



## **Season 5 Episode 14 — Cotton Insect Management**

**August 8, 2025**

Announcer

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

Scott Graham

Hey, everybody, welcome into the Alabama Crops Report podcast. Scott, Simer, and Ron Smith here today. How's everybody doing?

Simer Virk

Pretty good, pretty good. And Dr. Smith's already taking notes.

Ron Smith

No, I was just making some notes here. Trying to keep up with my activities this summer.

Scott Graham

So, as our listeners might can guess what our topics are going to be today. Primarily cotton insect management. Simer that little, little background for you being still relatively new to the overall podcast. This is only probably the second episode that we'll do dedicated just to cotton insect management.

Simer Virk

Oh, okay. So you can kind of thank me for just. Hey, we need to cover this. Yeah. Yeah. So I was. And just the way I thought about was, you know, again, I try to keep up a little bit, but I everything. But last week we were spraying out there, you know, with the drone and the ground spray and all that. I'm like, man. So apparently this is the time for growers to spray and manage insects and all that. So, it's pretty timely to cover that topic.

Scott Graham

Yeah. You know, Jeremy Green at Clemson calls August stink bug month. And that's true. But it's also become a plant bug month.

Ron Smith

Plant bug month in particular with our later planted cotton this year that makes it, even more, sensitive to it.

Scott Graham

Right.

Ron Smith

Plant bug injury on later into the summer.

Scott Graham

Yeah, yeah. You know, one one thing we talk about a lot in county meetings and we put out information is how insect situation changes day to day, week to week, field to field. And that complicates this type of, podcast. Right? Because a lot of times, you know, I'll say if I put something that on one day by Friday, I disagree with it.

Scott Graham

Yeah. It's not it's not right anymore. So we're maybe not going to try to key in on what's happening right now, but talk about the big picture.

Simer Virk

Yeah.

Scott Graham

Of what it's look like this year and and some general ease of where we are. And then, Ron, I think probably the best thing to do would be to talk about maybe when to stop treating cotton, either by planting day or just by, you know, time or what, what stage the crops at a given time and try to try to do something that that is more relevant for a longer period of time than just this week or next week.

Simer Virk

So I'm curious when you said August has been predominantly, but more bug activity and all, during the season, when does it start and when does it kind of end?

Scott Graham

Bug season? Yeah. Well, for our insect season, insect, insect season starts as soon as a crop comes out of the ground, and it lasts near about until cracked boll, depending on, on where you are.

Ron Smith

I would say the insect we're most concerned late would be the stink bug. And, our guideline is is, we're susceptible to injury until the youngest bolls that we think we can harvest are about 25 days old. Yeah, and real hard to the touch so.

Scott Graham

That you can. But you start out with thrips as soon as it comes out, and then, like Ron said, you're fighting stink bugs until you're done.

Simer Virk

In a way, it's a pretty active management throughout the season for insects.

Scott Graham

That's why we think it's the the most interesting discipline in agriculture.

Ron Smith

Good thing we are entomologists and not something.

Simer Virk

Yeah. No, it's I think or I mean cotton given already a crop which not very predictable in the way, you know, you could have a response one a year and next, not the other. That compared to corn or other crops that we usually see.

Scott Graham

And, and cotton may or may not be predicted as predictable as other crops, but it is predictable.

Simer Virk

Trend we're after, right? The bigger trend.

Scott Graham

Part of what messes it up is weather. And part of it is insects. If thrips hit it really early and it delays maturity a week or so, if plant bugs come in and knock squares off before bloom, that that delays maturity a couple of weeks. So insects also affect that.

Ron Smith

And and the planting date has an impact on the weather; indirectly there's a tie there. And also it has an impact on insects. So that's the situation we're in. This year is the most one of the most extreme planting seasons that I can ever remember in 54 years. And, and, and some of our late planted cotton didn't get rainfall right away.

Ron Smith

So it, it even became later maturing. And so I've never seen such an extreme environment out there in shape wise or crop wise. And, and that relates to insects too, is what we've got now.

Scott Graham

Even some of the early planted stuff had so much rain early, it didn't grow off very well.

Ron Smith

Exactly. The waterlogged soils. A question came up this morning, and this may not be the best place to fit it in, but, we're talking about when as a crop mature enough, it's no longer damage to insects. And, and I think we've got to consider the weather is a factor in there. And the cool nights and the slowing of the maturity, early frost. And when you put all those things together, when is that last boll that you can harvest? And that's going to be hard to tell. So I would suggest if we can get plant bugs and stink bugs suppressed, just, just let it go and let's see how long we can make before the fall. But the fall weather catches us.

Ron Smith

So that might be what, just if we just let it ride without any additional input there, we'll just let it let the weather determine when our season is over.

Simer Virk

So what would the — I know we were talking about this, and we want to make sure that we can also cover the fact that our crop is so widespread, in a way —for, for early planted. What would you say that got planted before this week, this day is considered in that?

Scott Graham

Well, traditionally, I would say early planting cotton is for Alabama is planted before about May the 7th or 10th.

Ron Smith

Well, I think, and I know, Phillip in Georgia has used his to May the 10th as a good, date to say anything prior to May the 10th could be considered early planted cotton.

Simer Virk

Yeah. So that's why I ask. Because the grower might be listening, and he is like, what if, Yeah. You know, this date planted, in.

Scott Graham

You know, this year. And the reason I said traditionally is because this year I might use my May 25th stuff might be early because of how the season went, you know, because we we had a long time in there where we couldn't plant that.

Ron Smith

That's what I was going to say. There was a long gap in there in May. Well, we didn't really plant anything. So the two crops really distinguished themselves either prior to May the 10th or basically almost after June the 1st there. So we didn't plant much the last 20 days of May because of the weather.

Scott Graham

Yeah. And so that is, you know, a lot of the early stuff is really through the insect window now. Some of it is, is probably getting close to thinking about defoliation, you know, which we will hopefully, as a side note, be able to do a good podcast on that soon. But but yeah, I think a lot of the early planted stuff is certainly should be through the boll, through the bug window at this point.

Simer Virk

So does growers need to when when you say that the most of that should be through, they can probably switch gears to the defoliation and other things. Start worrying more about that type of stuff than more management on the insect side.

Scott Graham

Well, maybe they're just not as they can focus in on their late planted stuff now for insect management.

Simer Virk

Okay, that's what I was saying.

Scott Graham

Because I think that there could be some people who got everything in in that tight window, but probably not a lot. Just were trying to finish up other crops and, you know, back when they were planting and all that kind of stuff. Okay. We're also starting to shell corn right now, too. Yeah. Which which can take away from your ability to spray insects and that kind of stuff.

Simer Virk

So what, all insect-wise is present out there now or what? What do they need to be managing for now?

Scott Graham

So right now, we're getting calls and stuff about plant bugs. And stink bugs are the primary. There are also some spider mites out there. I have not heard about any at treatable levels yet, but I've gotten pictures of of some out there, and people are, talking about how do we manage these other insects and not flare spider mites.

Ron Smith

Well, I did have a call from Monroe County. Just prior to time you were out, I guess. And that was just before we had all the rainy weather and, maybe it started raining on Friday, Saturday, Sunday. Monday was cloudy, then several days afterwards and, and, my suggestion was, let's wait till all of this weather is over and, and if we still need to treat let's treat next week. But, the plant bugs, not plant bugs. Spider mites just don't blow up during cloudy, wet things. Now they don't go away. They just don't multiply. So they're going to still be there. But the more you can ride it out, the, the less chances you might have to make a a second application.

Scott Graham

Yeah. And, you know, that's you made a point there about the cloudy, wet weather after the rain. I got a report Tuesday this week. Today is August the 8th. I got a report Tuesday that, cotton was starting to throw stuff off because of that cloudy weather. You know, that's another thing that complicates insect management when it starts throwing off small bolls.

Simer Virk

So it should start shedding.

Scott Graham

Physiological shed just. Yeah. Yeah.

Ron Smith

Well, and it could be another factor there. In addition to the cloudy weather too I think cloudy weather impacts small square shed more show early in the season than it does late. I would suggest the boll load that some of these varieties have on it now, because even though they did make a lot of vegetative growth, we've got a lot of, short cotton this year. But it is really, really loaded thanks to the varieties that we have today.

Scott Graham

And they did say they had a great boll set on it.

Ron Smith

And I think that's the reason that we're losing. We're going to lose some of the top things or one of the reasons

Scott Graham

But then also, you know, we we just talked about the rain. There's also still spots where it didn't rain. Yeah. No, my crew had to wear their boots to Prattville one Monday and, Blake Lanton and, you know, he covers Prattville but also in the south one that area, they're still praying for rain every day. You know, just 20 miles away.

Scott Graham

And so it's it's not everywhere. So I think southeast Alabama, Wiregrass in particular got a good widespread rain, but other places are still fighting these little spotty, you know, pop up showers even.

Ron Smith

Even across the northern part of the state, over in the northwestern part that was getting all the rain earlier, got, minimal amount out of this last front. But over in the northeastern part of the state, we had up to seven inches in some places.

Simer Virk

So what? Weather effects. They're not just when they can spray all that, but also looking out. How how does it affect. So like, what is the old recommendation on? Because I remember like not me getting but other colleague getting calls similar like even fungicides. Hey it's not going to rain tomorrow, but two days from now. Should I go and spray? You know what is kind of those suggestions for insecticide sprays?

Scott Graham

Yeah, that that's a pretty complicated one. You know, that's kind of a field. The field. How how big a population do you have? Right. Do you have five times your threshold? Are you just right at threshold?

Simer Virk

Okay.

Scott Graham

If you've got a bunch, maybe you go and try to get what you can and — and also when can you get back in the field if it rains, is it going to knock you out a week or is it going to knock you out a day? The the quicker you can get back in. Maybe you wait, but if it's going to push you out, you try to get what you can now and then reassess the situation after is my advice.

Ron Smith

I would say one other thing. There is, which depends on which bug you might be going for. Yeah. You need more residual on, plant bugs than you really do on stink bugs because I think most of our stink bug materials work within 24 to 48 hours. And so really, whether it's going to rain or not is irrelevant there, because, if, if that was my primary target pest and I could squeeze it in if I thought I could get 12 plus hours, I'd go ahead and control stink bugs.

Ron Smith

Say plant bugs.

Scott Graham

On stink bugs. You know, you're dealing with adults. And so they're very mobile, moving through the field where plant bugs this time of the year it's in matures, which don't move around as much. And they're in there in there the whole time. And so that's why the residual is more important.

Ron Smith

They're in there the whole time. And, and for the immature plant bugs live is inside, square bracts of large squares. And they're pretty much, isolated from any exposure there. And they don't come around out and move around on the plant either. I don't believe so.

Scott Graham

Not a whole lot.

Ron Smith

So, like, their food source is right there where they just keep feeding all that one large square. So there really is minimal exposure.

Simer Virk

I guess question: not knowing too much about insects and all that plant bugs necessarily, or anything inside that feed inside the plant or the bowl or something.

Scott Graham

Say that again, now.

Simer Virk

The the distinction between the stink bugs and the plant.



Scott Graham

Bug. Okay. Yeah. Yeah. So yeah. So stink bugs, like he said, they live inside the bracts feeding on the boll. So behind the leaves right of the of the square where stink bugs are actually going after the boll itself, which is outgrowing the bracts so they're not as hidden. Yeah. And the size, the size of the boll they prefer is about a quarter in diameter, is about ten day old boll.

Scott Graham

And where that is, they're kind of having to move up and down and getting in contact where that coverage was to get to the next boll or to another boll.

Simer Virk

Okay. Yeah. We're talking about you were talking about threshold and stuff. So what, what our, our thresholds were I know you were also working on some dynamic stuff.

Scott Graham

Yeah.

Simer Virk

Well what what is the normal threshold for some of these.

Scott Graham

So for, for our plant bugs or the best threshold is three immature plant bugs per five row feet. And so to do that you got to use a drop cloth. And it's very intense very takes a long time. On top of that it's hard to do, but it's a very good way to sample. There are also people that just use sweep nets and and there, it's you're you're kind of looking for the adults, which we try to focus on the immature. And so Ron maybe has more experience helping call shots in that scenario than I do. But I kind of I do if I do a set of sweep nets and I find 1 or 2 immature plant bugs, I feel like I probably got enough to spray.

Ron Smith

Yeah, there's a lot of factors that you want to consider. How long has it been since that field has been sprayed? Previously. But, the sweep net is a real good tool for detection. It's not a real good tool for quantifying.

Simer Virk

Quantifying.

Scott Graham

Yeah, at this time of the year.

Simer Virk

So. Okay, so when, when you are doing it, which it might differ because we, we kind of work in your expertise in this area versus a grower or a scout or someone. How many times you recommend that doing that in a field, because you just stay one part of the field and sample one and like, oh, you got bugs.

Scott Graham

Yeah, yeah, yeah, that's a question I get a lot. To me, you want to do it and in more than one area of the field, obviously maybe on the border and then move into the field, maybe a couple of places in the field. But I always say is you want to sample the fewest times you can to make the most confident decision that you can. And for a more experienced scout, that might be two times. It might be three times for a less experienced scout. It might be four or 5 or 6. But at a certain point you've got to make a decision and get out.

Ron Smith

Yeah. In it. And it's the size of the field. Has something to do with how many samples they would want to take. Also, because in, you know, we've got rivers in the state and sometimes the entire bend of a river is planted, maybe not in rows all run in the same direction, but in a situation like that, you would sample 3 or 4 times, maybe in a 300 or 400- 500 acre field. But the other thing is, is like with stink bugs, you know, when they, they come out of corn, you would want to look to see where your source would be. So this would be the moving time for them moving in, and you would want a sample there because, you know, Reed needs to go to the other side of the field to sample where you you'd likely would have a lower population.

Ron Smith

You really want to catch them as soon as they're coming in. And and we know all these insects clump, but stink bugs clump as they move into the field out of corn. Plant bugs just clump on their own, I don't know. Okay. So pheromones or what, but they are very clumpy and fields. But but, you can't sample every row, so if you detect a population, you've got to assume you've got a problem at that site. And I don't know, you don't feel good about letting that right to go sample another site that may have a zero.

Scott Graham

Yeah.

Ron Smith

The farmer probably needs to treat if you pick them up in any one site.

Simer Virk

Yeah. It's not like for like in precision AG we do variable rate fertilization and all that for insect. It's not in the way because I don't think there's even sampling you can do to really say, hey, spread this much in this part of the field. Don't spray over there. Yeah a little bit there.

Scott Graham

Yeah. And and in general, with insecticides in particular, most people either want to treat everything or nothing. Yeah. They don't want to go. Some of them will go and just spray a border like Ron saying if if they do find that they're only bad next to corn, they'll, they'll do that. But for the most part, with an insecticide, we want to go over the whole field or none of it.

Ron Smith

And the other thing, if you if you've got like 30 or 40 fields spread in three counties, you can't run up and down the road with your high cycle back and forth to get individual fields. You got to spray blocks.

Simer Virk

Yeah, too. Yeah.

Scott Graham

That's a good point too, because if you're going to variable rate PGR you know you're spraying every field anyway, right. Or within a planning day with insects. You might just find 1 or 2 fields out of, you know out of 15 in that on that farm that have bugs. A lot of them, they don't want to drive just to do that.

Scott Graham

So, yeah, it's it's complicated. Can be. But we have talked about stink bugs and we haven't brought up that threshold yet. So stink bugs require no fancy devices at all. We just pull those bolls I mentioned the size of a quarter, pop them open and look for damage. Our. With that. That is a dynamic threshold that changes peak bloom, which is weeks three, four, five and maybe six is 10% damage.

Scott Graham

So I was talking with the guy the other day that I should look at, you know, I think in the scout school we have on our slide that we recommend to pull one boll per acre, you know, in the field or a minimum of 20. And so, my I say, hey, if I know I'm going to do that and I've got a 100 acre field where if I pull ten bolls or if I pull 20 bolls to start and ten of them are damaged, that's 10% of a hundred. So I'm done. Yeah. So we don't need to actually quantify how much damage there is. We just need to know threshold not threshold. And so you don't even have to pull the rest of the bolls, let alone pop them if you're, you know, pulling them and popping them as you're walking. And you can figure out pretty quickly if you're going to hit that threshold or not.

Scott Graham

So that's another thing there.

Ron Smith

Yeah. And let me say this or see if you agree with it. Scott, I would say that our older cotton that is planted prior to May the 10th, is just about home free for stinkbugs now.

Scott Graham

Yes.

Ron Smith

Yeah, there's I don't that we're go we're going to, set a lot more bolls in the top. Most of it has bloomed out several weeks ago. Yeah.

Scott Graham

And so as you mentioned earlier to again, the the cut off is we want to protect, bolls that we plan to harvest until they're about 25 days old. But the threshold within that changes. So the seventh and eighth week of bloom since there aren't as many of those susceptible bolls in the field, it takes more damage to justify the spray. So now, if your eighth week of bloom, which is kind of the last week you expect to get anything anyway, threshold is 50% damage because there just aren't very many bolls out there to begin with.

Simer Virk

Yeah. So that growers who are noticing these, you know, whether that stinkbugs spider mites or other plant bugs, this is more so for late planted, right. That we still have a pretty good chance of bug activity.

Scott Graham

Yeah, for the most part. Yeah, yeah, we need to be keyed in on the late planted stuff.

Ron Smith

Yeah, yeah. Because if it's home free from stink bugs, it's most likely home free from plant for plant bugs too.

Scott Graham

Yeah.

Ron Smith

Yeah.

Scott Graham

Yeah. So that there's a, there's a fancy cut off or the, you know the, the way we determined I should say our cut off is based on degree units. Well not a whole lot of people are set up to keep up with that math. And so for plant bugs if you calculate that out it comes up to about an out above white flower two is our, our walk away from, from plant bugs.

Scott Graham

And so that's, that's another cut off there that should be mentioned for the light plant cotton. And something else we haven't talked about yet is the last effective bloom date.

Simer Virk

Okay.

Scott Graham

I'll ask our, our producer, Jacob. You know what that is? So the. He shook his head. No. The last effective bloom date is basically or not. Basically, it is the day. It is the day when you drop below at least a 50% chance for a white bloom to make it to the picker. So when you've got a 50% chance that the frost won't kill that boll before it fully matures.

Scott Graham

And a common question is when is your last effective bloom date? And people have a good idea for their area based on their, you know, their history, right? But it's it's pretty different from Cherokee County than it is from Baldwin County, because those are different environments. I think Brad Meyer had the best answer, which was, well, tell me when your frost is going to be, because it can vary so much from year to year, even if you have a good historical record.

Scott Graham

So that's something we need to think about with this late planting cotton is, you know, don't go chasing bolls that probably aren't going to mature anyway.

Ron Smith

Well, when I when they'll say don't go chasing them, I would say, don't go chasing them with additional inputs. Pest control. So yeah. And that's what I was referring to back earlier in our conversation here. Just let it ride. And if it makes, it makes as long as we're not putting any additional input into it, and let the weather dictate then what the last boll is.

Simer Virk

Yeah, sure. Is it also and when you were saying that, it kind of reminded me of, you know, we got this money tree for a cotton plant, where most of their money is coming from the bottom one third or whatever half of the planters for insect management, you know, later in the season, are the bottom bolls more susceptible to damage, or is it more top.

Scott Graham

Like late in the season? The bottom bolls are pretty well set, so.

Simer Virk

They're just.

Scott Graham

The top, right.

Simer Virk

It's mostly so. That's why you don't want to waste too much energy and resources on those top. You already have them.

Ron Smith

That's right. Because those top bolls are normally smaller in size, contribute less to yield.

Simer Virk

They're still developing.

Ron Smith

And the other thing we need to remember too is as the nights cooled down, the, the right that a boll matures in and the fiber matures inside the boll gets really little much longer than it does earlier in the year. Now, the only thing those bottom bolls are susceptible to would be diseases in from form boll rot later on.

Scott Graham

Yeah, yeah. You know.

Ron Smith

But hopefully, with our plant limited in size this year, that would be one advantage to minimizing boll rot because we don't have a lot of canopy there to be concerned about in most fields.

Simer Virk

Yeah, yeah, it was interesting when we were and that's the first time I've seen because, I mean, I'm more on the sprayer or other considerations that there was one chemical we were spraying last week. It actually had a minimum volume of only five gallons, which to me that's probably only time I've seen a label that with the ground sprayer because we always talk about ten being our like standard of like, hey, you don't want to go below ten, right?

Simer Virk

I'm more comfortable putting out 15 for everything in a way, because more coverage and all that. But is it that so for that you think are growers really kind of doing that or are they more like when they tank makes it kind of end up that they're actually applying a little bit higher volumes?

Scott Graham

I would say, we do know at least one person that goes six GPA, with insecticides, but I would at least hope most of this, or at least in the eight, if not the ten gallons per acre range.

Ron Smith

I believe most of them shoot for about ten, and they stay the same. They don't change it back and forth for chemicals all of the time of the season or anything. They pretty much keep that the same.

Simer Virk

Pretty good. What what else were we get about a few minutes here wrap up kind of some of the main things to highlight.

Scott Graham

Well we've. We've covered a lot.

Ron Smith

But well, one thing that, just came up this morning, a phone call is on this cotton that was planted real late, sat there and struggled from lack of water. What about PGR? Use all that cotton right now. It's got finally got some rain, so it's beginning to grow a little bit. In a case like that, I'd be very careful to not overdo that because we got you've got to have some, got to have a little growth on it to, to get any expected yield.

Ron Smith

So I'd be afraid to play around with much more than 8 or 10oz.

Scott Graham

Yeah, yeah. On that, that I would be, not aggressive for sure on late planted cotton PGRs right now.

Ron Smith

And the other thing though that I would like I don't know if you but I didn't look last week at our, our friend Snodgrass that does that real nice weather report, about, 10 or 12 days ago. His outlook for August was a wetter than normal August. And in fact, corn harvesting that's terrible. But for cotton, that's probably going to be really good because we can fill bolls with plenty of moisture.

Scott Graham

Yeah. You know, I've, I've, I talked a couple people at South Alabama that they've already gotten more rain in August than they got last year. And so hopefully that that sets us up to finish out that cotton for sure.

Simer Virk

So on the light planting, I guess to kind of wrap up, we are recording this on August 8, it might be out by next week. For how long should the growers watch it before that crop is out of the.

Scott Graham

So so here's what I'll say from an insect stage. Just keep in mind that plant bugs. Actually we generally about note about white flower to where we walk away from plant bugs. But they can damage dome sized bolls too, so they can damage bolls until they're about ten days old, which is when stinkbugs start targeting them. Stink bugs... We say it, based on your your dynamic threshold, protect bolls until they're about 25 days old, and then spider mites about the same. So they're damaging bolls until they're fully, filled as well. And so they think about it from that aspect for walking away from bugs.

Ron Smith

And I'll just add this to that we've got cotton is probably some of the latest that I've heard from is in the first week of bloom here on August 8th, I was hoping.

Simer Virk

Within this the second or third week of June, planting cotton.

Ron Smith

That's, June the 22nd planted Scott. That didn't grow well. So really, we're just beginning to to make a crop there. So I would say we need to keep the plant bugs and stinkbugs below threshold for the next four weeks.

Simer Virk

Four weeks. Okay.

Ron Smith

We need four weeks to make enough to justify harvesting from. We need four weeks of fruiting. Yeah.

Simer Virk

That's pretty good.

Scott Graham

Yeah, yeah, that's what Steve Brown always said. You can make a crop in four weeks.



Ron Smith

That will take us to about mid-September. So we really on this late, late planting cotton. We need to have it keep insects below threshold till about mid-September and then let the weather determine how much we can harvest.

Simer Virk

All right. Good information, guys.

Scott Graham

All right. Yeah. Enjoyed the conversation. So as always, to our listeners, if any of us Alabama Extension can do anything to help, please let us know. Or if we've got a topic you'd like to hear discussed, let let us know that as well. So with that, we'll, we'll hop off and, hope everybody has a good, good week and we'll be back, soon with another episode.

Announcer

The Alabama Crops Report Podcast is a production of the Alabama Cooperative Extension System.