county with Jesse Fly and Marty White,

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the field we ran was going to be a stoneville forty nine ninety.

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So Jesse is had the planet locked and he was dropping a thirty six thousand seed.

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Right. So we, we thought, you know, working with Geoffrey. Geoffrey wanted to.

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And Jesse wanted to look at a 32 to seed drop and a 40 seed drop.

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And again, you know, the 32 gets, as you know, with 85 percent germination.

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Give us about two plants, preferred row and the 36,

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about two and a quarter and a 40 about two and a half plants foot row with a 85 percent germination.

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So look at you know, look at our yield. Look at our plant population at harvest.

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We went out there after, you know, behind the picker and did some stand counts.

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And these are the stand counts we ended up with. And it worked out to be right.

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Eighty five percent of the seed we planted in the field were plants that we harvested into the year.

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Not a bit of difference in in in late yield. So if we look at dropping from forty thousand, the 32000 seed drop,

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that's a 20 percent reduction in the seed it in and no difference in that, you know, statistical Davidson.

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Any of those. So where do we go to get our variety test information?

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Dr. Bourland puts together the Arkansas Variety Test publication.

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It's available online and also an ad is part of our county production.

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We include all of our counties in our and our large block county trials.

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Here we got a picture of Craig Allen and his team.

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I got a picture, It’s an old one. Mike Hamilton, back when he used when he used to be a county agent and had work for a living here.

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When we look at twenty-twenty. What we had we had 12 different varieties across multiple locations.

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And what I did. Of all the locations that we had, all twelve of those we'd looked at the ranking.

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And then overall, on the on the right side, we ranked those with our average ranking.

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And so we see that that Delta Pine 2012, when we go across here, had the lowest average ranking of three point six seven.

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So that's why it's on top. So the ranking is the average ranking goes up.

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We move down. And we also looked at loan rate and income per acre.

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So we would just look at those numbers here again, is this the average ranking across all locations in the yields that go with it?

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I think it's interesting that the diner girl, that 34, 56, had a higher yield.

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It had the highest yield of all the rides we looked at, but it was a little more variable in different locations than 2012.

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So I had a little bit higher average ranking. But but look at the difference in EnLink yield, especially if you look at the top.

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I like look at the top 10. There's very little difference in EnLink yield.

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And we come over, we look at our loan value with the program from Cotton Inc., the loan rate, the loan rate calculator.

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We took loan. The loan rate times the lowest yield and come up with the income per acre and know from the top variety.

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Now, especially these top 10, there's only about 50 dollars difference in an acre.

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So these properties are all really tight. So these these all these properties are really pretty good.

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2012. You know, the thing the thing I like about that is pretty early, Materne, Variety, kind of, you know,

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one to get in and get planted early and go on the class of, you know, talked about the 30 456 looking good.

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Baeza with Frank. Frank Rose the other day and they were doing had a lot of their seat production in Texas, had a cold front come through real early.

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And the, the cotton, their seed production kind of took it on the chin with with a lot of immature.

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So I think their seed supply is going to be pretty tight. The twenty twenty.

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That's a Variety. I really liked the way it looked all season long. It's, it's, it's one I think it's a lot of places.

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The twenty, thirty eight I really feel like is a little bit lighter than the Delta Pine.

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Sixteen, forty six in you know when we planted it early and got it in I think it did well us it just seemed

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like to me it was a little more bearable than the sixteen forty six the stall of forty five fifty.

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It's, it's a pretty forgiving ride.

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It kind of reminds me kind of something like a Delta Pound fifty because they'll probably do is a pretty forgiving variety.

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You know, I really liked that. But it again, it's not it's not a extant flex cottin and some people are really want to extend flex time next year.

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And forty nine thirty six is very responsive to peaks.

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In fact, there's a lot of places I feel like if we had a little more plant that we might have done a little bit better on yield.

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I really think that, you know, if I was looking at a set of varieties isn't put behind peanuts at forty nine.

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Thirty six might be one and I'd kind of look in there and come down here to the bottom, you know, again,

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there's not a lot of difference from the top to the bottom, but the forty nine ninety and look at the vintage in four hundred right above that.

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Those are two varieties, especially the forty nine ninety.

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When I look at that and farmer fields, a visit with consultants,

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visit with growers and when that variety was made and managed picks and otherwise for the forty nine ninety I think,

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I think it looked better than what kind of what we're seeing right here.

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Again a lot of these tests are in a field of sixteen, forty six and we had sixteen, forty six picks on it.

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And I think that's a little too much picture some of these writings. You know, when you switch over to Dr. Bourland’s test again,

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that's another thing he talks about it all the varieties are a winner is they have to win a lot of tests to get this far along.

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And so, you know, Dr. Bourland primary focuses on, you know, how to how do these varieties perform in Arkansas?

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So how do they differ, how these writings differ? You know,

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the main thing we're going to be looking at today in this presentation is the difference in transgenics and kind of how they've evolved over time.

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And then in them looking mostly at yield. So if we look at again, is the cotton Variety test information, see where that's available online.

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Encourage us to look at that. Now, how these writings changed over time.

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We see, you know, we go back years, eleven years, a date on this slide in 2010 and we were real heavy in the Bollgard to Roundup flags.

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And we kind of kind of got out. They got to where it is pretty hard to grow cotton in Arkansas.

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We couldn't spray glyphosate over the top. And you see, with the extent flex varieties were still have pretty how reliant on the Bollgard 2s.

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But, you know, the Bollgard 3s are really, really coming along and we're seeing more acres, those planted.

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I think we're going to continue to see a big shift. We look at Toine link between genes and that we look at to Gene versus three gene.

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You know, we see kind of a shift that we're making in those three gene varieties which strike, you know,

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not not looking at any watch strike in about 10 percent of our acreage or in one strike three this year.

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You know, we look at it how our dominant Varieties's have changed over time.

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I went in and, you know, starting in 2013 or top Variety was was was founded in nineteen forty four is kind of it was kind of the

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last year that was ranked number one in ranked number two in 14 and kind of dropped off the scale.

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When we step down and look at it, Stoneville. Forty nine. Forty six. It really jumped out there.

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It wasn't in the in 2013 one even in the top five,

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but it jumped up to number one and it was a pretty dominant variety for a long time in it and in it,

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you know, the varieties, they come and go pretty fast nowadays. The next variety.

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Our number one riding, you know, came on board. It's a class of fifteens. First year we planted it was in 15.

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It was the fourth most lively planet variety. And it rode in at number one spot for about three years.

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And it is starting to drop off. And I think the the fate of the Bollgard to ride are going to want to tell the tale on that one.

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Our next number one, Variety, was the 16 46 Haniyah seat.

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Supply was really low in, you know, when when that came out in a class of 16.

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So we didn't have very many acres of that. And we then we saw that, you know, they told us that that property was too late for us and we found it.

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It's it's it's a lot earlier than at forty six number on an indicator.

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00:22:17,000 --> 00:22:21,000

And it's been a good Variety for us, looking at another variety.

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00:22:21,000 --> 00:22:25,000

You know, the seventeen, twenty five has been one early in the term. Right.

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00:22:25,000 --> 00:22:31,000

If it's really good for a lot of people. But again, I think our Belgard two varieties are kind of the day.

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00:22:31,000 --> 00:22:35,000

The days are numbered on those and we'll be shipped into the Bollgard three varieties.

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00:22:35,000 --> 00:22:41,000

So if we look at the at the top varieties that were planted in Arkansas,

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00:22:41,000 --> 00:22:46,000

the top five varieties accounted for about 82 percent of the acreage in Arkansas.

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00:22:46,000 --> 00:22:52,000

See kind of where their yields were. And Dr. Bolen's test, sixteen forty six.

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00:22:52,000 --> 00:22:56,000

There's 51 varieties in its testing program. It came in number twenty one.

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00:22:56,000 --> 00:23:04,000

We all know that, you know, 16, 46, that we do the right things on that, that it's got to top in that it's really well.

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00:23:04,000 --> 00:23:08,000

And, you know, with with 51 varieties, it's hard to do. Yeah.

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00:23:08,000 --> 00:23:11,000

You can't do everything perfect for everybody.

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00:23:11,000 --> 00:23:18,000

And that's kind of kind of a reflection on how that Variety will fall out if if we don't do everything right.

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00:23:18,000 --> 00:23:24,000

So it's really important to get on top of with peaks and stay on top of and kind of see where some of the riders are.

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00:23:24,000 --> 00:23:29,000

Seventeen, twenty five. It's one. It's always done really well. And Dr. Born's program, it's pretty early, Materne Browdy.

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00:23:29,000 --> 00:23:32,000

And we kind of see where some of these other riders fall.

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00:23:32,000 --> 00:23:40,000

When you go in and look at Dr. Ball's data, you'll remember that, you know, there are more Sandy locations up at Menella, Claes or Haiveta Soil.

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00:23:40,000 --> 00:23:47,000

If we're needing to look at how Ryze compare to one another in Hobart, will situation jet heal is a good place to go.

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00:23:47,000 --> 00:23:55,000

You know, as you move further south, get into Marijana, kind of a mid part of the state is is our location, Erin,

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00:23:55,000 --> 00:24:04,000

southeast Arkansas down at or, you know, as our as our growing season gets a little longer as we move down south.

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00:24:04,000 --> 00:24:09,000

If we look at Dr. Boringness Testing Program and look at for all the varieties that, you know,

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00:24:09,000 --> 00:24:16,000

the rise, the top prize that he has to your data on, again, the number one, Variety is's 1725.

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00:24:16,000 --> 00:24:23,000

Number two is the thousand four hundred forty five fifty in 2012.

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You know, those all those four varieties. The thing they have in common, they're pretty are materne varieties.

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So. So it looks like the earlier material writers are the ones that maybe do better in his test.

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Dr. Bohlen, then have to your data on the 2020. See, here's where the 2038 come in and see kind of how they play.

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They line out with with the other varieties. We've talked about a lot of these here.

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00:24:48,000 --> 00:24:53,000

Just just a few minutes ago. So if we look at it, varieties that are worth a look.

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00:24:53,000 --> 00:25:01,000

You know, the data grow the 34 56. I don't think there's going to be very, very much seed supply, but certainly one that deserves a look.

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00:25:01,000 --> 00:25:06,000

We've got the 35, 50 are the 35 35 that's up in that category.

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00:25:06,000 --> 00:25:13,000

Thirty seven. Twenty nine. It's kind of been one. It's skin kind of, you know, then, you know, looks pretty good fast and a lot of places.

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00:25:13,000 --> 00:25:18,000

Sort of a forty nine. You last year was the first year I really had a good look at that.

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00:25:18,000 --> 00:25:25,000

It's a real showy variety. And I think, you know, when we manage the forty nine ninety four forty nine that I'm not sixteen,

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00:25:25,000 --> 00:25:30,000

forty six I think is going to be a better mature, better looking variety vase.

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00:25:30,000 --> 00:25:36,000

Talked about the forty nine thirty six for I'd like to place it. Forty five fifty is pretty forgiving Variety.

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00:25:36,000 --> 00:25:42,000

I'll tell you what, if I've got nematodes you know the and 400 is going to be certainly real.

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00:25:42,000 --> 00:25:53,000

How Malleus if you look at this year's Browdy test at the county location and actually counting yet heavy, heavy rainfall and pressure.

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The thirty nine ninety was the top right down there.

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And when I visit with some of the footage and people when they have havey nematode pressures of thirty nine,

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an animal out to the 400, but most town the forerunners going to go to outdo the thirty nine ninety.

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But and I worked with a grower in law county this year that had in 1880 planted soybeans is nematode or surveyed.

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I think he only cut about 20 20 bushels last year in 2020.

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00:26:20,000 --> 00:26:27,000

You playing a thousand four hundred made twelve and a half on only on his cuts.

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00:26:27,000 --> 00:26:31,000

Really pleased with that. Got some a couple early Materne.

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00:26:31,000 --> 00:26:37,000

Varieties's here to look at it again with the kind of the old standby.

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00:26:37,000 --> 00:26:42,000

And I really feel like we're probably still going to be a lot of sixteen, forty six planted in Arkansas.

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00:26:42,000 --> 00:26:48,000

But again, this Bollgard to thing is something that we need to think about looking at shifting away from.

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We go into the Bollgard three U.A. two to two, certainly unplanted conventional Variety.

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That's going to be pretty high on my list. On own what plant.

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00:26:58,000 --> 00:27:04,000

So to wrap up for Variety selection know we need to have four or five proven Varieties's from early,

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00:27:04,000 --> 00:27:08,000

mature and later material to spread our risk and maturity across the farm plant

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00:27:08,000 --> 00:27:12,000

to new varieties like those on about ten to fifteen percent of the farm.

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00:27:12,000 --> 00:27:18,000

And we've got to play some early maturing varieties on the front end so we can try to have a picker

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00:27:18,000 --> 00:27:22,000

in a field mid-September so we can try to get out of the field and again go to the Web site.

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00:27:22,000 --> 00:27:31,000

Look at Dr. Bolen's day to look at the county data and give that a study that that fits for your particular location instances.

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00:27:31,000 --> 00:27:35,000

And look at some of the Variety tests from across the river.

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00:27:35,000 --> 00:27:42,000

You know, there's excellent data come out of out of out of Tennessee, out of Missouri and Mississippi that were there.

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We can kind of look far. You know, we're kind of close just across the river that we can look at some day to get a good indication what's going on.

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00:27:49,000 --> 00:27:55,000

So with that, appreciate your Teach-In and I hope you enjoy our virtual cotton production meeting.

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00:27:55,000 --> 00:28:04,000

And and with that, I'll conclude my presentation.

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00:28:04,000 --> 00:28:13,000

Well, I thought that was an excellent presentation (laughs) But I do wish that that I caught myself when I talked about the FM 1944.

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That’s Phytogen. That’s Phytamix.

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00:28:16,000 --> 00:28:26,000

But anyway, again, I'd like to remind everyone to use the Q&A box to some meeting questions you might have about a researcher hearing today.

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And after all the presentations conclude, our presenters will be on hand to answer your questions.

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So so up next is Matt Frier, our extinction soil health educator, to discuss fertility.

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And while we're getting switch that, I'd like to note that Dr. Bourland, we we dated some years information on the right tasting Web site.

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So up until today, we just had is yield old information.

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But we got this whole data set up now. So the next step is Matt.

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00:28:58,000 --> 00:29:07,000

Well, I'm excited to be with you today to present some data collected by Doctors Wilson and Mozaffari’s Cotton Fertility Work.

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00:29:07,000 --> 00:29:13,000

And so my name's Matt Fryer, soils instructor for the University of Arkansas System Division of Ag.

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And so just moving right into just some basic soil fertility, one to one.

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I wanted to touch on this just to remind us of some things that we can sometimes forget, but they all play a big role in our production practices.

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So the first thing I'd say is that our recommendations are built, are made on a build and maintain philosophy.

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And so what that means is we're going to maintain our current soil test levels by replacing what the crops are moving in the harvested portion.

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And then we're going to add a little extra to that to to build lower soil test levels to an optimal level where we expect crop yields to be maximized.

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And so something else I'd like to point out is that in general, as soil test levels increase,

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regardless of the nature, whether it's phosphorous or potassium.

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00:30:10,000 --> 00:30:17,000

The magnitude of yield response and the frequency of yielder responses decreases as well.

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And so that that all makes sense, that they're Soltis levels go up, so do our yields.

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00:30:22,000 --> 00:30:28,000

And there's always a law of diminishing returns and (?), for soil fertility as well.

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00:30:28,000 --> 00:30:34,000

And so you get more bang for your buck for that first amount of fertilizer plot.

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And so what I mean by that is, you know, if you apply 50 pounds of potash, it might give you a 10 bushel yield return for that application.

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00:30:44,000 --> 00:30:50,000

But the next 50 pounds may only give you five bushel or two bushel yield return.

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00:30:50,000 --> 00:30:59,000

And so I always like to use food analogies. And so that second third hamburger is never as good as the first one.

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00:30:59,000 --> 00:31:11,000

And so remember that we're making decisions in tight years where we can't afford to put out everything that's needed.

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00:31:11,000 --> 00:31:19,000

The next point is very crucial, but is often forgotten is that most nutrients are taken up via water and most nutrients … .

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00:31:19,000 --> 00:31:27,000

And so if water is not present in the soil, a lot of our soil nutrients that plants need are not going to be taken up.

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And so just keep that in mind.

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I wanted to show this as well, this is just the amount of nutrients removed in our horror's and portion of the cotton plan.

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And so just want to direct your attention to this second or the last and second to last column here at the bottom.

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00:31:49,000 --> 00:31:57,000

Total pounds of P to 05 removed. Three thousand pounds. Cotton crop is about thirty three pounds, A, B to five.

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00:31:57,000 --> 00:32:05,000

And that's that's not pounds of fertilizer, but P to A five and K to the amount of K to O is about thirty six pounds removed.

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00:32:05,000 --> 00:32:10,000

And so when we look at our. You have a fertilizer recommendations.

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00:32:10,000 --> 00:32:14,000

We have a. Phosphorus on top of the table.

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00:32:14,000 --> 00:32:17,000

Potassium recommendations on the bottom.

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00:32:17,000 --> 00:32:27,000

And this first column here is going to be our very low soil test levels than low, medium and an optimum and above optimum in the last column.

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00:32:27,000 --> 00:32:34,000

And so you can see when you look at our soil test potassium. We have an optimal.

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00:32:34,000 --> 00:32:37,000

Recommendation. It's optimal soil test level.

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It's a it's a small recommendation, but that is just to replace with the crops for moving to maintain our Soltis levels at the optimal level.

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And so moving into some of the data, this is a large table.

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00:32:52,000 --> 00:33:02,000

A lot of numbers and the following few slides will look similar and some won't take some time to set this up and it kind of simplify things.

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00:33:02,000 --> 00:33:05,000

So the first column is going to be our fertilizer rate in this case.

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00:33:05,000 --> 00:33:16,000

It's going to be P to 05 for this slot. The next. And then the sites are across the top with our yields and (?).

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00:33:16,000 --> 00:33:19,000

And then the third to last column is going to be our P value.

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00:33:19,000 --> 00:33:26,000

And so this number is important because it tells us how confident we are that we can reproduce the

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00:33:26,000 --> 00:33:32,000

results of this of this study or how confident we are in the numbers that this study gave us.

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00:33:32,000 --> 00:33:39,000

And so. The smaller the number, the more confident we are, and so if this number was point zero one,

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00:33:39,000 --> 00:33:46,000

we would be 99 percent confident that we can reproduce this and that this is what's gonna happen.

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00:33:46,000 --> 00:33:56,000

Not an option. The. And so the next point I want to bring out is this last second to last row is going to be our soil test level.

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00:33:56,000 --> 00:34:05,000

A-oh, V-oh, AM, and all those stand for very low, low, medium, optimal and above optimal soil test categories.

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00:34:05,000 --> 00:34:08,000

And so again, just just.

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00:34:08,000 --> 00:34:17,000

To state the obvious and our very low and low soil test categories, we expect to see yield increases when we get to that medium category.

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00:34:17,000 --> 00:34:22,000

Expect the expectancy, the sealed sea, that yield response greatly diminishes.

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00:34:22,000 --> 00:34:27,000

And we don't really expect to see anything in the outcome above all categories.

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00:34:27,000 --> 00:34:32,000

Now we have (?) on the last row. And so.

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00:34:32,000 --> 00:34:40,000

You can see that these columns that are in bold are going to be the size that we had strong, significant yield responses.

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And you can see that in about half the time here correlates to our very low and low soil test categories.

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00:34:47,000 --> 00:34:58,000

And so that yield difference is looking to be about 500 pounds, depending on depending on the phosphorous rate.

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00:34:58,000 --> 00:35:04,000

Great. Even greater. Really high rates that aren't usually applied.

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00:35:04,000 --> 00:35:12,000

So when we look at the same studies for twenty nineteen same tables set up the same way,

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00:35:12,000 --> 00:35:22,000

even at our low and very low sides, we're not seeing any statistical yield responses to phosphorus.

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00:35:22,000 --> 00:35:32,000

Want to move on to look at the potassium studies table set up the same, except we have an extra row here with LSD.

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00:35:32,000 --> 00:35:41,000

And those numbers tell us the least significant difference. So at this site here, the second column,

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00:35:41,000 --> 00:35:50,000

the least significant difference for a treatment to be different than another is one hundred sixty eight pounds of C cotton.

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00:35:50,000 --> 00:35:53,000

And so you can just kind of look and see that.

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00:35:53,000 --> 00:36:04,000

From our zero K to all rates to our 50, we've got significant responses at every site and at two out of three from our 50 to 100,

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00:36:04,000 --> 00:36:17,000

we have a significant response, a significant increase. And so all of our low and variable sites and 17 and 18 showed us positive yield responses.

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00:36:17,000 --> 00:36:23,000

And that's what we would expect if they sold US levels. But when you look at 20, 19.

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00:36:23,000 --> 00:36:29,000

We've got a medium sized that could have showed a positive response, but didn't.

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00:36:29,000 --> 00:36:38,000

But the again, the low soil test potassium science showed us positive yield responses and so pretty drastic yield increases,

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00:36:38,000 --> 00:36:51,000

as you can see when you look at alarming contestation, one sided in the second column from zero to 50, nearly a thousand pound increase in yield.

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00:36:51,000 --> 00:36:56,000

And then it is a definitely significantly increased from 50 to 100.

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00:36:56,000 --> 00:37:01,000

And again, it, uh, one of the sites, um.

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00:37:01,000 --> 00:37:06,000

We don't see that significant. You'll jump from 50 to 100.

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00:37:06,000 --> 00:37:13,000

But we certainly see it from zero to 50, it always low testing sites.

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00:37:13,000 --> 00:37:21,000

And so when you when you graph this information for potassium sites, when you graph the plots,

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00:37:21,000 --> 00:37:27,000

they received no fertilizer and compare it to the highest yielding plots in the study.

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00:37:27,000 --> 00:37:31,000

This is what you get. We've got on this vertical axis is our relative grain yield.

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00:37:31,000 --> 00:37:42,000

And so this is the yield. Relative to the highest yielding plot, and then we have our sole test potassium level on the x axis.

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00:37:42,000 --> 00:37:49,000

And so as you can see, like I said earlier, as soil test levels increase, the magnitude of response decreases.

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00:37:49,000 --> 00:37:55,000

So with no fertilizer applied, we would get over here above 130.

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00:37:55,000 --> 00:38:02,000

Most of these, sites, around 90 to 100 percent of the of their potential and Grania within.

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00:38:02,000 --> 00:38:10,000

We always have signs like this down here around this 150. You can see that point there close to that 150 p.m.

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00:38:10,000 --> 00:38:15,000

And it makes a scratch or a and why is that site only given us about 80 percent of

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00:38:15,000 --> 00:38:22,000

its potential when it's in an optimal or above optimal category for potassium?

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00:38:22,000 --> 00:38:30,000

And I think, you know. If you've been around long enough, you've seen potassium deficiency symptoms and cotton.

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00:38:30,000 --> 00:38:36,000

And sometimes you've seen it and feels it has soil levels that are again off (?) out like that.

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00:38:36,000 --> 00:38:43,000

Datapoint showed us in that graph where we've got where our soil test tells us we have enough potassium.

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00:38:43,000 --> 00:38:49,000

But in season our crop tells us otherwise. Or where we've applied the recommended rate pre plant.

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00:38:49,000 --> 00:38:57,000

But we're still seeing deficiency symptoms. And so it makes us scratch your head and ask what's going on.

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00:38:57,000 --> 00:39:02,000

I really think what's going on is, is the fact that soils are complex.

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00:39:02,000 --> 00:39:12,000

And this whole presentations thus far, we've talked about the chemical aspects of soil, the nutrients and exchange capacity that soil pH.

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00:39:12,000 --> 00:39:19,000

But we've failed to neglect or failed to mention the physical properties and the biological properties.

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00:39:19,000 --> 00:39:26,000

Nearly all those have been introduced somewhat to the physical properties. We know about compaction and bone density.

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00:39:26,000 --> 00:39:31,000

But we sometimes get confused. We might not be able to connect the dots on.

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00:39:31,000 --> 00:39:35,000

Well, what does that mean for my field? Was that had to do with anything?

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00:39:35,000 --> 00:39:44,000

And then I think even fewer of us are. Well versed with the bar biology, the biological parts of the soil.

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00:39:44,000 --> 00:39:49,000

And rightly so, they're they're very complex and they're very volatile.

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00:39:49,000 --> 00:39:54,000

And what they want information they can give us their lifespans very short of the month.

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00:39:54,000 --> 00:39:57,000

A lot of microbes in the soil.

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00:39:57,000 --> 00:40:05,000

So it's really hard to to gauge and learn anything relative to our crop or yield responses from the biological side of things.

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00:40:05,000 --> 00:40:09,000

But one thing's for certain is that we cannot improve our soil,

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00:40:09,000 --> 00:40:15,000

physical properties without the biological without those soil microbes in living roots growing in the soil

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00:40:15,000 --> 00:40:22,000

to create those glue that holds soil together and improve water infiltration and reduce bone density.

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00:40:22,000 --> 00:40:25,000

And we know that all this is connected chemical properties,

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00:40:25,000 --> 00:40:34,000

effective biological because many microorganisms can't live at certain nutrient or certain soapy h.s.

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00:40:34,000 --> 00:40:38,000

And we know that the physical properties affect chemical properties.

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00:40:38,000 --> 00:40:44,000

And so like I said earlier, nutrients are taken up by the plant in water, most nutrients.

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00:40:44,000 --> 00:40:50,000

And so if we don't have water infiltration past six inches and we don't have nutrient uptake pass six inches.

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00:40:50,000 --> 00:40:59,000

And I think that's really the situation that we have when we have potassium deficiency symptoms in season

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00:40:59,000 --> 00:41:07,000

in a field that has above optimal salt as levels or as had the recommended rate of fertilizer applied.

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00:41:07,000 --> 00:41:14,000

And so take a look at your field when you're irrigating in season. If you don't have water, we can stop your beds.

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00:41:14,000 --> 00:41:23,000

If if your furrows are slick and over and water down at the end of the field, go dig a hole and see how deep, deeper waters soaking in the ground.

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00:41:23,000 --> 00:41:30,000

If it's only going for six inches to that hardpan, then most your roots are only that deep.

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00:41:30,000 --> 00:41:38,000

And so I think we're really handcuffing. Our crop, when when we don't manage for sole physical properties as well,

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00:41:38,000 --> 00:41:46,000

and there's things that you can do to improve that and cover crops and different different management systems.

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00:41:46,000 --> 00:41:51,000

No, and it's all you know.

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00:41:51,000 --> 00:41:56,000

It has to all be included when we when we try to manage our systems.

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00:41:56,000 --> 00:42:01,000

We've got to realize that solar is a system. It's not just the chemical, it's not just our routine.

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00:42:01,000 --> 00:42:05,000

Soltis. There's more to this system than we can manage for.

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00:42:05,000 --> 00:42:11,000

And so you really have two options you can either manage for it or you can continue to spoon feed and season.

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00:42:11,000 --> 00:42:15,000

And some are successful doing that. And if you are, then then then keep doing it.

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00:42:15,000 --> 00:42:22,000

But. But some of the some of the research has shown here.

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00:42:22,000 --> 00:42:28,000

But Dr. Wilson, those far that it's some science we see yield increases at others we don't.

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00:42:28,000 --> 00:42:33,000

And so in this graph bar graph, we've got seed yield on the left side.

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00:42:33,000 --> 00:42:40,000

Gotten yield and then our side on the x axis. And so these sites.

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00:42:40,000 --> 00:42:50,000

Preplanned or preplanned fertilizer plot, and then an additional 60 pounds applied after squaring and before first flower.

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00:42:50,000 --> 00:42:53,000

And so you can see some science has significant yield responses,

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00:42:53,000 --> 00:43:01,000

as indicated by the Asterix and then other science indicated by the NHS were not significant.

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And so we can see some yield increases, dances and applications,

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especially in fields where our root system is limited to hard banzer for ranch's water, not so open in the ground.

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This is another study for your study at one location that Dr. Bill Robertson and Amanda FRE conducted in Points at County.

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And they did a little bit different applications where they had early timing, which was at four to six leaf cotton, where they applied.

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Potash, and they applied a late application at about a week before first flower.

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And then they compared that to preplan only application. And so they didn't have any statistical differences at this site.

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Among years. But. The trend is is toward.

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Increased yields when we spoon feed and this conventional to a system where we're not managing for for the other properties of ourselves.

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So just in conclusion. Phosphorus deficiencies are rare.

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Except and soils that are very low in phosphorus.

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And so I think that's that's. Pretty well-known.

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Next is a positive potassium Ferlazzo responses are probable.

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If we have less than a hundred parts per million potassium in our soils and so.

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And so that's a key thing to remember, especially if we've got, again, limited root systems in K applications can increase yield to some size.

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And just like I've been saying, Soheil, factors managing for physical and biological properties.

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Look at where your water is going. That can tell us a lot about.

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About the nature and status, potential nutrient status of our crop in season and what's gonna happen.

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Here's my contact information in case you've got some questions that we don't get to before we finish up here today.

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Thanks for your time and I hope it was beneficial. All right.

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00:45:17,000 --> 00:45:25,000

Thanks, Matt. I want to remind everybody, if you have any questions, please, Zardoz to the Q&A box.

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We had one question that I'll go ahead and address. This program is being recorded and it's going to be posted on the same Web site with extinction.

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Were where were you registered for this particular program and for the other programs.

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But again, go ahead and submit your questions. Next on the agenda is Dr. Tom Barber.

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He's extinction weed specialist. Tom will discuss weed management in cotton.

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Hello, this is Tom Barber, extension wait scientist with the University of Arkansas System Division of Agriculture.

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Today, as a part of our Cotton Winter Production Meeting series,

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I'm going to be talking to you about cotton we control and some different programs

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that may be beneficial on your farm and help it manage in many different ways.

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But mainly Palmer Amaranth is what I'm going to be talking about today. And if we look at Palmer Amaranth.

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Over the last several years, we gained resistance in that we in particular weed species to several different herbicide modes.

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Of action, and I've got them lifted listed here on the left hand side,

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our DNA or yellow herbicide, such as Prowl, Treflan, , ALS herbicides glyphosate.

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In 2010, we had widespread glyphosate resistance across the state and that is continued for the last 10 years.

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More recently, since 2015,

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PPO resistance has increased across the state and you can see the spread in the map to the right with these red-shaded counties in those counties.

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We have confirmed PPO resistance, so herbicides such as Flex Star or Formesathen, Sharpen, Valor, etc. Those are PPO,

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Herbicides. Metolachlor in the same map where we have the county shaded in black in those counties.

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We have identified populations of Palmer that are resistant to Metolaclor or group, the group fifteen classic chemistry.

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So that's a little more recent. In addition, we use most of these herbicides in corn, but the HPPD here shaded in blue post tolerance.

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We've identified in several counties in the map on top into the right with the counties are shaded in blue.

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Those populations have not have been identified to be more tolerant from a post tolerance standpoint to our HPPD herbicides.

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Now, recently, this past summer, I got several calls from growers and consultants in northeast Arkansas,

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went to a few fields and collected some pigweed seed and currently have three populations growing in our greenhouse

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that viable with our we team folks inl taking care and doing some screening on those populations.

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But these pictures are palmer, one particular population of Palmer, Amaranth.

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In response to Gluyphonsinate or Liberty.

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And if you'll look across the bottom, it's just a right titration of Liberi, right from 16 ounces to thirty two ounces,

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which we'd consider a standard feel right all the way up to eight x of that or 256 fluid ounces per acre.

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Obviously we're very concerned about what we see in this particular picture.

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No. One at 32 fluid ounces. We didn't kill many of the pig.

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We did in the flat, if any, maybe be a couple. However, with an eight x ray of that, we killed a lot.

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But we still have some survivors. And so we're making another run of these in the greenhouse or another replication.

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Looking at the top potential tolerance of this and other potential pigweed, populations to glufonsinatee.

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And you'll hear more about that in the future from us. I think we should they should have the run sometime by middle of February.

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So be on the lookout for more information on these particular populations.

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You know, seeing those results from glufonsinate remind me how very important it is to diversify our herbicide system, our production practices.

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We need to start now if you're not started. It's crucial that you get a game plan together for this next season.

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We have very few herbicide modes of action that pigweed has not shown some tolerance to either here or in other states across the US.

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And so. No one that we also know that we have very few herbicide modes of action that are going to be developed in the very near future.

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And so within the next five or even six or seven years, we might not see a new herbicide motive action.

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We know FMC has got one for pigweed and we look forward to hopefully getting our hands on that at some point in the future.

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But regardless,

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cultural practices and non-chemical practices are going to have to become the foundation of our weed control programs in cotton and other crops.

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Serial rye, deep tillage, narrowing our row spacing.

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That's hard to do in cotton, but it's possible in other crops earlier planning dates.

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Again, that one is hard to do in cotton just because cotton looks up come looking for a place to die.

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And so the earlier we plan in a cool window, we're not going to have much luck getting the boot and keeping a good stay in there.

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But we can sanitize regardless of the crop we grow. We can sanitize our equipment when moving from farm to farm, our equipment, yards or ditches,

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our turn roads and prevent c prevent pigweed from going to sea to prevent seed production.

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Crop rotation is a good cultural practice to key on in terms of managing resistant weeds,

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optimizing our herbicide application rates, making sure we deliver the rod right to the acre.

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To give us appropriate control. Seed bank management is the biggest one, in my opinion, out of all of these.

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I mean, all of these do the same not the same thing, but they all move towards more seed bank management.

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And so we're focusing on not returning Palmer Amaranth seed to the soil.

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Basically, we want to zero out the seed that is falling to the soil each year if possible.

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And so we know a polymer has a weakness. It is definitely in seed longevity.

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And we have data that says, you know, three to four years might be all that Palmer, Amaranth, so you can survive in the soil.

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So we need to focus on seed bank management and reduce the numbers going back to the seed by each year.

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And to do that, we've started a graduate student project, the fall of 2018 with Roger Farr.

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He's a master student of this particular study was funded by Cotton Inc. State Support Moniess.

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But it's just a partnership with myself and Dr. Norsworthy and with Roger far beyond the primary responsibility agent for this project.

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But integrating weed management strategies for Palmer Amaranth management in Arkansas.

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And so what we wanted to do this is a very large study, takes about 10 acres each location that we do this, but a zero tolerance platform again.

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Where we go in and remove Palmer, Amaranth that have escaped somewhere between 70 and 80 days after planning the first year,

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we did it at seventy seven versus not doing that.

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So allowing those see those plans to go to see an increase in the seed bank with the each one of those, we want to look at the tillage.

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So how much effect can running one year a mow more plow in the fall.

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About eight inches deep. And so we did that in twenty eighteen versus not doing that.

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This is not a no till system. It's a reduced till system.

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But we just didn't use the deep tillage in this where we have NO2 here.

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So we're just compared. No date tillage with these tillage. In addition, we put cover crops versus no cover crop within one of those.

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Each one of those factors. So we wanted to see the effect a cover crop might have or not in each particular scenario.

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So each one of these can be separate. But basically, we'll have a zero tolerance where we don't beat two versus where we do.

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And then within each one of those will either have a cover crop or we won't.

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And then we'd break it down further by Harborside and where we don't include a

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Dicamba at planning approved doc formulation that planning or whether we do.

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And we know in previous years we've seen some benefit, especially if we don't get that active,

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any rainfall to use an approved dicamba formulation at planning and in our extreme crops.

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And just briefly, look at some of these data.

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And again, this is a system that we're not really gonna know what's doing the best until we use this of our value system for over five years.

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And so we've only had it in the field for two years. I gave one start in the fall of 2018, but over here.

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Blue bars represent 2019. Orange bars represent 2020.

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Yes, we did. (?) handweed. No, we did not. And you can see the big effect from handweeding.

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Just in that first year, we had a sixty three percent reduction in the amount of Palmer Amaranth plants that emerged throughout the season.

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What about till, as we mentioned, the (?)

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thus varying all the Palmer seed at the top underneath about a six to eight inches in soil

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Well, where we did it the first year, these blue bars bean and (?)the second year where we did it,

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we reduced that population of emerge plants 73 percent just by running a beat tillage event.

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And this would be something that we might have to do every three or four years.

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If we incorporate this in a program, it's not something we would do every fall in a particular of field.

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What about that dicamba application with our pre emerge?

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We put Cotoran down as a base for all of our herbicide evaluations that we made within these cultural practices.

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The first year, these are blue bars, but they represent 20, 20, not 20, 19 and 20, 19.

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We didn't see any benefit from polymer pigweed control, including Doc Kamba at planning.

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But in 2020, we did 20, 19. We didn't 20, 20, we did.

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And the reason we saw it so big in 2020 was because of the dry spell we had.

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Shortly after planning. So we went of 10 to 14 days without a rainfall and activating rainfall on our Cotter end.

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We had pigweed that can emerge in that tongas. We had enough moisture, but we didn't get good activation of that herbicide.

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In that scenario, Doc Hambo can protect his own pigweed emergence.

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And so I think it's crucial to have in our extreme crop system more or less in the insurance application,

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if nothing else, of dicamba up front with our residual controls and where we didn't use it.

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Five hundred twenty five percent increase in polymer amaranth emerge.

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What about cover crops and I don't have a slot here comparing cover versus no cover on sheer

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polymer emergence because we didn't see much on that when we average over all the other factors.

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But what we did see when we look at net profit, so the first year, again,

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net profit similar regardless of where we had to cover, not because of the dry conditions.

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I believe the second year we saw a benefit of having that covered crop in terms of

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net dollars per acre received over not doing what you'll see right here in this old.

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We know that cover crops can reduce pigweed numbers and increase success of our harvest programs just based off of several years of evaluation.

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But it can depend on when you terminate your cover crop.

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And I know a lot of people will terminated for weeks or even earlier than that, four to five weeks before planting.

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I know people that that will terminate it well after they've planted.

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And so there's a wide range of when you look at growers and what they're doing, there's a wide range of management practices there.

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What I can tell you is if you're doing this for weed control,

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we need more biomass than what you see here in this particular example where we terminated four weeks ahead of time.

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And in this scenario, we planted my first. So our four week termination was the first week of April.

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Not enough biomass to help us reduce these pigweed numbers that are coming up.

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Just one more wait. Helped tremendously. And then again, wait until that first week or last week of April.

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First week of May. We have a significant amount of biomass of there.

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One thing else you can tell in this three week photo, there's a lot still a lot of bare soil there.

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And so regardless of your termination timing,

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we still believe it's crucial to include a pre emerge with either your termination application or at planting in each one of these systems.

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It's also important to include a nonselective you know, it could be dicamba if we're an extended system,

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it could make remarks along with that pretty (?) planning to take care of anything that's up.

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So we don't have to worry about it later on.

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And just to show you, you know, we talked about population dynamics earlier in pigweed populations, what they might or might not be resistant to.

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These photos are from Marion, Arkansas, where we have six way resistant Palmer Amaranth.

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Basically, everything I talked about earlier other than the blue phosphate resistant is present in this particular field.

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And so all of our data suggests that mixing multiple products has always been nine times out of 10.

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A better approach, regardless of the crop that we're growing here. But just to show you, again, we have some great 15 resistance.

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A war didn't help us much. Cotoran, did a pretty decent job, but it's at a core and that's a little heavy, right?

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For this whole time, we had a lot of cotton injury from the cotoran there.

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When we back that down to a pint and a half and use 16 ounces of Brake, we can do a much better job and get by with a little less injury, I think.

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And so using multiple products with these multiple resistant pigweed is going to be crucial in management in the future.

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And you can see our own trades and how how much pigweed population we're dealing with there.

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And when you look at the data from this two year span at the Marion location, again, (?), look pretty good.

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We got more injury, but my four weeks, a little over 50 percent control and all of these four weeks are doing great.

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But for whatever reason, that bright Cotoran combination is always pulled through to be towards the top in most of our research.

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Well, you can you can mix bright with other products. And again, this is a two year average of data set.

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So some years it may be better than others, depending know the environmental conditions,

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etc. But when we look at a cotton technology check list and puts available, we talk about those

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They're gonna be important regardless of the technology that we plant.

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We've we've had to Extendflex technology that's been planted in the state since 2015.

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Everybody, I think by this time knows is tolerated by Cam McGlaughlin citing glufonsinate

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I know we have a cutoff date in Arkansas at current time.

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It's May 25th, but including Doc Kamba up front and planning can really help us along and give

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us some insurance against pigweed emergence with our other pre immerge product.

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We can use these products post up until that cutoff date and then we can follow those

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with glyphosate plus glew fascinate or blue phos nine plus whatever in our group.

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Fifteen residual. And we've done a good job in all our plots managing pigweed in this fashion.

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In the enlist technology yield, one benefit at least gives us, I believe, last year or maybe around probably 15 percent of our cotton acres.

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But one benefit at least gives us is we can take makes up to 40 coaling in list one plus glew fascinate.

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And we have to harborside modes of action post on our pigweed populations and I'll show

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you what that how that can make a difference here and a little bit in terms of control.

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It is better, I think, because we get those two modes of action in there, but still timely after gonna be key to the success.

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Nothing changes from a residual standpoint. We still need Omak planning.

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We need them post the other system that has been around a long time.

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The glass tolerantly twin Lync plus system. Again, this gives us Towner's to just Claff aside unglue fascinate from a Harborside's standpoint.

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No to for day no doc Kamba tolerance. But again, for several years we've used this.

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It would be nice to have another mode of action.

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Again, going back to some of those early pictures I saw option O with possible tilers, tubular fascinate.

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Any of these systems are going to require labor.

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I put that one down at the bottom here, but all of them are going to require labor, in my opinion, when we use that Kamba front.

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I showed you some data earlier from a different study. This is from two locations in twenty eighteen season.

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And so break at 16 ounces plus twenty two ounces of extended max, four weeks, 80 percent.

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Control is as good as anything we saw. You know, the two years there with those other products or and extended max or extended Max Botsio.

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01:03:11,000 --> 01:03:15,000

One thing you've got to remember about that Kamba is that it does provide good

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01:03:15,000 --> 01:03:21,000

protection against pigweed margins until you get an active rainfall and its opposite,

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if you will, of something like Halleran. So once you get the rain, we start losing activity of extending Max.

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01:03:26,000 --> 01:03:33,000

But once we get that rain, we gain activity of Qatar, Iran or break or whatever we're putting in the system with.

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01:03:33,000 --> 01:03:42,000

And so to me, it's it's it's a perfect pair mix to go into our planning pre emerge applications.

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01:03:42,000 --> 01:03:47,000

Now for any type makes what the 80s approved CAMBA products native.

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01:03:47,000 --> 01:03:53,000

Look at the website and see what is available to mix with the.

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01:03:53,000 --> 01:04:02,000

Enlists system, so he and I mentioned two modes of action post for pigweed, it's the only system that allows us to do that.

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01:04:02,000 --> 01:04:06,000

Untreated here, this is some data from 20-20 at Tiller.

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01:04:06,000 --> 01:04:09,000

Here we use costarring Cap Rawle and a pint each.

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01:04:09,000 --> 01:04:16,000

Pretty good residual activity overall had some escapes, followed it up within list one plus sequence.

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01:04:16,000 --> 01:04:21,000

Pretty good treatment. Cleaned everything up except these Tylor pigweed. They're still going to be there.

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01:04:21,000 --> 01:04:27,000

We're still right at home in 14 nights following this. They just twist around, bend around and start coming back.

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01:04:27,000 --> 01:04:32,000

When I had liberty to that treatment, I don't have many escapes.

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01:04:32,000 --> 01:04:38,000

Very, very few if any. But what I do is I injured the Cottin a little more and gave it a little more burn.

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01:04:38,000 --> 01:04:43,000

Turn it a little more shiny yellow. But I'm able to clean up the escape's I had here.

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01:04:43,000 --> 01:04:51,000

I had that blue fastener and that's what it brings to the table. In another scenario where we just use Choteau Grand Prix, followed by analysts do.

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01:04:51,000 --> 01:04:53,000

Oh, so that's just the two 4-D act.

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01:04:53,000 --> 01:05:03,000

And on the pigweed in this plot, more escapes because we didn't get as good with a one shot, a Coleraine or the Contran single application by itself.

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But where we incorporated Liberty plus at least one round up again, those bigger ones.

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01:05:10,000 --> 01:05:15,000

It pretty much took those out. And so we're gonna have less escapes in that scenario.

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01:05:15,000 --> 01:05:24,000

And that's the benefit of having to post emergence margins, modes of action in that system.

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01:05:24,000 --> 01:05:32,000

In terms of dark amber regulations for 20 21. They did check the Arkansas State Plant Board Web site because it could change.

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01:05:32,000 --> 01:05:37,000

From the time I'm recording this presentation to you, plant your crop or get your seed.

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01:05:37,000 --> 01:05:46,000

So definitely check the Web site. Basically, the spray date cut off Arkansas spray cut off stays the same for Doc Hambo.

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01:05:46,000 --> 01:05:51,000

It may. Twenty fifth one change is inside the Mississippi River levee.

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01:05:51,000 --> 01:05:55,000

Can use the federal label with a permit. The federal label change.

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01:05:55,000 --> 01:06:02,000

Therefore this is a change. Still cannot makes it, we're glad to say.

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01:06:02,000 --> 01:06:09,000

After April 15th. But again, check my dates on that in case something changes, must had a volatility reducing age.

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And this is something new on the federal label this year. Only two at this point are labeled again.

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There may be more, but the Vaporgrip extra and the centrists again, the buffers from last year are gonna stay the same.

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One change to the federal level buffer is a two hundred and forty foot down win to sensitive areas and that's a federal label change.

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If none of these other buffer requirements apply to your application, again,

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check with individual product labels and plant board websites because these regulations could change prior to the growing cities.

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So to maximize our cotton herbicide performance, we need to win the battle early and to maximize our pigweed control program.

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01:06:51,000 --> 01:06:55,000

We need to. We need to focus early because it's hard to catch up with pigweed.

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01:06:55,000 --> 01:07:02,000

Once it gets any size. It's hard to kill. And we just start throwing money at it to residuals, that planning or better than one.

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01:07:02,000 --> 01:07:09,000

We definitely need to include a knockdown at planting paraquat or dicamba figuring ExtenDflex system.

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01:07:09,000 --> 01:07:15,000

Plus Brake, Cotodrn + Caparol + WARRANT – PRE, etc.

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Again, any of those combinations have shown to work fairly good. Mixing two is better than one.

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01:07:21,000 --> 01:07:30,000

Adding dicamba where we can again check that those an individual product websites for tank make makes options.

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01:07:30,000 --> 01:07:38,000

Applying a timely post, small weeds, especially with pigweed, is key; overlay residuals regardless of technology.

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01:07:38,000 --> 01:07:43,000

I think in cotton, more or less, it's going to take us four applications to get through the season.

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01:07:43,000 --> 01:07:47,000

And Layby is one of those important applications.

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01:07:47,000 --> 01:07:54,000

Layby with diuron plus something, it can be Anthem or Zidua because they can only be post directed.

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Can't go over the top with those two. So you can include those in this makes you can include Liberty in this mix.

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You can include Roundup in this mix. But you know, Diuron is a unique mode of action for us on pigweed and it's very hot on small emerged pigweed.

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Prickly Sida in yellow nutsedge control. You know what?

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I get a lot of calls on these every year, probably because we move more to an auxin based system.

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But in that, dicmab is not that effective with Roundup on it, or at least is not (?) either, but glufosinate

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So if you have a glufosintae option roundup plus glyphosate does a good job invoked past the fifth tree leaf and it's the same store for nuts.

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A nut sage can really dry in a cotton crop, especially competition early.

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01:08:41,000 --> 01:08:45,000

I got a lot of calls on nutsedge last two years.

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It might take two applications, but Roundup plus Liberty is going to be probably the best option, especially in an extreme environment roundup by itself is not great

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Not great liberty by itself is not great, but Roundup plus Liberty to Applications does a decent job Roundup.

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Plus, get in early, by the fifth true leaf will do a decent job. But again, you want to get this early before the fifth tree leaf.

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01:09:07,000 --> 01:09:12,000

If you've got a heavy infestation of yellow nuts sage.

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01:09:12,000 --> 01:09:17,000

What about the future and talk just a little bit. I'll show you one herbicide l'oeil.

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01:09:17,000 --> 01:09:21,000

Twenty seven cotton, soybeans, we've seen some of those grown in the state.

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But cotton won't be allowed to probably twenty, twenty three or more.

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I'll show you some work we're doing with some visual recognition technologies as well.

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So one herbicide I'm going to talk about that. You may see potential for burn down as roundup on at one to three ounces.

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It's a tough in a SEAL or it's a PPO or a group field 14.

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Very similar to sharpen register for burn down and potentially crop desiccation.

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Be 14 day plant back to cotton. And it has very little residual.

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So if you think of it like a sharpened, it's not going to be a standalone product.

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Blackett going out with Roundup plus 240 around it plus not Campbell.

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Plus this. I think it can help us on some of our broadleaf top weeds that we have burned down.

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So again, I've only looked at it one year, but you know, the data shows that it's fairly comparable to sharpen at this point.

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We've evaluated lower as opposed to Rick, and I'm not recommending this.

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But you wanted to kind of show you what we're doing moving forward,

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working with Corteva on some of this cotton is fairly tolerant to law, and especially once it gets to and those are bigger.

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And as long as we're not post direct and up the side of the plant, we can do a good job of weight control with very little injury.

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You can see flashes these leaves up a little bit sometimes. But overall, we've looked at this now maybe for the last four seasons.

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And I'm very pleased with the potential, especially with the activity it has on pigweed at a Layby slash post, direct timing.

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So more to come on that in the future. We are evaluating a see and spray system and have for the last three years.

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And if you're not familiar with the see and spray

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it has little cameras on it towards the front that identify the weeds and separate it from cotton using basically facial recognition technology.

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But once it says it's a weed and it's not cotton, it sprays or doesn't spray for these little nozzles that you see up here.

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And these are a little stream and nozzles very close together. And it just spray a pattern based on where those waves are present.

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This particular model, we can also overlay a residual herbicide broadcast if we want to with this back move here.

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And what that will look like go and we put dye. When we evaluate this.

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But again, you can see where he hid or didn't what he had to wait.

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01:11:46,000 --> 01:11:51,000

Sometimes we skip one. But the last four years of algorithm's gotten a lot better.

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01:11:51,000 --> 01:12:01,000

And so when we make these applications, we're using the nonselective such as paraquat, plus a photosynthetic inhibitor such as Caparol

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OK. And so you pretty makes those two together. Very hot post the margins on basically any weed or cotton.

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So we don't want to get it on cotton. And if you'll just look down the row, these two rows were treated here all the way down.

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I was very pleased, considering especially at the front with all the Bermuda grass we had.

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We thought we'd end up killing all the cotton. I won't tell you we didn't kill some.

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01:12:23,000 --> 01:12:29,000

But cotton can compensate for the gifts that are left in the, you know, the plants that are missing there.

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Very good job considering the heavy wheat pressure we put it through last year.

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01:12:34,000 --> 01:12:39,000

So very pleased with what that might hold in the future. But that's the last thing I want to show today.

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I want to thank Cotton, Inc. for funding our graduate student project. Looking at those cultural practices, because, again,

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I think that that's going to be where we're going to have to be in the future with we control almost all of our crops.

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01:12:53,000 --> 01:12:58,000

My contact information is listed here and we're going to have a question and answer session next.

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01:12:58,000 --> 01:13:02,000

And so I'll just invite you to ask me questions or text me.

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01:13:02,000 --> 01:13:10,000

Email me, and we'll get back to you as soon as we can with the entry. Thank you.

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All right. Thanks, Tom. That was a great presentation and I've gotten a few questions on on my phone and online land.

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Well, I think we'll address those at the end of the program as we're running a little bit behind again.

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You know, we've been held in around 180 folks and a lot of people have questions on how many people's attending.

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But again, I want to remind you all to keep putting your questions in the queue in a box.

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Next up is Dr. Kiva's Foskey. He's our extinction plant pathologist.

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And Travis is going to discuss cotton disease and nematode management. Travis.

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01:13:45,000 --> 01:13:53,000

Hello, my name is Travis Faske. I'm the extension plant pathologist for the University of Arkansas System Division of Agriculture.

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Today, we're going to talk about cotton nematodes and their management.

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In my opinion, cotton nematodes probably on a regular basis, an annual basis, rob,

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more yield from the Arkansas farmer than any of the other single diseases that we have out there.

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Specifically, you're talking about the southern route,

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not nematode and reniform nematode as far as is our most important cotton nematodes in the state as well as the mid-South.

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And because we're meeting virtual, we don't have a chance to kind of ask questions.

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I've posed a few questions along the way that I've often been asked.

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01:14:32,000 --> 01:14:41,000

And one of them, the first one is How do I get ready? Nematodes. And the simple answer is you're not really.

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It's something you live with. It's it's like having high blood pressure.

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01:14:46,000 --> 01:14:52,000

You tend to manage it by diet or exercise. And sometimes you might need some medication with it.

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01:14:52,000 --> 01:14:56,000

But but it's something you live with. You don't just get rid of it at some point in your life.

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Same thing with nematodes.

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So I'm the first one to talk about the matter sides, so oftentimes we'll leave that to the end and we kind of rush through it.

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But it's very interesting to me that the number of the mad asides that are available now compared to just 10 to 20 years ago.

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We have a lot of them. And I think we need to spend some time to make sure we understand them and how they might fit into our production system.

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They're often used when resistance and rotation options are limited or when multiple yield limiting plant parasitic nematodes are in the field.

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So both rootknot and run a form specifically in this case. Well, often they see nematodes like stopped in a field.

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But those really aren't your limiting species.

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The mad asides in general only provide one year protection and then by the next year it's gone and even after midseason, sometimes they're gone.

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This is a nice diagram here, talking about some of the dramatic sides quickly kind of go through this.

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We demand the as often as fumigants and non-fuel because fumigants move through the soil profile is a gas.

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They're often injected deeper into this whole profile and move up where they require different equipment and often are expensive or unavailable.

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More recently, the non fumigants have become more common.

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There's more options within the nonfuel against and there's basically three different application methods.

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Soil applied often in ferral at planting, seed applied just on the seed coat or a seed treatment,

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and then a foliar applied, which is almost always used with something like soil applied.

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Historically, it was used with Timit. And now we have what is called egg logic.

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Same active ingredient, Alda, calm, but just a different bag.

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Training, if you will. Bellen total villain primum for Pulse. All had the same active ingredient, which is fluid pi ram.

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And this is a SDH fungicide that has the matricide activity.

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So it's really odd to see a fungicide had this kind of impact on nematodes, something I've looked at early on.

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And it does affect their ability to move, which again would affect their ability to actually infect a plant.

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The seat Applied Materials evicts probably been around the longest since 05.

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Abu MCT, Eris followed a car and then Koppio or probably the three chemicals and Koppio is actually food program,

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the same as the active ingredient developed materials. The biologicals will be Bo TVO Bacillus Farmers about Mestinon Matricide.

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One hundred. That's he killed Mercal dairy bacteria and then tried.

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Nemko is actually an essay or type of material systemic acquired resistance and it's

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often been used in or being looked at now and in cotton as well as an soybean.

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01:17:58,000 --> 01:18:07,000

And we've seen some some interesting trends with it. Now have some information to show you about the.

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So specifically, I want to talk probably mostly about the seat and soil applied, because that's what my program has evaluated over the past few years,

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specifically a little bit more information about the movement, about the matter sides, especially the non fumigants first property.

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They need us to be water-soluble. If they can't mix them with the water, they can't move to the water phase.

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Just as a comparison, something like Coquille Flow Piirainen is is more water-soluble than a victor.

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Mobility is important. So we've got to move into the soil. And if you buy into a small particle really quickly, you can't be effective.

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As Neamat aside, something like Koppio is a smaller molecule, although it binds to organic matter clay particles.

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It doesn't bind as quickly as something like Invicta.

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So it's a little bit more mobile than than have a victim.

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And that's also going to be affected by soil porosity.

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So here we have coarse texture Soiles or we would have more typically yield limiting environments

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for demand-side because usually we'll we'll have this has lower water holding capacity.

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01:19:15,000 --> 01:19:20,000

And so the nematodes actually move on the water face on these soil particles.

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And so if within these soil particles, within this air phase here, if there's the waters here and the mad asides there,

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it's going to affect their nobility, mobility and their ability to to migrate towards a root system.

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In the fine texture as well as you could imagine, that something like that mobility is going to be really limited because that Namenda side is

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going to come into contact with a small particle relatively quickly compared to something coarse.

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01:19:47,000 --> 01:19:54,000

And so it's going to have limited movement. Some of the bacterial materials that actually have to grow and develop may actually do

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01:19:54,000 --> 01:19:58,000

a little bit better in this type of environment compared to the coarse texture swirls.

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01:19:58,000 --> 01:20:03,000

So more movement here, less movement here.

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01:20:03,000 --> 01:20:10,000

And finally, water infiltration, which is also going to be affected by soil porosity here, we'd have a greater amount of movement,

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01:20:10,000 --> 01:20:14,000

although it's still limited because these Namenda sides of being bound by those small

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particles with their affinity to bind to them and but a little bit greater in the sandy soil.

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So a lot of times I'll recommend the chemical materials in those soils that have a higher porosity than in some of the finer textured soils.

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Now, typically, these type of soils or not really problematic for something like root.

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Not that they can be problematic for something like general. All right.

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So the goal of the Man-Sized specifically is to reduce nematode infection.

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And so this is kind of a summary from a multi-state Nomad Assad trial where we looked

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at basically to see treatments to Inferno's and then a combination of those two.

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So here we really don't see any suppression of of brute Gorlin by the sea treatment or the end for a product.

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But we do see it with the combination product. So it's kind of positive.

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Seeing those two together is kind of what you need to to be a provide suppression.

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And keep in mind that that protection is probably probably within this point here.

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We have an image that there's going out here,

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but that zone of protection is probably somewhere within this range and probably has a little more opportunity to move downward.

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If you have water infiltration to help protect that taproot, and that's that's extremely important in cotton production with RNA for nematodes,

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01:21:38,000 --> 01:21:43,000

we're really trying to reduce the nematode population reproduction.

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01:21:43,000 --> 01:21:47,000

That's the only way we can measure how in the matter sides working.

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01:21:47,000 --> 01:21:57,000

And then so here we have a of several juveniles, as well as mixed life stages of the run of form nematode.

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And we see a similar trend here.

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01:21:59,000 --> 01:22:06,000

Not much protection with the sea treatment or the inferno itself, but a little bit more suppression with the sea treatment plus the inferno.

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01:22:06,000 --> 01:22:15,000

So it's not so much which one you're selecting as far as FXE goes, but having a combination of those provides a little bit more protection.

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That also did relate in these trials to a more positive yield protection as well, albeit and these studies,

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the great amount was about five percent of your protection with the sea treatment plus the four.

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Here's a trial we had near Manila, Arkansas, on 20, 19, just to show a little bit more local data.

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The galling here, the highest calling was with Bell Total and the lowest was actually the non-trading control.

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So not uncommon for Nomad's signs, for things to work like that.

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This is based off of about five to eight plants, four root system.

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01:22:56,000 --> 01:23:02,000

And unfortunately, you know, you can't pull all of them and check the gall and plant them back to be able to get a yield.

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01:23:02,000 --> 01:23:06,000

But that's what you need to get a better indication of what's going on.

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01:23:06,000 --> 01:23:11,000

But this just gives you an idea of what kind of suppression you're getting, if it's really going to protect it.

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01:23:11,000 --> 01:23:14,000

We should see it based on those few counts here.

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01:23:14,000 --> 01:23:18,000

We do have the best yield protection with the ideologic.

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01:23:18,000 --> 01:23:22,000

So that's the ultimate. Which has been very consistent, kind of the gold standard.

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01:23:22,000 --> 01:23:30,000

You can see the rest of these kind of fall between above or below that of the non tree to control.

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01:23:30,000 --> 01:23:35,000

So, again, there's quite a bit of variability within the meadow sides.

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01:23:35,000 --> 01:23:40,000

And you have to have multiple studies and kind of that multi-state trial to get a little bit better ideas.

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01:23:40,000 --> 01:23:48,000

No more difficult on some of these single trials. In the greenhouse, we can actually control the nematode environment.

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01:23:48,000 --> 01:23:56,000

Some of the challenges with the field is that the nematodes are aggregated. And here I can apply consistent population in a single pot.

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01:23:56,000 --> 01:23:59,000

The disadvantage, it's not the field.

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01:23:59,000 --> 01:24:07,000

The other vantages is remember the water infiltration, something like Koppio Prime actually has a very long Half-Life.

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01:24:07,000 --> 01:24:13,000

And so it actually hangs round into the soil or in this case, the pot longer.

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01:24:13,000 --> 01:24:18,000

And an event that has about a 30 day Half-Life are going about 42 days.

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01:24:18,000 --> 01:24:24,000

Evictee here, you can see it's probably binding up to the soil or sea treatment, C-code more.

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01:24:24,000 --> 01:24:33,000

And then here for washing it off. And we're getting that protection or lower nematode reproduction actually in the greenhouse based on this.

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01:24:33,000 --> 01:24:40,000

You can see most of these actually did better than an entree to control, but only Koppio prime being significantly better.

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01:24:40,000 --> 01:24:47,000

And also compared to something like Trinko, which we didn't see that positive response with it in this case.

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01:24:47,000 --> 01:24:52,000

And sometimes we do in the field. But again, these tend to be somewhat variable.

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01:24:52,000 --> 01:24:58,000

So what's some of the limitations with the seat apply the Madison first toxicity?

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01:24:58,000 --> 01:25:03,000

Evicted is very toxic, actually. More toxic than Copi or Nimmer strike, which is no longer available.

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01:25:03,000 --> 01:25:09,000

But we did have it in one of our trials. And I just sort of thought I would mention it here.

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01:25:09,000 --> 01:25:18,000

And so only a small amount of what is applied on the seed coat actually needs to come off to kill a lot of nematodes.

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01:25:18,000 --> 01:25:24,000

The longevity I mentioned before, Koppio lasting a year or so, depending on the different soil type.

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01:25:24,000 --> 01:25:27,000

There's a lot of variation there and evict about 30 days.

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01:25:27,000 --> 01:25:38,000

So something that's lasting longer is going to be more effective within that zone of protection compared to something that's that's not.

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01:25:38,000 --> 01:25:47,000

That zone of protection is going to depend on some of those parameters I mentioned before in that earlier slide, the mobility of the matter side.

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01:25:47,000 --> 01:25:51,000

And as well as that water infiltration rate as well.

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01:25:51,000 --> 01:26:00,000

The one other thing that really limits some of the sea treatments that all are meant to deal with, this is the amount that comes off the seed coat.

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01:26:00,000 --> 01:26:04,000

I mentioned several of these bind to soil particles. Will they actually bind to the sea coat as well?

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01:26:04,000 --> 01:26:08,000

So only a small portion actually comes off of that sea coat.

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01:26:08,000 --> 01:26:17,000

Now, not much is needed when you have something is extremely toxic, like a victo or Koppio, but there is a limited amount that comes off.

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So that does affect that zone of protection. But we're really looking for some protection that ranges about four to six weeks.

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And again, it's as the roots grow out of that zone, protection.

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01:26:27,000 --> 01:26:29,000

It's no longer protected.

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01:26:29,000 --> 01:26:42,000

But we do, based on some of our research, have identified that that early season protection is certainly important for late season deal protection.

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01:26:42,000 --> 01:26:47,000

All right. Another question often get asked this is our nematodes becoming more abundant?

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Well, one, I think we're doing a better job,

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01:26:48,000 --> 01:26:58,000

a sampling and many are taking advantage of some of the free nematode assays that are available through the soybean and corn promotion boards.

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01:26:58,000 --> 01:27:09,000

And this is just a general map of of the three states, your Arkansas, Mississippi, Louisiana, of where we can find southern route, not nematode.

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A lot of times this follows a lot of the years and years of cotton production within these respective states.

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A little bit less with rent a farm. But I would have to say that in my route, not render farm fields sometimes when a farm is.

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01:27:21,000 --> 01:27:25,000

It's becoming more common. That's based on biology.

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But sometimes that's based on the host and what's being grown in that field.

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01:27:30,000 --> 01:27:35,000

So let's take a closer look at that. That that's that's what these nematodes are going to fall.

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01:27:35,000 --> 01:27:40,000

So they're increasing based on our crop production system.

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So root knot can reproduce on cotton, corn, grain, Jordan's soybean.

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01:27:45,000 --> 01:27:49,000

All of those are susceptible. Host ran perform only cotton and soybean.

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01:27:49,000 --> 01:27:55,000

So the more of the production of cotton you have, oftentimes rainfall numbers tend to come up,

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01:27:55,000 --> 01:28:02,000

especially in those fine textured soils, the long soles and the silt mom's.

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01:28:02,000 --> 01:28:09,000

Host, plant resistant. So this is the next step in and disease management, the most economical part.

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And years ago, we we didn't have any options. And so I'm glad to say that I think our host plant resistance is actually getting better.

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01:28:17,000 --> 01:28:21,000

These are two root system. This one is a susceptible variety.

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This one is resistant that I took at the end of the season for a trial.

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01:28:26,000 --> 01:28:29,000

But really nice contrasting differences there.

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01:28:29,000 --> 01:28:38,000

You can actually see some of the gall in here on that main taproot, which is which is certainly important for cotton production.

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01:28:38,000 --> 01:28:42,000

These are the cultivars that are marketed with resistance to the southern route, not nematode.

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01:28:42,000 --> 01:28:49,000

And I may not have everything here, but this is certainly a good mix of the group.

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01:28:49,000 --> 01:28:55,000

Stoneville five or Max, and of course, you can see five again, is the majority of them.

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They've been actually selecting for resistance for a number of years. There's multiple genes for resistance.

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Will macie two genes resistance excuse me, some of them only have a single gene with a single Hester care.

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01:29:08,000 --> 01:29:15,000

And if they have two to Asterix, then they have a two genes that are homozygous.

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The others are kind of unknown or heterozygous kind of a variable.

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Still having resistance. But these two genes are definitely better than the single gene themselves.

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And for the first time, it's it's really nice to be able to report that we do have some options for rent reform nematodes and

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certainly this is something I would I would certainly look into if I have a field that has a lot of run form,

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these two forage and lines actually have a better resistance than what we see in some of the other varieties.

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01:29:49,000 --> 01:29:55,000

This is 20-20 data from Dr. Terry Whitter at Texas Agri Life Research in Lubbock.

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01:29:55,000 --> 01:30:02,000

You can see that the numbers here with the two (?) are much lower than the Stoneville or the Delta Pines, sixteen point six.

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I just threw those in kind of s comparison. Twenty nineteen.

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This is a little bit more what I would expect out of these two compared to some of the susceptible.

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But again, looking at the two year data, you can see that both of these have some resistance to the run of form nematode,

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which could certainly be helpful in managing this particular pest.

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Arkansas.

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Also learned that the belt by cotton conferences earlier this month that Delta Pine has two varieties here that are also market is having resistance.

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The rainfall nematode. I don't have any data with it,

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but I do say that a lot of our our cotton companies do a really good job of doing some screening and and ensuring that their information is accurate.

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So certainly would be worth looking into if you have run a form in your field.

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All right, one question and I often get asked this is how many years do I have to grow

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resistant variety to finally get rid of myself of of rid myself of nematodes?

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Well, I said before that we can never get rid of them. But let's take a look at a particular trial.

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So this is one. This was Davis and Kim, right, and oh nine.

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And so I just summarized a portion of their study. But basically,

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01:31:19,000 --> 01:31:26,000

they planted a susceptible cultivar in the same spot for three years and then a moderately resistant cultivar in the same spot for four,

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three years, actually four years. We'll get to that. And so you can see the susceptible slowly increasing and nematode counts over time.

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This is the southern route not and with the model, the resistant up-down.

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But, you know, 05 certainly an increase that could be environmental.

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And then here's what happened in 06. They find it is a central one.

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I have mostly resisted here, but that's just the plot. So these were both susceptible.

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And you can see those numbers come right back up.

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01:31:56,000 --> 01:32:04,000

So even though we've we've dropped a numbers, dropped the numbers, dropped the numbers, just one season of a susceptible crop can bring those back up.

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01:32:04,000 --> 01:32:08,000

And so think about it. Growing resistant cotton.

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01:32:08,000 --> 01:32:12,000

Cotton, cotton and planting corn. And those numbers come right back up.

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01:32:12,000 --> 01:32:14,000

So they they don't stay now for long.

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01:32:14,000 --> 01:32:22,000

That's just because of the number cycles and the magnitude of reproduction by this, the plant parasitic nematodes.

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So what's the risk of just using a resistant or midly resistant again and again and again?

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It's the same problem we have with fungicide resistance.

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If you use one fungicide, one mode of action again and again and again, the possibility of having resistance to that is is pretty high.

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And an example of where we're seeing that within nematodes is this Royden system of toad and cotton production and soybean production in the Midwest,

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where over time the resistance has started to dwindle.

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01:32:54,000 --> 01:33:04,000

It's still somewhat effective, but we can start to see it not being effective as it is it once was when it was first deployed.

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All right.

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So finally, a couple of rotation sequences to kind of considered what might be going on with the plant parasitic nematodes within that sequence.

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This is a common sequence with some of the folks that are able to incorporate it into our production system.

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So southern root knot nematode, no reproduction on peanut.

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01:33:23,000 --> 01:33:31,000

And let's say you had a resistant variety for reniform, rootknot, not those numbers, but to drop something susceptible.

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Maybe it yields better. The yield comes up, but also the nematode counts really come up.

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01:33:36,000 --> 01:33:43,000

And then back again with our our peanut. That drops it down. So that really helps with the root, not what goes on with the rest of form.

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Again, similar with the peanut. It's a non host, but here it's susceptible.

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01:33:48,000 --> 01:33:51,000

Those numbers are going to come up and you have to get back to the peanut to drop those.

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01:33:51,000 --> 01:34:01,000

So the impact from the random form nematode may be less for this codon compared to this cotton in this sequence.

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Finally, you know, oftentimes we have a lot of soybean and corn in our rotation sequence.

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01:34:08,000 --> 01:34:12,000

If we could add cotton in some place, that would certainly help with our root.

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01:34:12,000 --> 01:34:15,000

Not it may not help so much with the rainfall.

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Again, these sequences are so mean that you're not utilizing any of the cotton varieties that now have some resistance to the reniform nematode

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But here, anytime we'd have the corn that the nematodes are or root now it's going to come back up.

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But for reniform, it's going back now. So so the whole point here is that.

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Depending on which is your most your limiting pathogen is what you need to do to kind of manage it.

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And the only way you know what species is, is increasing or decreasing is is oftentimes if you take a small sample,

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01:34:49,000 --> 01:34:56,000

especially with the reniform nematode. So is my sequence rotation sequence having a benefit or is it hurting me?

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Certainly take advantage of some of the free soil assays to see if your population and what's changing in there.

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01:35:04,000 --> 01:35:08,000

And this is kind of a long process. You're living with them.

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01:35:08,000 --> 01:35:14,000

So how can you manage them over time and keep them in the lowest population possible?

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We're never gonna get rid of them. But these are the things now, the different tools.

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We have to be able to manage our cotton nematodes with soybeans.

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We do have some varieties that are moderate,

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resistant to resistant that we can we can incorporate each year in my program screens from the more popular varieties that are marketed for resistant.

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This is just a short list of those in 2019 and 2020.

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I don't have any that call resistance in the group force.

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And here's some of their modeling resistant the group finds.

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I really don't like saying somethin's resistant or model resistant because if you say something is resistant, it's relative.

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It's it's only meaningful compared to something that's susceptible.

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So when I have that growing in the field, even though I may see some galling, it's going to yield better than something that's susceptible.

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01:36:05,000 --> 01:36:07,000

That's the main point.

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01:36:07,000 --> 01:36:15,000

Saying that want to pick something, it's model resistant over model is susceptible depending on the environment, maybe relatively close.

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But this is this is as close as I can get. And this is the galling percentage that I've associated with those.

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I do think that some of these they were in the resistant.

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01:36:25,000 --> 01:36:30,000

I do think that they're more model resistant based off of one or two years of data.

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And you can see some of these are just based off of one year, some kind of being more conservative where I put those the group fires.

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01:36:36,000 --> 01:36:40,000

We always known that we have a little bit better source of host plant resistance there.

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And certainly some of these varieties could be useful. This information is also on the Row Crops website for the University of Arkansas.

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So if you need this information and you don't see it here or get it here and get it from that Web site.

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With that, I hope you found this information about cotton nematodes helpful and informative.

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I like to thank Cotton, Inc. for some of the supporting some of the research here,

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01:37:06,000 --> 01:37:11,000

as well as the University of Arkansas system for supporting us as well.

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So, again, hope you found it helpful. Right.

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Thank you, Travis. I'm really glad to see, but some of the writers and because we do have several writers from several seed companies

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that with an tolerance and I was really anxious to hear what you said about,

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you know, how long that reduced number last. So appreciate that.

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Moving on. I think we'll be working on our last presentation.

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Coming up. We have Dr. Gus Lorenz. That's distinguished professor and extension entomologist.

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Gus is gonna discuss insect management, including some of the information,

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except especially some of the exciting new technology that's coming down the road.

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01:37:54,000 --> 01:38:07,000

So, Gus. extension entomologist for the University of Arkansas Division of Agriculture.

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01:38:07,000 --> 01:38:12,000

University of Arkansas system. And I'm here today to talk about cotton pest management.

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And you see my coauthors here, the guys that I work with, Glenn Studebaker, Ben Thrash, Nick Bateman =

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All had some input into this to this presentation, but they tell me I only got about 20 minutes,

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so I'm going to get right into it and talk about all the stuff that we got going on right now in Comune Asset Management.

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So I hope you can see my screen there. OK.

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So. The far side is talking about going into twenty twenty one.

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Some of the issues that we got resistance, we got some trait resistance and some insecticide we got issues with tobacco thrips.

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And hopefully we got some solutions for that plant bug management.

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01:39:04,000 --> 01:39:08,000

And finally, I want to talk a little bit more about bollworms.

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I've been talking to you all the last several years about making the transition to Bollgard, the three gene.

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The three instead of the two genes, particularly in light of the last couple of years, I guess time for us to really talk about this.

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So the tobacco thrips we know we got resistance to neonics makes now more so than ever.

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And we're currently testing with the for acephate resistance.

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And one of the highest levels of resistance that was shown in the mid-South this year was at Mariana, Arkansas.

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So we know we've got a problem and it's something we're going to have to deal with.

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You know, I acephate is one the products that we that we use a lot for when we have to make foliar applications for.

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So that's it, because it's cheap and it's effective.

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But it looks like it might be we might be quickly getting to the point where it's not going to work,

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forcing more so something that we need to keep in mind as we go into 2021.

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The exciting thing and I want to talk about is the difference that we're seeing with this new ThryvOn technology from one is another gene

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similar to Bollgard two to Bollgard three is that it's a gene that gives protection to the cotton plant for thrips and for plant bugs.

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And just to give you an example, this is last year's PLOTTS in 2020.

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And you can see the one on the left, you can see the thrips damage the black and terminal.

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The leaves are messed up. A good indication and this is right across on the next row over just one road to the next.

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And this is with no insects. I've seen treatment.

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This is this is the Thryvon technology and the level of plant, but are a threat to control that you get with with this new technology.

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The reason I'm bringing it up is it's gonna have some limited release this year.

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So some people are going to get the opportunity to look at this technology.

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But we really like what we're seeing with the thrips. And just to give you an idea, the numbers differences that we see with Bravo.

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This is in the Thryvon this is the regular conventional cotton.

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And you can see the number of differences is down at Tiller on a big, large block.

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We had the opportunity to look at this technology in a large block situation because you never know what small plots and large blocks or,

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you know, sometimes when you make that transition, you can see the technology might not be as great.

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But in this situation, particularly for three, as you can see and here's another shot on another plot that we had at Mariana.

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And I want you to look at the numbers that we're picking up on. This is on five on five plants.

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But you can see the no trait, both notraits. You're running around one hundred and twenty thrips per five plants.

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And there's the to the traited. Neither one of those got treeted that point, obviously.

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01:42:18,000 --> 01:42:22,000

But you can say that a huge impact on thrips control.

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01:42:22,000 --> 01:42:31,000

And so what I like about this technology is, you know, it's given us control and we're not having to make foliar application.

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01:42:31,000 --> 01:42:37,000

So I see this as a big plus. We're saving not only money and application,

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01:42:37,000 --> 01:42:48,000

but but we're also not spraying the field and in killing our beneficials and that kind of thing, which can be huge in that situation.

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01:42:48,000 --> 01:42:54,000

I'll change gears to plant bugs. You know, that's our number one pest to Cotton in Arkansas and the mid-South.

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01:42:54,000 --> 01:42:58,000

And this one that we we really need to concentrate on.

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01:42:58,000 --> 01:43:06,000

And what I'd like to do is talk about the things that we can do to avoid, you know, plant bug issues.

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01:43:06,000 --> 01:43:10,000

And first of all, is rotating that chemistry. I mean, that I think that helps more, than anything

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01:43:10,000 --> 01:43:14,000

I know we got a lot of growers after that won't go with the cheapest product they can find

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01:43:14,000 --> 01:43:20,000

and they might multiple applications and it just doesn't work the control that you get.

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01:43:20,000 --> 01:43:24,000

And as we go through some of this data, I want you to see what happens,

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01:43:24,000 --> 01:43:31,000

where you get good control versus where you don't achieve the level of control that you need to get.

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01:43:31,000 --> 01:43:37,000

Some of the things that we need to do is consider when we're when we're in those high populations looking at spray Mariana

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01:43:37,000 --> 01:43:45,000

shortening that interval between application when we have to. I know guys go on spray more than once, you know, ever week to 10 days.

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01:43:45,000 --> 01:43:50,000

But sometimes when the is by enough, you have to do what you have to do.

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01:43:50,000 --> 01:43:55,000

And we continually see the use of diamond in that situation,

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01:43:55,000 --> 01:44:01,000

really help and stretch those applications out between treatments so it can make a big difference.

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01:44:01,000 --> 01:44:10,000

There are ways we can avoid big plant bug problems, as is planting early, just getting them fail, planted early and getting to go on.

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01:44:10,000 --> 01:44:16,000

He can escape a lot of plant bug problems out there. Yes, by plant and early.

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01:44:16,000 --> 01:44:24,000

And it's shown to, say, one to two applications a year just by by getting the cotton planted early and getting out.

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01:44:24,000 --> 01:44:28,000

And then, you know, using our termination rules,

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01:44:28,000 --> 01:44:34,000

we can cut out some applications that every year there's a lot of applications that go out after the fact,

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01:44:34,000 --> 01:44:38,000

you know, when it's too late to do any good.

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01:44:38,000 --> 01:44:46,000

So paying attention to that, cut out the mower, white flower, five plus 250 units can can save you a lot of time.

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01:44:46,000 --> 01:44:58,000

One, two applications. Because when we look at performance for tarnished a you know, it's kind of amazing, really.

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01:44:58,000 --> 01:45:04,000

What you see is if you don't pay attention, you know, a lot of times when you're looking at our data.

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01:45:04,000 --> 01:45:10,000

But this is for this is like an eight year study for Arkansas, Mississippi, Tennessee.

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01:45:10,000 --> 01:45:14,000

And you look across the bottom at all the products that we have there.

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01:45:14,000 --> 01:45:19,000

And we see just about everything that you would use or consider using.

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01:45:19,000 --> 01:45:25,000

And want I want you to concentrate on the level of control that we're seeing across mirrors transform over only.

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01:45:25,000 --> 01:45:34,000

And it's it's given the highest percentage of control. But this is about the best control that we get is about 70, 75 percent control.

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01:45:34,000 --> 01:45:39,000

Even with the better products in here in the in the tank mixes and that kind of thing.

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01:45:39,000 --> 01:45:48,000

So you can see, you know, if you don't use the right product, a lot of times you get less than 50 percent control.

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01:45:48,000 --> 01:45:55,000

That's just not acceptable. You know, we can't you can't control plant bugs in a bad situation with that level of control.

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01:45:55,000 --> 01:46:01,000

So choose them, right. And set aside and get one that's going to give you at least the highest level

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01:46:01,000 --> 01:46:06,000

of control that you can expect to see and not let plant bugs get away from.

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01:46:06,000 --> 01:46:12,000

You can mean a lot. This is just another look at the kind of the same thing.

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01:46:12,000 --> 01:46:14,000

It's a it's a different dataset.

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01:46:14,000 --> 01:46:23,000

But what we're looking at and this I know this is a Baz's slide, but what you got is a number of plant books per Tamaro faded across the y axis.

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01:46:23,000 --> 01:46:31,000

And a Keiser, you get most of the products that we currently use for control of plant bugs in the mid-South.

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01:46:31,000 --> 01:46:39,000

And each bar represents a time. So the blue bar and the red bar are four and seven days after one application.

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01:46:39,000 --> 01:46:47,000

And then the green bar, the purple bar and in the turquoise bar are for seven and eleven days after the second application.

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01:46:47,000 --> 01:46:53,000

So when we look at our entree to what we're seeing here is my threshold six.

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01:46:53,000 --> 01:47:01,000

Look how quickly that plant bug population increases in just a short amount of time to where we're looking at about sixty five,

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01:47:01,000 --> 01:47:05,000

sixty six plant bugs on 10 row feet. Our threshold is six.

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01:47:05,000 --> 01:47:09,000

So we're 10 times threshold. At the highest point here.

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01:47:09,000 --> 01:47:15,000

But you can say we're starting out well above threshold at six per (?), you can see.

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01:47:15,000 --> 01:47:23,000

And as you look across here in all these products that are that we're looking at, you know what I'm looking for?

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01:47:23,000 --> 01:47:29,000

Our products that are going to keep me as close to that red line or below that red line that I can.

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01:47:29,000 --> 01:47:37,000

And when you look at some of these products, here is a strike by regrowing, not doing much better with not much.

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01:47:37,000 --> 01:47:44,000

But but this is where, you know, when when you use the wrong insecticide and you don't get the level of control

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01:47:44,000 --> 01:47:49,000

that you need and you're leaving plant bugs after your your leaving you.

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01:47:49,000 --> 01:47:55,000

So transform. And then we know Diamond is the growth regulator, so it works a little slower.

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01:47:55,000 --> 01:48:06,000

So it took a little longer to get started. But as you can see in the three times after that, it provided a superior level of control,

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01:48:06,000 --> 01:48:10,000

particularly compared to all these other products across the year.

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01:48:10,000 --> 01:48:17,000

So it just gives you an idea of. Insecticide selection and how important it is.

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01:48:17,000 --> 01:48:23,000

And now he's just going with the cheapest buying there. Stop the mouse.

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01:48:23,000 --> 01:48:30,000

So here's a trial in 2020. This is a product that that we're compared to the country check.

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01:48:30,000 --> 01:48:35,000

And you can see it seven days after the first application, not providing any level of control.

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01:48:35,000 --> 01:48:40,000

And there's a few other products. And when you look at your thing and you know,

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01:48:40,000 --> 01:48:49,000

you're looking at transforming down and providing a level of control below that threshold of six per (?).

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01:48:49,000 --> 01:48:58,000

So what we did in this in this trial was we sprayed it. We went back and scouted it and it was above the threshold and we sprayed it again.

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01:48:58,000 --> 01:49:03,000

And so this is what we're looking at here. We're well into the season now.

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01:49:03,000 --> 01:49:16,000

And so my three applications here with this product and we're eleven days after application for (?)

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01:49:16,000 --> 01:49:22,000

And then we're 14 days after our application for Transform and Transform plus time.

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01:49:22,000 --> 01:49:30,000

So you can see the range of control, even with some of the products that are that aren't working as well as the others.

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01:49:30,000 --> 01:49:36,000

So you see what's worked in the past and what's not. And this is out seven days after treatment.

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01:49:36,000 --> 01:49:47,000

And I've got four applications now with this product. Three applications with the buy day in or thing in order thing plus time.

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01:49:47,000 --> 01:49:54,000

And here's the two applications, seven days after two applications of a transform.

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01:49:54,000 --> 01:50:00,000

So I'm beginning to see what products are really providing a level of control.

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01:50:00,000 --> 01:50:08,000

And if you watch those three graphs and then you match them up to the ones that we're provide the highest level of control.

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01:50:08,000 --> 01:50:16,000

It works out that the yield associated with with with these trials or the products, it showed the harsh level of control.

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01:50:16,000 --> 01:50:24,000

And the ones that did not provide a good level of control had a yield decrease compared to those products that are working.

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01:50:24,000 --> 01:50:28,000

So it makes a lot of difference on the products that you choose. Here's another one.

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01:50:28,000 --> 01:50:36,000

This is the regional plant bug from last year. And what we've got is every product that's currently labeled for control.

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01:50:36,000 --> 01:50:44,000

And and for plant bugs, and you can see it seven days after the first application are untreated,

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01:50:44,000 --> 01:50:51,000

Jack is running just right at twenty five on row feet and (?) there's our threshold of six per (?)

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01:50:51,000 --> 01:50:54,000

And you can see all these products out there were seven days after.

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01:50:54,000 --> 01:50:59,000

And we we don't have control. We're still above threshold for all these products.

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01:50:59,000 --> 01:51:04,000

The bar goes above if it's close. I feel good about it.

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01:51:04,000 --> 01:51:06,000

But if it's if it's not even close like some of these are,

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01:51:06,000 --> 01:51:12,000

then that's telling you that you're not achieving the level of control for plant bugs that you need.

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01:51:12,000 --> 01:51:16,000

This is seven days after the second application. So we got two applications only.

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01:51:16,000 --> 01:51:24,000

And now look at my. Jack, I'm running about 70 plant bugs on T and Roe feet.

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01:51:24,000 --> 01:51:31,000

That's a lot. And you can see what products are not providing control and which ones you're keeping that that population level below.

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01:51:31,000 --> 01:51:40,000

This is intense pressure. And I'm sure there's a lot of people out there never even seen to implant bugs on the wrong foot.

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01:51:40,000 --> 01:51:43,000

But this is a good indication of what it looks like.

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01:51:43,000 --> 01:51:51,000

And when you get plant bugs out of control, it's really hard to keep them under control for any time.

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01:51:51,000 --> 01:51:55,000

Now we go out to eleven days after application and you can see the untreated

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01:51:55,000 --> 01:52:01,000

chick is still above 60 and all age products are still well above threshold.

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01:52:01,000 --> 01:52:05,000

And these are the cats that I'm looking forward to provide me the level of control.

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01:52:05,000 --> 01:52:15,000

And I would tell you that if you're not using these products to help you control plant bugs and then you need to rethink it.

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01:52:15,000 --> 01:52:20,000

And then the sign tree that we saw on the last test,

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01:52:20,000 --> 01:52:26,000

the products and provide the highest level of control are the ones that give us the highest level of yield.

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01:52:26,000 --> 01:52:30,000

And so it's important. Now, we talked about their (?) for Thrips.

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01:52:30,000 --> 01:52:35,000

But when you look at the data for it bugs, this is what we saw last year.

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01:52:35,000 --> 01:52:39,000

When we compare that the the conventional is the blue bar.

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01:52:39,000 --> 01:52:49,000

The transgenic is the red bar. And and so we got it sprayed at one time at three per (?), six (?)

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01:52:49,000 --> 01:52:53,000

And then this is double that threshold and then just spray in weekly.

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01:52:53,000 --> 01:53:02,000

And so what I want to point out is the largest transgenic all the way across here, one x, two X weekley,

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01:53:02,000 --> 01:53:08,000

don't have to spray weekly with this technology to get to get you a good level of yield.

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01:53:08,000 --> 01:53:12,000

And when you compare it to the conventional, we see the trend.

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01:53:12,000 --> 01:53:17,000

Every situation might not be significantly different like it is for totally unsprayed

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01:53:17,000 --> 01:53:29,000

But still we see a trend for a yield increase with the largest transgenic over the conventional in regardless of the the spray regime

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01:53:29,000 --> 01:53:33,000

This is last year on a large block trial.

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01:53:33,000 --> 01:53:41,000

Like I say, we want to look at it in a large block to see if what the trends that we had seen with the technology was holding up.

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01:53:41,000 --> 01:53:48,000

And so this is the number of plantt bugs per five row feet. . And this is seven days after the fourth application in the note.

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01:53:48,000 --> 01:53:53,000

Right. So that would be right here. This is no trait, not spray.

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01:53:53,000 --> 01:53:58,000

This is try not spray. This is trait with treatment when it hit threshold.

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01:53:58,000 --> 01:54:04,000

And the sign here. So when we spray this four times, we'd only spray this three times.

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01:54:04,000 --> 01:54:08,000

And you see the level of difference as you go across here to show you.

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01:54:08,000 --> 01:54:14,000

To give you an idea of how how effective this this technology can be.

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01:54:14,000 --> 01:54:24,000

And this is this is the same data, but it's looking at over the whole sampling process.

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01:54:24,000 --> 01:54:31,000

And these two upper bars are the are the tried it a no try not spray.

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01:54:31,000 --> 01:54:40,000

So when you look across here, you look at the difference and here's a blip or the the trait, it actually had more plant bugs than untreated.

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01:54:40,000 --> 01:54:50,000

But as you see across the whole deal. Considerably less plant bugs in the traited versus the the no trait.

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01:54:50,000 --> 01:54:57,000

And then down here is the these two bars down here. This is the no trait with with sprays that were made.

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01:54:57,000 --> 01:55:06,000

And you can see when those applications were made, three applications on the traded in for applications on the on trading.

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01:55:06,000 --> 01:55:10,000

And you can see how those populations compared over time.

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01:55:10,000 --> 01:55:15,000

And you're seeing a big difference in a lot of cases over here and over here

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01:55:15,000 --> 01:55:21,000

where the traited had considerably less plant bugs regardless of application.

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01:55:21,000 --> 01:55:27,000

So most of the time, the traded is providing a level of control over the over the year.

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01:55:27,000 --> 01:55:33,000

That's what what we really like about this this technology.

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01:55:33,000 --> 01:55:37,000

And when we look at the yield associated with there's the trade with local

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01:55:37,000 --> 01:55:43,000

management and the trade with no management and then no try with with treatments,

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01:55:43,000 --> 01:55:47,000

with sprays. And this is no trial with no sprays.

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01:55:47,000 --> 01:55:56,000

And you can see the obvious yield differences between those treatments and, you know, a good yield response with the trait compared to the nut.

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01:55:56,000 --> 01:56:01,000

Right. So what I would tell you about this technology, and I hope you know,

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01:56:01,000 --> 01:56:09,000

a lot of you get the opportunity to to to evaluate this technology this year, but we feel like it provides a pretty good level of control.

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01:56:09,000 --> 01:56:17,000

I think it's going to save you about one to two applications a year, depending on how severe the plant bugs are.

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01:56:17,000 --> 01:56:22,000

Overall, when we look at our square, retention data is just holding squares better.

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01:56:22,000 --> 01:56:29,000

It just regardless of having plant bug drafter, when you when you look at square retention, it's really good.

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01:56:29,000 --> 01:56:32,000

I feel like it gives the growers some cushion. Almost plant bug applications.

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01:56:32,000 --> 01:56:39,000

If you get a wet, you know, rain or something like that, you can't get in the field, you can't spray.

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01:56:39,000 --> 01:56:45,000

You got a little cushion there. It gives you some time to make an application when they don't get above threshold.

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01:56:45,000 --> 01:56:56,000

In the technology. And it it just gives you a little more comfort level about spraying and not being not having to be Johnny on the spot.

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01:56:56,000 --> 01:57:01,000

You know, if you're a few days late on conventional cotton and when you get by plant bugs, it's going to cost you.

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01:57:01,000 --> 01:57:08,000

With this technology. It's going to give you a little time. What we do what we really like is, you know,

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01:57:08,000 --> 01:57:15,000

like we saw with Bollgard when it came out and with with other traits that have come out on the market in crops,

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01:57:15,000 --> 01:57:24,000

there was a yield drag associated with that technology. But it appears that there is no yield drag with this current technology.

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01:57:24,000 --> 01:57:29,000

And I'll show you some data on that in a minute. But but certainly the.

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01:57:29,000 --> 01:57:34,000

There doesn't appear to be with the addition of this gene for plant bug and thrips controller.

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01:57:34,000 --> 01:57:36,000

There's no yield drag associated with.

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01:57:36,000 --> 01:57:47,000

So we'll be working on this on this technology because we feel like it's given us an opportunity to evaluate our thresholds.

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01:57:47,000 --> 01:57:54,000

Now. Is the threshold going up going to be the same with this?

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01:57:54,000 --> 01:58:00,000

Technology is not that's what we're going to work really hard on next year.

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01:58:00,000 --> 01:58:07,000

The last thing I will talk about is making the transition to three. We still got too much folks out there that are planting to gotten.

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01:58:07,000 --> 01:58:11,000

That's what I like and I understand that. But we've been looking at this.

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01:58:11,000 --> 01:58:19,000

This the worm applications that we're having to make on (?) Bollgard two.

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01:58:19,000 --> 01:58:24,000

And for a while it was washed like in, you know, the dual gene.

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01:58:24,000 --> 01:58:28,000

There's still a lot of Gene Cottin after. So I won't talk about that.

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01:58:28,000 --> 01:58:33,000

And the problems that we're having and how to get control in that kind of thing.

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01:58:33,000 --> 01:58:35,000

But, you know, both arms.

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01:58:35,000 --> 01:58:46,000

You know, if you have to my two applications of foliar insecticide for control worms, you know, it really gets in your back pocket quick.

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01:58:46,000 --> 01:58:51,000

Those exposure to very expensive applications and it can cost you a lot of money.

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01:58:51,000 --> 01:59:00,000

So we looked at a lot of three gene cotton this past season and it really held up extremely well.

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01:59:00,000 --> 01:59:03,000

And I'll show you some light on that here just a second.

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01:59:03,000 --> 01:59:09,000

But, you know, part of the problem with the dual gene is or so much overlap with all of the crowd.

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01:59:09,000 --> 01:59:21,000

One I see, which is the common protein that's used in Bollgard Bollgard to life, Strike Watch, Strike three and Belgard, they all got that gene.

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01:59:21,000 --> 01:59:28,000

And in are the same genes are pretty close that we share with with corn, too.

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01:59:28,000 --> 01:59:37,000

So but you say some little differences there in the products in the in the conscript of Bayti prompting that they have.

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01:59:37,000 --> 01:59:40,000

But take it for me. They're just not a lot of difference they made.

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01:59:40,000 --> 01:59:46,000

And if they if they develop resistance to one or norm, they're going to eventually develop resistance to all of them.

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01:59:46,000 --> 01:59:59,000

And that's a concern. And certainly, you know. What we saw with the duel gene launch drive was it really gave it a quick with that crowd here.

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01:59:59,000 --> 02:00:08,000

But now all of the three genes have the same. They take protein, it's a it's an.

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02:00:08,000 --> 02:00:12,000

And they're also inserting it in corn, and I think that's what our problem is.

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02:00:12,000 --> 02:00:23,000

We're we're seeing this issue being driven by the corn because of the big genes that they've inserted in the corn.

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02:00:23,000 --> 02:00:32,000

And now it's carrying over into our cotton. And we're beginning to see less and less control with the new gene Scott.

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02:00:32,000 --> 02:00:36,000

And just over time, just looking at the last few years is 18.

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02:00:36,000 --> 02:00:41,000

And when I look at our threshold of six percent now, I'm looking across at all the technology.

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02:00:41,000 --> 02:00:49,000

You got watch drive one, strike three between like 20 plus, which is the three, Gene Bollgard two and Bollgard three.

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02:00:49,000 --> 02:00:56,000

What you see is that that Bujji the life strike below Gene in this case, given it up pretty bad.

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02:00:56,000 --> 02:01:02,000

Now the blue bars on spray, the orange bars where we put a up shot of premiere on out there.

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02:01:02,000 --> 02:01:09,000

And even with the 20 as a private in this situation with with the bulging watch strike, we're still above threshold.

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02:01:09,000 --> 02:01:18,000

So that just tells you that that technology and that's why the company is it's all Livescribe 30 now because of that.

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02:01:18,000 --> 02:01:23,000

This is a regional comparison of sprayed on spray.

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02:01:23,000 --> 02:01:33,000

And again, this is in 18. And you can see the difference in when I look across here from this on spray to the spray on Spreyton spray,

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02:01:33,000 --> 02:01:40,000

whether it's what strike was strike three twin twin length plus bogarted and Bollgard three.

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02:01:40,000 --> 02:01:44,000

The trend is very obvious for the Sprite component to help.

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02:01:44,000 --> 02:01:52,000

So that's telling me that even with the three geeing, we're we're going big running out of time with this technology.

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02:01:52,000 --> 02:02:00,000

If we don't watch out. But we're seeing a significant yield yield difference between on on sprayed and sprayed.

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02:02:00,000 --> 02:02:09,000

In some cases, it's particularly bad in a lot of these cases, significant yield difference.

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02:02:09,000 --> 02:02:13,000

But in those three days, this is in a pretty heavily infested field,

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02:02:13,000 --> 02:02:20,000

which you can see the obvious trend there is the spray is is helping maintain yield.

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02:02:20,000 --> 02:02:26,000

Dave. This is two thousand ninety and there's at six percent, that's your threshold.

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02:02:26,000 --> 02:02:35,000

And when we look up across this technology, our to the to the three gene with Bollgard to just looking at it, there's Don Sprite.

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02:02:35,000 --> 02:02:40,000

There's a Sprite. So you see a difference beginning to develop there.

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02:02:40,000 --> 02:02:49,000

And we get a little blip here again with bollgard three. So it makes me wonder how much how long this technology is going to hold for us now.

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Like I said earlier, the three gene held up really good last year.

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02:02:52,000 --> 02:02:57,000

But maybe, you know, I don't know how long it's gonna last.

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02:02:57,000 --> 02:03:02,000

That's Arkansas. And this is 20, 20. And there's on Bollgard.

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Last year, a lot of you guys in several parts of the state had to make two applications.

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02:03:08,000 --> 02:03:12,000

And this might be a show on that situation.

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But you see, what we see across here is that all the three gene products are providing a really good level of control.

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02:03:20,000 --> 02:03:25,000

And there's really no difference between the sprayed and non sprayed in that situation.

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02:03:25,000 --> 02:03:35,000

We do see a little bit like a transferee increase yield, though, like we saw earlier in other earlier graphic.

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02:03:35,000 --> 02:03:42,000

But you can say that there is a tendency for spraying to increase yields little bit.

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02:03:42,000 --> 02:03:48,000

The data, the worm data that show that, but certainly.

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02:03:48,000 --> 02:03:53,000

You know, there there is a train near that. That can't be ignored.

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02:03:53,000 --> 02:03:57,000

And when you make that decision that it's time to train, you're going to make an application.

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02:03:57,000 --> 02:04:03,000

We started looking at the various treatments here that provide a level of control.

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And what you see here is.

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The diamide is like besiege in private time, which is both of (?), but you can see to get that population below that threshold level.

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It's only the dollar mods that are providing that level of control.

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02:04:20,000 --> 02:04:31,000

And so we decided we went and took like four trials and we looked at the percent control at different rates of products and what you see there.

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02:04:31,000 --> 02:04:41,000

And this is why we push this 20 ounce right of pray with or ten out right of besiege compared to the lower rates like seven.

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02:04:41,000 --> 02:04:45,000

People are always looking for a way to to save a buck.

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02:04:45,000 --> 02:04:52,000

And you can see the level of control with 14 ounces of power on compared to 20 ounces.

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02:04:52,000 --> 02:04:59,000

It's it's almost as good. But look at drops off so fast when you get out to about two weeks.

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02:04:59,000 --> 02:05:08,000

That's when when the when the control really falls off with those reduced levels of our application levels.

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Going from 20 ounces to 14 ounces can make a heck of a lot of difference in the level of control that you get between the two.

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So if you want to maintain your potential, you need to be using these products at that, at the label or at the twenty outright like we recommend.

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02:05:24,000 --> 02:05:33,000

And this is looking at it, seven locations in four states and looking at the yield, the increased percentage above the entry.

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02:05:33,000 --> 02:05:40,000

They're 14 ounces of Trevathan. There's 20 s. There, seven ounces, 10 ounces.

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02:05:40,000 --> 02:05:45,000

And then there's your other products and traffic and brigade. Massive fight.

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02:05:45,000 --> 02:05:56,000

Not a lot of difference between that. And the fourth plane out there, you know, so but our ourselves this year, as we go into twenty twenty one.

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02:05:56,000 --> 02:05:59,000

On the dual gene, or regardless of of the technology is large,

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02:05:59,000 --> 02:06:09,000

it's a dual gene and last non traited we're going treat when our population reaches eight per hundred or six percent free entry of any kind.

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02:06:09,000 --> 02:06:12,000

And then after (?)

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02:06:12,000 --> 02:06:22,000

And we're going to trade on that 20 to 25 percent, a Óglaigh for six percent free of an injury of any kind.

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02:06:22,000 --> 02:06:28,000

And, you know, regardless of the size of the larvae, you know.

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02:06:28,000 --> 02:06:34,000

You got spray. When those when we have that big (?) we didn't have it so bad this past season.

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02:06:34,000 --> 02:06:47,000

But but if you're treating own eggs with the diamide, you know, I would not make an additional applications any sooner than twelve to 14 days.

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02:06:47,000 --> 02:06:55,000

Making double applications that quick by seven, eight, ten days apart.

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02:06:55,000 --> 02:06:59,000

I think you're just not given the the application time to work.

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02:06:59,000 --> 02:07:07,000

So we got we got to be patient with it after that and let the technology and the insect side work force on the three

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02:07:07,000 --> 02:07:14,000

gene stuff we're going to treat when populations exceed eight larvae per hundred plants or six percent fruit injury,

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02:07:14,000 --> 02:07:22,000

just like in the non (?) in the building stuff. But we're not going to make we're not going make applications based on eggs.

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02:07:22,000 --> 02:07:30,000

We got to see what's going to happen with the with the three gene stuff because it's held up so well for us at this point.

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02:07:30,000 --> 02:07:34,000

And just to Mike, I told you a little earlier about the yield associated with this.

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02:07:34,000 --> 02:07:39,000

They're our alone. And we screened a bunch of varieties with the company this year.

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02:07:39,000 --> 02:07:46,000

And we're looking at the yield associated with some of these lines that are coming out with this new technology.

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02:07:46,000 --> 02:07:51,000

And there's some right here is the three gene watch dry.

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02:07:51,000 --> 02:07:55,000

There's a couple do a gene and a three gene cotton here.

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02:07:55,000 --> 02:07:59,000

That's about pine. Sixteen, forty six mayors, twenty, twenty.

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02:07:59,000 --> 02:08:05,000

And then out here they end, you know, you get those and some Billie Gene and three Gene got right.

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02:08:05,000 --> 02:08:14,000

But I want you to look at the all these lines of of the three gene with Bravo that are yield and as good as anything in the past.

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And this is in a situation where, you know,

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there's plant bugs in the field and it's a good indication of how much how much value there is with that technology for plant birth control.

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But basically, we're going to give the three gene stuff a chance to work to hold for us.

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02:08:34,000 --> 02:08:38,000

We're going sprayed by Stoneville’s dual gene.

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We're going to do all the same things that we've been doing. But we get we got to give the big take.

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02:08:42,000 --> 02:08:47,000

You the three Gene bollgard, a chance to work at hail really well for some (?)

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02:08:47,000 --> 02:08:59,000

So but he only took (?). If you're if you're sticking with the dual genes, then, you know, we're going target spray spraying early and catch you.

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02:08:59,000 --> 02:09:07,000

Oh, my eggs. If you get that 20, 25 percent. But but certainly that's that's the strategy for us going in.

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02:09:07,000 --> 02:09:10,000

And you can call me anytime. We can talk about it.

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02:09:10,000 --> 02:09:15,000

Oh, you won't. The question, is it time to make the transition to three gene?

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And I think that's a good question. I'm no rocket scientist, but I can tell you from my perspective, it's high time, I think, for us to.

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To make that transition. That's about all I got.

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I'll pay. I'm a song off with that.

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02:09:45,000 --> 02:09:46,000

Thanks, guys. I really like that graphic.

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02:09:46,000 --> 02:09:54,000

We're not exactly rocket scientists, but our goal is to breakthrough with this part of the little after 3:00 and we hit that pretty good.

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But even that, again, this concludes our recorded presentation part.

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Before we move on to the Q&A session. I'd like to thank all of our faculty,

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staff and students for their efforts to improve cotton production in Arkansas is just as important that we think

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the Arkansas cotton producers sale themselves and the funds that are administered through the Cotton Board.

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The work that we do would not be possible without your support.

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So we hope that these presentations help demonstrate your checkoff dollars at work.

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We also want to remind you that C use will be submitted after the meeting for those that provided their license.

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Number one, they Richard. I think maybe some of those on the front end, you were not asked for your license number.

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So if you registered and you weren't asked for your license number and you want to receive credit for this,

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02:10:45,000 --> 02:10:50,000

please e-mail your information to Jerry Clements. And his email address is j.

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02:10:50,000 --> 02:10:57,000

C. L. E. O. N. S at u.a.e x dot E.T.

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02:10:57,000 --> 02:11:04,000

Now, they're not going to submit the credits for these until all of our meetings have been conducted.

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And, you know, our last one is gonna be February the 2nd. So they might not show up on your records still maybe toward the end of February.

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So now we'll begin our Q&A session. We've gotten several questions. If you have a question, is that did you want ask?

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Be sure and top that in the Q and A box and we'll do our best to get to that.

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02:11:23,000 --> 02:11:32,000

But. Start with we've had a question carry overseas and guess part of this question is for you.

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I know there's a consultant ask about Saltbox Sicari overseas.

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And I know one thing would want to I'd want to do germination is to make sure our carryover seed was still good.

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But then their question also the second part of that had to do with was, you know, as a victor treated.

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Does that need to be retreated again or what? What what do you feel like are in six sitesi treatments like.

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But Victor, you know, is the name a toad in the plant bug?

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Sort of to to Travis about. About the nematode part of it, but.

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But certainly, you know, and when a product's been out for over a year.

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There's there's going to be a little bit of a degradation of that product.

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It depends on environmental conditions and that kind of thing.

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But a prop and mob from the insect perspective, I don't think I would try to trigger it again.

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OK, Travis. Yeah. So so I would agree with that, I probably, you know, we've had this come up before long as it's stored.

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OK. Yeah, you're going to have some loss. But I don't think it's enough that it's going to really it's not gonna be zero.

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And there's so much of it on that seed that is still going to be effective.

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But again, I agree with you, Bill. I think germination and a vigor test would be more important to me, especially if it ever froze.

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At some point. You're really going to have some serious issues there. That would be my major concern for that seed.

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And I know in the past we could see and see to the plant board for the warm J for the the the standard germination test.

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The cool test will also tell you a lot about the quality of the sea.

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And so our our state plaint board is has been able to do that in the past.

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Are there other places to send that Goswell? We kind of got you on air.

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02:13:36,000 --> 02:13:40,000

There was a question to you mentioned something about a 10 RHOA foot samples that you did.

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Some of the research in Asia, we know. Did Jesus used to drop Claw's the sample down or would you come up with the 10 Reelfoot sampling?

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Yeah. So the way we sample our plants is we take to shake shapes per plant.

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And so that would make the the 10 10 total roffey.

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You're doing two and a half on each side. Four, five, eight. We do it twice in a plot.

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So it's a total of 10 row fate. So instead of three, four, five, which is our threshold, that would be six putting and saying fine.

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All right. Sounds good while you're on that, while you're on the horn, Gus.

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Looks like there was a lot of really good travel varieties that are coming on, especially compared to some of our standards.

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You mentioned something about availability of some of the thousand varieties this this coming season.

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I had a question on what what can you share with us on availability of those varieties?

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Yes. The exciting thing, if you hadn't seen it, is that thrive on has USDA and EPA have released that, you know, from regulation.

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It'll still be a sturdier product because there's a couple of countries out there that won't accept it steel.

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But the good news for us is it'll be non.

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02:15:03,000 --> 02:15:10,000

So we we don't have to go through all those hoops about mortars and buffer's and all that stuff,

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which is pretty exciting, you know, and and not having to deal with that part of it.

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But what the company indicated to me that they plan to do is have a fairly good release of the product.

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I think they they've targeted like 80 to 100 growers or something like that that are going

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to be that are going to have the opportunity to look at the product and evaluate it.

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02:15:41,000 --> 02:15:49,000

And and like I mentioned earlier in my talk, it was pretty.

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It was pretty exciting to see how well those varieties perform for us and our trials.

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They really turned to cotton at the end of the season and there's some really good yielder and there

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02:16:01,000 --> 02:16:08,000

is no yield drag associated with this technology like we've seen in the past with other technology.

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02:16:08,000 --> 02:16:13,000

So I think they're making strides in that in that arena.

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02:16:13,000 --> 02:16:19,000

I guess, you know you know, the thrive on is effective on the tobacco through ups like you showed.

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02:16:19,000 --> 02:16:23,000

We just had another question. Just come in. I wanted to hit you on. We're still here.

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02:16:23,000 --> 02:16:29,000

Are you seeing the benefits of overtreat and seed with has Gaucho on it.

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02:16:29,000 --> 02:16:36,000

Overtreat Net with everything are using our trading Artinian Ferral to combat tobacco through which you thought some.

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02:16:36,000 --> 02:16:38,000

Yeah. We're eating dinner. Yeah.

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02:16:38,000 --> 02:16:48,000

Although we've seen a little slippage with foliar applications with fight the seed treatment or they in Forell applications.

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02:16:48,000 --> 02:16:53,000

Steele are doing a great job for thrips control on that.

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02:16:53,000 --> 02:17:04,000

And that's still a viable option. The only problem. With the same treatment part, you know, we used to call it triple treated sea back in the day.

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Probably nobody here, remember?

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And you anyway, so that once you treat that scene with with ossify, you can't if you don't use it, you can't take it back.

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You can't turn it back in. And so I guess there's always a danger if you traded a bunch of it and then you didn't use it.

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You've got nowhere to go with it. So but it still works and it's still done a fairly decent job.

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And it's one of the best treatments and munther trials every year.

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Now, I testified in Far on even the same treatment. Both looked pretty good compared to all the other thrips treatments out there.

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Yeah, you know, we got we've gotten kind of spoiled here lately.

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02:17:49,000 --> 02:17:54,000

You know, we're on twelve row planners and no thing we're doing is putting seed and we can cover a lot of acres.

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02:17:54,000 --> 02:18:01,000

But sometimes that leaves us some some some holes in our protection program.

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02:18:01,000 --> 02:18:06,000

I've kind of switched gears a little bit and and visit and get mad up, Matt.

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02:18:06,000 --> 02:18:10,000

I know, you know, I've talked about peanuts, you know, cotton behind peanuts.

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And and we talked about George recommendation on nitrogen behind peanuts.

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And I mentioned today a variety that that I thought would work pretty good behind peanuts.

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But what you share with us, your thoughts on what we need to do with nitrogen.

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02:18:26,000 --> 02:18:33,000

Following paint, follow peanuts with cotton. That's a good question.

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Give you two answers and maybe short answer and a long answer. Short answer is we don't know.

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02:18:39,000 --> 02:18:47,000

I haven't done any research in Arkansas on nitrogen and cotton following peanuts.

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The long answer is a good possibility.

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You look at Georgia's recommendation, I think they recommend a 20 unit created, if I'm not mistaken.

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And then you look at our rice nitrogen recommendations and rice following follow on corn or rice bowl and rice

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or cotton is a 10 to 20 pound of nitrogen increase compared to rice fall and soybeans and other war games.

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So there is a possibility that that that could be the case, that we can reduce snatch rates, fall and peanuts.

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But I think the main point is that like anything its size but specific, I would you know, if you're really interested in doing that,

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I would do some strip trials on farm and most folks have your monitors and test it out yourself.

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02:19:43,000 --> 02:19:48,000

You can do that a lot quicker than we can get out three years of replicated data.

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So I would just say test it out yourself because it's stability.

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But I would be cautious. Yeah,

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02:19:57,000 --> 02:20:01,000

I think we have some consultants that have been in that testing phase for a couple

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of years and and and I think from what I remember seem like Georgias said.

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Twenty five percent reduction in nitrogen fertility, fertilizer rate band peanuts.

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And it seemed like to me in some consultants I've a visit with that I think they have a pretty good handle on it.

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Looks like they do, too. That kind of fits in with what? All right.

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Another question that, you know, kind of shifting gears toward toward the herbicide part time is I had a question.

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It was texting me a while ago about, you know, we talked about, you know, viability of pigweed seed.

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Is there such a difference in pigweed viability when it's sitting on the soil surface so far in a no till situation using cover crops?

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How long does pigweed seed last on the soil surface as opposed? Or if we turn it under when the plant?

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Well, that's a good question, Bill, I think that I mean,

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we know if we'd buried deep enough like six inches or greater, that would significantly reduce our germination.

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So if we're just tailing it to two to three inches, I don't think we're affecting germination of that pigweed one one way or the other.

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But but, you know, seed left on top of the soil at the end of the year can be subject to predation

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from various birds and can be moved offsite with water flooding and spread around.

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And so there can be some reduction in viability of the you know,

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02:21:24,000 --> 02:21:33,000

of the seed this left on the soil surface through just weathering and predation of various different breakdown mechanisms of the germ.

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But but and then, you know, if we tell it a little bit, it probably protects a lot of that leftover seeing more than if we don't.

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02:21:42,000 --> 02:21:46,000

So I think that, you know,

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I don't know that there's a great big difference in the amount of seed that will germinate because we're going to lose some.

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02:21:52,000 --> 02:22:03,000

Either way, regardless. The big thing is most pigweed going to germinate either from the soil surface or just one to maybe two inches deep.

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02:22:03,000 --> 02:22:11,000

And so if we can get it deeper than that, we'll probably reduce germination the next year a little bit.

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02:22:11,000 --> 02:22:20,000

When we look at all these. Fields that have potential resistance issues, we always are most in most cases, we see a spot.

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That's just the result of seed rain from the mother plan, if you will, the year before.

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02:22:25,000 --> 02:22:37,000

So, you know, if we're seeing fields like that and we need to especially in northeast Arkansas, we need to take action this coming season.

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02:22:37,000 --> 02:22:43,000

So each Friday and our next question, when we're taking action, do in question.

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02:22:43,000 --> 02:22:51,000

I've got a couple of questions. In northeast Arkansas, do generic liberty. They talked about interline and Cheetah in the products.

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02:22:51,000 --> 02:22:58,000

Work is good. Is the name brand in the end on these Liberty Tallant resistant populations?

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02:22:58,000 --> 02:23:04,000

Would adding H.M.S. to Liberty help help heated up a little bit so we could get some better control?

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Yeah, and so. Oh, man, on liberty in general or any glue fascinate.

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I mean, it's it's a very finicky herbicide, regardless of the of the formulation.

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And so if we spray it too early in the morning, too late in the evening, we're gonna get lost control of polymer or it's going to have less activity.

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If the temperatures are cooler than 65 degrees, we're gonna get less activity, I think,

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02:23:27,000 --> 02:23:33,000

in periods of stress or or stress on the activity of that herbicide, adding Hamas.

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And a lot of those instances can help. We see the greatest benefit in a cooler, more drier environment.

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02:23:41,000 --> 02:23:45,000

Window of application when we had a mist versus when we don't.

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02:23:45,000 --> 02:23:53,000

Now, whether or not, you know, I very rarely, Bill, unless it's earlier in the year yet a significant difference in our all our data sets.

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By adding a mass of the other reason to add it would be as a as a buffer agent.

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If we have hard water or something like that. And so adding it's not going to hurt anything.

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02:24:04,000 --> 02:24:12,000

Number one, I think a majority of our galloon phosphate applications go out with with biomass in the tank.

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In terms of the populations that are discussed in northeast Arkansas, well,

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when I did initial screening Elmos here at Loana, we did add a mess to the tank.

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I have and I used Liberte herbicide when I did my evaluations on those.

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I have not looked at those particular populations across all the different generic blue phosphate herbicides available for those specific populations.

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Now I have evaluated all those generics and just a standard black site resistant of pigweed population at Marijana over several years.

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And they're just generally is not much difference in terms of efficacy.

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We can't get anything to separate in terms of cottony injury we've seen.

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I think one year we saw more injury, maybe with one called Koong, I think.

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02:25:05,000 --> 02:25:15,000

But again, very rarely do we see differences in those Glueck fascinates in efficacy.

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02:25:15,000 --> 02:25:19,000

OK. Another question from the same neck of the woods,

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02:25:19,000 --> 02:25:27,000

if that camera is a proud plate pre with break or warnt, can or should we still mix it with paraquat?

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02:25:27,000 --> 02:25:35,000

Well, that's a great question into me. If we're just after pigweed and, you know, that's all that's in the field, you know,

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02:25:35,000 --> 02:25:41,000

Doc Hambo, especially on small pigweed, is very efficacious, almost populations.

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02:25:41,000 --> 02:25:46,000

If we have a lot of winter annuals. Of course, Doc Campbell's good on horse weight.

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02:25:46,000 --> 02:25:57,000

It's really less active on him bit by itself. And so if we've got handbill populations of various other winter annuals, Primrose Top Pop, you know,

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02:25:57,000 --> 02:26:04,000

it might be beneficial to mix a paraquat formulation in with the Doc Camba hat had burned down.

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If we don't think LAF assay can take care of the remaining weeds in the field, I guess that the Doc Kamba might miss.

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And so it's a case by case situation.

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And I'm going to say most of the time, if if a grower has has made a good fall or I'm sorry, spring burn down application,

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you know, a month or so prior to planting, he's probably not going to have a whole lot in the field.

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02:26:29,000 --> 02:26:34,000

That glassful site plus Doc Dicamba can take take care of.

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02:26:34,000 --> 02:26:38,000

So it's a case by case, but with any of those products and I don't know,

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off the top of my head, what's on the list for each individual product right now.

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So go to the Web sites, either Virginia tank mix,

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Google and Jania type makes Rixton Max type mix and make sure you search for the approved product for for type mix in that system.

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Well, Matt, I want to circle back around to you and and this may be more of a comment.

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Our question from our producer.

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02:27:07,000 --> 02:27:14,000

But it's why our fertilizer recommendations for eleven hundred twenty five pounds instead of twelve hundred and fifty to fifteen hundred pounds.

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And Matt, I know before you start, I came to Arkansas in ninety five. And that's where our our recommendations were.

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But you know, when you go back that far, you know, we, we didn't bust a state average over a thousand pounds for a long time.

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And so, you know, eleven hundred twenty five pound yield go on or on.

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A fertilizer recommendations back 20 years ago was was was a pretty strong yield because we weren't that have.

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But but our yields have changed. And I know our state average this last year was twelve hundred pounds.

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But, you know, when we look at the economics, if you're just producing twelve hundred pounds, you're just barely paying your out of pocket expenses.

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And so I know there's some philosophical answers to some things to think about what our recommendations are far.

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But have you got any, any thoughts on. On. On do we need to look at change in this or how how do we adjust?

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02:28:08,000 --> 02:28:13,000

You know, eleven or twenty five pound, we're not making money. What are your thoughts?

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02:28:13,000 --> 02:28:20,000

Palladio to spotter's. Sorry that. Now, that's a good question. Very, very good question.

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02:28:20,000 --> 02:28:30,000

You know, like you said, state average about twelve hundred pounds. We might need to increase those recommendations.

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But, you know, again, kind of back to my talk.

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Our recommendations are based on a build and maintain philosophy.

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02:28:40,000 --> 02:28:47,000

So we have. Ferlazzo recommendations that cover that.

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Eleven hundred pound recommendation that we currently have. Plus a little bit above it to build solar to cells.

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And so I really think that build caution is given us a little leeway and our in our yield goals.

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And so even though our recommendations are for certain,

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you'll know we are flying a little bit more that that will maximize or take care of a Western or a higher yielding situation.

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But yeah, I mean, it may we might need to look at their future.

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02:29:21,000 --> 02:29:31,000

Oh. While you're here, Matt, I know I help you or you help me or we work together on a lot of our soil health stuff

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and in in just kind of the interaction between the roots and the root exodus and the,

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you know, the organic matter and and all that and the interaction between now and ah,

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02:29:43,000 --> 02:29:49,000

in our in our soil microbes, especially, you know, as we get into more of a.

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Tale or fungi to bacteria balance becomes greater in terms of fungi.

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02:29:54,000 --> 02:30:03,000

But how do you feel like the role of the mycorrhiza fund is in the soil and in in how it relates to production?

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No. As far as (?), (?), soil compaction, root enhancement and ongoing add.

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Well, there's nutrient uptake in some things, but what share kind of what you think on that and in and you might.

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And I've heard you talk about this beforehand. How do you relate that to what we see.

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Potassium deficiency symptoms because we're seeing potassium deficiency.

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Simple and I'm heimann through the question, but we're seeing potassium deficiency symptoms way earlier now than we have before.

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And our sole test values are still pretty high. So there's this related.

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I think you definitely, as you know, I talked about so else in my presentation in mycorrhizal fungi is a case you don't know.

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It extends approving the routes capacity to uptake nutrients and water and so that fungi actually penetrates

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02:30:58,000 --> 02:31:06,000

the roots and is kind of like an extension of that rooting system to bring in nutrients and water.

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02:31:06,000 --> 02:31:12,000

And then not to mention when we know when we have increased fruiting death from.

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02:31:12,000 --> 02:31:20,000

From use of cover crops the previous fall and or reducing tillage, we're also increasing that.

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02:31:20,000 --> 02:31:29,000

The environment conducive environment for microbiology and all that fungi to form and helpless.

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And when it comes to soil fertility and so I think a lot of times, you know, just like our civil tests say that the nutrients are there,

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but our crop is tiny, handcuffed and unable to pick it up,

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02:31:42,000 --> 02:31:50,000

sometimes based on rooting depth and moisture movement down and throughout the soil profile.

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And so. So, yeah, I think it all plays a big role. It's all connected.

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It's just a matter of trying to manage for all these factors to help us all in the long run and ultimately economically.

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This was I really feel like that helps build social structure in as we develop better social structure.

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We have deeper water and filtration. We have deeper water infiltration.

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We have deeper affective reading. And so all of the things and to one another.

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02:32:21,000 --> 02:32:27,000

And so it's it's it's it's kind of a complex issue.

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But I think something that we have to really give a lot more attention to and

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another cut supply chain is really trying to get our industry to go that direction,

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too. And it's that's a that's a subject for hard another meeting like this.

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But you know, the question we had a question a while ago, nitrogen behind peanuts.

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And I would talk, talk, you know, run it by you, Matt, for the fertility guy.

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02:32:51,000 --> 02:33:00,000

But, you know, if we look at our pay here, this is probably by far our best peanut expert that we have here.

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Travis, what are your thoughts on own nitrogen for cotton behind peanuts?

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What do you think? Yeah, yeah, sure. So, yeah, I would agree with Matt.

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What a bit of variability. But, you know, sometimes guys just looking for a number and if I'd give you a number, I'd be about 30 pounds to the acre.

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So that's a starting point. Or LRB, you want to go with it. But that's that's something to start working with.

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And how you want to adjust it depending on your production system. So 30 pounds to the acre.

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All right. So we should be in around that hundred, too. Now, if you look at the data.

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On, you know, kind of were the the nitrogen peak is it's somewhere between, you know,

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90 to 100 units and sometimes we but that because the losses so far around eight hundred units, that drops down to about 70.

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So that that fits your ballpark. Yep, yeah, that's that's where I would be, of course, again, like, you know, we all know fields are variable,

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but that just gives somebody kind of a reference, a starting point, and they can kind of modify depending on their production system over time.

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But a lot of biomass, difficult to have quite a lot more.

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They're in and I don't think you know, and it's not just cutting back on fertility pick and a variety.

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That's that's a little more responsive to a map, quite chloride.

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It is also something in your favor.

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If you pick a real aggressive righty, then you can really shoot yourself in the foot or both feet if you if you think about that way.

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02:34:29,000 --> 02:34:33,000

So, you know, that was you know, we all about Matt Peacock Chloride. I don't hear I've got one question.

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When we talked about met picklock fluoride. And and I would.

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I really don't know anybody in Arkansas. And I would certainly hate to grow cotton without my chloride.

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But their question is, is stress in the plant? And is there an alternative for that application?

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You know, there's some other plant growth regulators that will have a growth inhibitor in impacts on them in the cotton plant.

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But I don't know that there's going to be anything that's. Is is cheaper than metal quart chloride.

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But, you know, there's there's two components of growth. There's cell division, cell elongation and medical cloud only impacts cell elongation.

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But the bottom line is, when you put my Precourt claw out on a plant,

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it decreases elongation of sales on the aboveground portion of plant as well as a below ground portion of the plant.

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It just impacts the aboveground portion of the plant greater than it does below ground.

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And so that's something I found. Guess now we're doing some work down around Pine Bluff and in in some fields we had.

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Nematodes, root, not nematodes. Very, very early in the season and and the bottom line is, you know, the nematodes really stress those plants.

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And we know we don't put nitpicked chloride on plants that have that are drought stress.

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But I found that the same thing goes for nematode stress because basically,

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I don't know if you remember that gas, but in the plots that more pics I put on, the worse the yield was.

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And I had BASF come out and we looked at that. I thought, well, we did something wrong.

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But anyway, it went till the next year that really realized what the problem was,

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02:36:08,000 --> 02:36:13,000

because I had I had like 30 foot plots and a 15 foot alleyway where the alleyway was.

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02:36:13,000 --> 02:36:17,000

And it was no cut point growing. There were no nematodes in the alleys in Travis.

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And guess I'm sure you remember that.

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02:36:19,000 --> 02:36:28,000

But the cotton in the alleyways were like almost twice as tall as the cotton in the plants last year from from the nematodes that were there.

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02:36:28,000 --> 02:36:33,000

So we kind of backed into an Internet question, but we just don't put mefloquine chloride.

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You don't wanna put meth quite clear. I don't stress plants because it it does have a belowground impact on the plant as well as above ground,

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02:36:40,000 --> 02:36:48,000

but it does impact aboveground more so than the others. And I think that that really kind of wraps up on our questions.

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02:36:48,000 --> 02:37:03,000

I don't know, panelists, these. Do any of you all have have questions that we not might want to think about before we start rapid descent?

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I see a lot of head shaking, no. All right. So they had Hardy and by his feelings, if we finish early.

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So once more, I want to recognize the importance of the support of Cotton Inc. and the Arkansas State Support Committee,

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02:37:18,000 --> 02:37:26,000

who, through the Cotton Board, the funds of our programs with checkoff funds will not be available.

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02:37:26,000 --> 02:37:32,000

So, again, we want to thank you for your support of our research and extension programs.

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02:37:32,000 --> 02:37:37,000

If you've and we've pretty well answered all of our questions, so I had to hear about that.

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02:37:37,000 --> 02:37:41,000

But again, thank you for joining us for our virtual cotton production meeting.

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If you enjoyed this program, we have additional production meetings coming up with peanuts on the twenty sixth of January.

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We have another session, marketing new technologies and irrigations.

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On January 28 in India, soybeans are going wrap this up.

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On February the 2nd and again, none of the sea information will be submitted until all of these stations have been completed.

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And it may take a little bit because they're going to go through and you put these together.

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So makes it a little bit easier on the people that are adding these numbers to your to your records.

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02:38:14,000 --> 02:38:20,000

But registration for these events are open now. And that is going to wrap up our program.

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I want to thank you and hope you have a great evening.