Episode 20—Fall Armyworms

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Announcer:

The Alabama Crops Report Podcast, your trusted information source for Alabama agriculture.

Scott:

Hi. Hey everybody. Welcome into a special edition of the Alabama Crops Report Podcast. Today. We've got the two entomologists behind the mic, Scott Graham and Katelyn Kesler. And we're going to talk about, Katelyn, what I'm told is something that's historic going back to like the '70s.

Katelyn:

Yeah. We've seen epic numbers of fall army worms in 2021. So yeah, history is a good word. Large, epic, insane numbers across the board. Whether it's Texas, Alabama, the mid south. I mean, we're seeing it everywhere.

Scott:

Yeah. I know. It seems like it started in Texas, I don't know, maybe a month ago or so. Kind of started hearing a little bit about it there. Then our colleagues in the mid south started talking about it in Arkansas, Louisiana, Mississippi, started talking about it in west Tennessee and then now here we are in Alabama and it's our turn to deal with suckers.

Katelyn:

Yeah. And I feel like we were calm a couple of weeks ago and you and I were like, well, it's not that bad yet. We haven't seen it here. And then the last... We're at the end of July right now in the last week, it's really blown up in terms of numbers of worms, of spray failures, what have you, whatever's going on. We're seeing a lot of it here in Alabama.

Scott:

And the big problem is we've got these two strains of fall army worms, the corn strain and the grass strain. Traditionally the grass strain, which is the one we feel like we're dealing with still, is one that gets into our pastures, it gets into grass, crops, things like that. And it's basically you pick a pyrethroid, you spray it, you come back a day or two later, worms are gone. And we're not seeing that.

Katelyn:

Yeah. And whether it's actual spray failures or applicator error or bad weather, too much rain, poor contact. I mean, there's a lot going on and I don't want to speculate what the cause is, but whatever it is, producers are spraying multiple applications and we're not getting the control where used to.

Scott:

Yeah. Yeah. And it is so widespread. I don't think he can be an applicator error or something like that cause it's everywhere from Southwest, Southeast Alabama, all the way up to the Tennessee valley.

Katelyn:

Yeah. Up to Limestone county was where I heard this morning. So what we're going to do today is we just kind of want to talk through army worms, what we need to know, what we can do to control them in a couple of different systems. And so if you're not familiar with Scott and I and what we do, Scott covers peanuts, cotton and soybeans. I do grain crops and pastures and turf. And because we are never bored and army worms like to eat a little bit of everything, we're going to kind of cross a lot of different systems today and just discuss some control strategies and what are our best options to make sure we're getting good control as effective as we can for this year given the circumstances, whether it's spray failures or weather. And so let's talk very briefly about the current situation and why is fall army worm such a major past right now?

Katelyn:

And I think we've covered this on a previous episode where we talked about the rain and how it was constantly raining and that kind of a wouldn't allow producers to get into fields to spray. But also what it does is we're at the end of July and we don't usually see green lush grass across the state this time a year. That's kind of a new thing for this year and army worms love lush, green grass, especially Bermuda grass, but we're also seeing it in bahia grass, Zoysia grass, all other types of grasses, which this rain allows them to not only survive, but also really just thrive in terms of their numbers.

Scott:

Yeah. I got asked this morning, is this situation because we just simply have more fall army worms in the system this year and I don't think it is. I think we've probably started off with a similar number of moss and worms and the system. We just have the perfect environment like you mentioned, for them to really survive at a much higher rate and thus we're building populations quicker than what we normally see.

Katelyn:

Yeah. And it's what? Mid 90s in temperature this week. And so when that happens, we know that insects are cold-blooded so their reproduction, everything speeds up a little bit. And in addition with the high temperatures and humidity, natural enemies, things that would normally feed on army worm egg masses, they're just slowed down a little bit. That we were tired in the field and so our predatory, whether it's insects or rodents or birds. And so all those factors kind of work together. Like you said, there's not really one thing, but they're just thriving in numbers this year.

Scott:

Yeah. And there's always a lag time between the exponential growth of a pest population and the beneficial insects and things trying to catch up. Fortunately if, or maybe fortunately for me and you, have beneficial insects could take care of all our pest problems, people wouldn't need entomologists.

Katelyn:

Yeah. We'd be out of a job. So part of me is cool, these are awesome bugs and I like seeing them, but at the same time, it's like, well, it's job security, so. But so in terms of finding army worms in your, whether it's lawn or crop or anything, what's the best way to go about just looking for army worms?

Scott:

Well, for me in our row crops, it's using a sweep net or a drop cloth depending on the size of the crops. These younger beans and stuff, just going through with sweep nets and trying to see how many caterpillars you have per set of sweeps. I know for grasses and things like that, a lot of folks don't have sweep nets for some reason. I don't know why everybody doesn't have a sweep net to catch insects at their house.

Katelyn:

I would say though that is probably the best $20 investment you can make if you have grass.

Scott:

I know. And you can talk better about scouting yards and stuff, but I looked like a knucklehead yesterday evening on my job. I got noticed some grass leaves that were caught shoot up my shoe. I bet there's some fall army worms in there. So I stopped and got down digging cause it was still kind of hot and was looking down close to the ground level and started finding some really, really small ones. So that's another way. And that was, don't tell Steve Lee and David Rosseau, I'm not sure what weed grass species it was. Maybe crab grass.

Katelyn:

My guess would be crab grass. That's my go to.

Scott:

And, well, it's a lot easier to see defoliation and window painting from little caterpillars on crab grass than it is on Bermuda grass.

Katelyn:

Yeah. And I think you made a good point too about it was hot out so looking down at the soil at the base of the grass plant because when it's really hot, they're not going to be in full sun feeding at the top of the plant. They're going to go back down. So if you're looking on your hands and knees on your run or whatever, and it's the heat of the day, look down at the soil, if it's a little bit cooler, first thing in the morning or at dusk, look at the tops of the leaves because they'll likely going to be feeding then. And yes, sweep net is the best thing you can do in pastures. I've been in fields that are completely infested and just kind of like a quick glance, I don't see it and then I know I've taken some students out to sweep and they are just like, holy cow, there are so many worms in this field.

Katelyn:

And so yeah, if you don't have a sweep net, let us know. We have ones at probably all the county extension offices throughout the state. And so another method is a soap flush. And so just getting a cup of soapy water and dumping on the ground. This works really well for turf situations. And then the caterpillars are going to get really annoyed because you just dumped soap all over their homes and so they're going to come to the surface and you'll see them within a couple of minutes.

Scott:

Let's talk about one thing this year we probably don't need to do. In a previous life or previous career, I guess I should say, I did a little bit of looking at fall army worms in pastures and I was talking to somebody this morning about it and we can't wait until we see the cow birds and then go.

Katelyn:

Yeah. Yeah. Pastures especially if you wait for those signs, then you've probably already lost a lot of your yield from army worms. And they get their name because they're moving like armies and they're eating a ton.

Scott:

Yeah. And particularly this year where we can't kill them tomorrow, without these pyrethroids and a knock down quick action, we can't just run out there real quick and take care of the situation.

Katelyn:

All right. So let's talk about what options do producers have. And you mentioned pasture so I'll start with that. A lot of our hay looks really good and we may be close to harvest. And so if you're within a week or so of your normal harvest time, just go ahead and harvest early. You may still need to treat afterwards because there still may be some worms in there, but another option is to use your cattle to graze intensively. And they'll actually feed on the caterpillars as they're grazing.

Scott:

So getting an extra protein there too.

Katelyn:

Yeah, exactly. We should all be eating more insects. And so that's an option for pastures. And if you're seeing big worms, then you might want to go out with something, whether it's a systemic like one of the diamides and then that will give you a little bit longer control, but we're also dealing with rain events. I know just this morning, we had a little bit of rain. It's raining on a regular basis. And if you're going out with one of the contact insecticides or the growth regulators, as soon as we get a rain, you're going to have to apply again because that's no longer in the system. It's not taken up by the plants.

Scott:

So if you've got a hay pasture person or hay producers, is that what we call them? And they start to see some larger worms and they're close to cutting, is it better just to go ahead and cut? Is that going to kill some of those caterpillars too or?

Katelyn:

Yeah. It'll kill some. Mechanical harvest will take care of a lot of the worms. So if you're honestly less than 10 days from your average harvest, I would go ahead and just get it off the field.

Scott:

Just go ahead and cut it.

Katelyn:

Yeah. We're also running into issues with Bermuda grass stem maggots, which are here and the maggots are feeding on the grass. And so that's another way to break up their lifecycle. Harvest early. But then we may also need to follow up with a pyrethroid to kill the flies.

Scott:

Well, has taken on the grass lawn there, how about turf? People's yards, golf courses, football fields, things like that.

Katelyn:

Yeah. So there's honestly a ton of options and active ingredients. And what you're going to want to do is pick based on your scenario, whether you're a sod farm or golf course, there's going to be stuff labeled for each of those systems and there's also going to be different products labeled for home lawns that residential homeowners can use that are going to be different than a commercial applicator. We do know that liquid applications are more effective than granular because they can get down through that thatch layer. But whether you're a home lawn or a golf course, we recommend mowing first to kind of shorten that thatch layer. It's basically a less depth that the insecticide has to penetrate to get to the worms. And check the label. A lot of them will require a light irrigation after.

Katelyn:

And for greens and fairways, you may want to kind of extend your spray area out because you're going to have worms on tree lines or roughs that can then move into the greens after you treat. And so I would recommend just increasing your spray width by a couple of bands on each side or doing those roughs where you have historic army worm populations each year.

Scott:

Yeah. And again pyrethroids, probably staying away from pyrethroids.

Katelyn:

Yeah. And we do have a lot of options for much longer control. Like I mentioned, the diamides, those can give you a couple of months control in many situations. If you're concerned about preserving beneficials, you have options like BT or Spinosad. Those may require multiple applications though. We know with these biologicals, they break down in the environment so you may be spraying twice a week to stay control especially as we have these flights that keep coming through, keep laying eggs and keep surviving. But for your typical kind of home lawn, that's certainly a great option because you're not going to take out all the beneficials and you'll still promote biological control. And if you're not doing a large area, then it shouldn't be too costly.

Scott:

Yeah, yeah. Any other, I guess we covered the pastures and turf, any other grass things before we move more into real crops?

Katelyn:

I think that's probably it. Yeah. Mowing, irrigating, pay attention specifically to pre-harvest intervals. For a lot of these products they're going to vary and so that's going to just, if you have questions, feel free to reach out to us or check out our IPM guides because each product is going to have a different time following spray that you can harvest. And we'll tell you whether you to irrigate, whether it's labeled for a sod farm or a golf course or athletic fields. And so a lot of these products are very, very specific in their labeling. And so make sure to check them

out. And a lot of them will have generally just turf caterpillars, which army worms will fall into, but you won't necessarily see the term fall army worm on some of the labels, but turf caterpillars, that's what they'll fall into

Scott:

And this is something that's important. Even if you've got a professional pest management person coming in to spray your yard, look behind them a day or two after they spray and just make sure because like I said, this is just so rare. It's just hard to know what's going to work and what's not going to work.

Katelyn:

Yeah. And that's a great point, but just keep in mind too, if you're spraying something with a quick knockdown, you should expect control right away. Whether if you're spraying a BT, it's probably going to take about 48 hours. If you're spraying and insect growth regulator like Dimilin, what that does is it messes with the hormones and the molting process of insects. So they're not going to die right away, but when it comes time for them to molt and go to the next growth stage, that's when we've messed with it enough that they're going to die. And so that's going to take a couple days too, but you'll end up with better and longer control especially for the smaller worms, but it may not take out the bigger worms.

Scott:

Yeah, yeah. Yeah. If you run into situations with worms that are over an inch long, it's probably too late to kill them with most of this stuff.

Katelyn:

Yeah. Because these worms live a couple of weeks, depending on whether it may be maybe shorter, especially this time of year. But we know when they're real tiny, they're not doing a lot of feeding. They really do in those last couple of days before they go into pupation, which is, they're kind of changing, resting, non-feeding stage, they're going to eat 80% of their food for the entire larval stage in those last couple of days. And so that's why we really want to find them using a sweep net, using a soap flush. We're getting down our hands and knees and looking for them because when they're small, they're not causing a lot of damage. They're easy to kill. And then as soon as they get bigger, they need more food and they're hard to kill.

Scott:

Yep. Yep.

Katelyn:

All right. Well, let's move on to soybeans. I know Scott, you've been getting a lot of calls about soybeans throughout the state and how to control worms.

Scott:

Yeah. And like we said earlier, we've gotten calls from Monroe county, from Henry county, from Colbert county. So I'm aware we're across the state with this thing and we're not recommending pyrethroids just like you've been saying, this is primarily going to be an issue in our later planted beans, our weed beans fields where there's not as much foliage, the soybeans just haven't quite grown as much as. That's where our issues are. Fields where we got a wet spots where we couldn't get across where grass weeds grew in the fields or were... We got volunteer weed, things like that. These army warrants were coming there first. They're either moving to the soybeans after we sprayed the weeds and killed them or after that just consume all those weeds and they're looking for the next thing to feed on.

Scott:

If you get out of the sweep net and you're picking up eight, 10 per 25 sweeps pretty quick, I wouldn't wait on our defoliation threshold at 35%, I'd go ahead and pull the trigger. With what we're dealing with right now with rains and things, you never know when the rain is going to pop up. So when you can get across a field, I recommend go ahead and doing it. But I would look, I wouldn't just spray a diamide insecticide and spend that much money without knowing I did actually have worms in the field. But as far as options, as you mentioned them, one is insect growth regulator diamide . We got some feedback on that today. It looks pretty good as well, but again, we're really targeting smaller infestations at that point or smaller sized worms at that point.

Scott:

You've also got your diamides, several different trade names. Prevathon, Vantacor, Besiege, products like that. Intrepid Edge is another good option. Without them we will say... With most of these diamides, we feel like we can get away with our lowest labeled rates. With Intrepid Edge, we're talking probably about five ounces of Intrepid Edge or Intrepid Troubadour. Again, those come in some different names as well, but just to make sure we get good control. Now, if you're just absolutely determined to go out with the pyrethroid, our colleagues in the mid south are recommended if... They're not recommending to go out with pyrethroids, but if you do, they say, throw in at least a half a pound of acephate and come back and check it two days later and make sure that you didn't get a miss. This is something that we can control. We've got good products to control them with good residual, but we've got to use those products to manage this situation for right now.

Katelyn:

Yeah. And that's a great point. I mean, a lot of our products do work like you said, but you can't just kind of spray and forget it. We need to go out there and make sure that we are getting adequate control. And if you have questions, you're not getting control for whatever reason, please get in touch with us. And we'll both kind of look at your situation. And each farm is different, each budget, each kind of worm population. These are or we are experiencing a huge infestation, you can have one field that's infested and just down the road, there'll be no worms. They are really patchy and so that's something to keep in mind. And so that's why scouting, treating if necessary and then going back within a couple of days and checking is going to be super important.

Scott:

Yeah. Yeah. Like I said, with these diamides that they cost more, but all we've got to do is just save ourselves a bushel and they paid for themselves. So I know it's a lot, but the price of beans are good and that means we really can afford to be a little bit more aggressive and cache yields this year and try to get the most return on our investment that we can. What about Katelyn? What about sorghum? Any thoughts there on fall army worms? Typically I feel like our... What do y'all call it? The head worm complex.

Katelyn:

Yeah. So, I mean, between army worms and ear worms, and then sometimes for fun, just throw in sorghum midge, it can get complicated in terms of control. And so we're talking a lot about grasses and beans, but I wouldn't rule out checking your sorghum for the major pests that we're now accustomed to like head worms, sorghum midge, sugarcane aphid. I mean, there's a lot of things. I think we've seen lower populations of sugar cane aphids this year. A lot of that may have to do with the rain. They're just not thriving like they normally do in dry heat.

Katelyn:

But depending on size and number of worms and if we're kind of past or before that stage where sorghum midge can really do damage, it's important to get out early in the morning in that window we can find midge. I go out with a very scientific thing. It's an empty milk jug, cut out the bottom and just shake my heads, the sorghum heads into it and look for worms and sorghum midge. First thing in the morning, that's the best thing you can do. And if you have questions about managing that complex and whether it's worms or midge, we can certainly talk through some of those issues.

Scott:

And before we get out of here, I'll mention too for peanuts, really we're not too concerned about this fall army worm outbreak. A couple of different reasons for that one. We're doing a lot of AGRs tank mix with fungicide applications. So that's really going to help us manage these, but also a lot of our peanuts are starting to lap, or at least what I saw today down around Headland, we're really starting to get good growth in our peanuts. So we've got a lot of foliage there to be eaten. We also are doing a pretty good job of keeping those clean and keeping grass weeds out of it. So really not too concerned there. And then all the same thing in cotton, how our BT technologies, whether two or three gene still provide good control of fall army worms. So really not an issue there. We need to be focused on plant bugs and stink bugs in our cotton right now.

Katelyn:

All right. Well, I think that's everything we needed to discuss. I would just reiterate if anyone out there is applying any of the products we talked about and running into issues where you're not going to get control, please reach out to us, let us know. It's good for us to keep a pulse on what's happening out there and we can talk through some options, looking at budget and rain and harvest time and everything. So please reach out to us. And hopefully we won't have to do another special edition. Hopefully things will calm down soon and then we can get some more guests on here so you're not stuck with me and Scott.

Scott:

Yeah. Yes, like you said, if we can ever be of any help, please let us know. And we appreciate our listeners, our folks who've been tuning in with us every week and appreciate the feedback that we've been getting. So be ready for another episode of the Alabama Crop Support coming soon.

Announcer:

The Alabama Crop Support Podcast is a production of the Alabama Cooperative Extension System and it's sponsored by Alabama AG Credit.