



Episode 28 — October Cotton Update

October 15, 2021

Announcer:

The Alabama Crops Report podcast. Your trusted information source for Alabama agriculture.

Scott Graham:

Hey, everybody. Welcome into another episode of the Alabama Crops Report podcast. I'm Scott Graham.

Katelyn Kesheimer:

And I'm Katelyn Kesheimer. And we're both Extension Entomologists. And today we're going to talk about, I assume, cotton, but also rain.

Scott Graham:

Yeah, yeah, probably a little bit of both. As we record here on-

Dr. Steve Brown:

Yes.

Scott Graham:

... October the fifth, it is wet in Lee County anyway. And I think just depending on where you're standing in the state, there's a good chance your head's probably getting rained on.

Katelyn Kesheimer:

And with us today, we have a good friend of the pod. And at this point, probably a co-host, Dr. Steve Brown. Welcome Steve.

Dr. Steve Brown:

Good to be with you again, and to share stories.

Scott Graham:

The most reoccurring guest in the history of the Alabama Crops Report podcast.

Katelyn Kesheimer:

That's quite a title.

Dr. Steve Brown:

Pod, pod. Pa sounds like almost like Pa.

Scott Graham:

In the pod.

Dr. Steve Brown:

Yeah.

Katelyn Kesheimer:

Oh, we've been in it so long. I'm just shortening it to the pod.

Scott Graham:

Yeah, it's the pod.

Katelyn Kesheimer:

Yeah. We're old hats at this.

Scott Graham:

Yes.

Katelyn Kesheimer:

But it's good to be back in the studio. It's been a while. With our fearless leader, Josh, our Producer. Editor of inappropriate laughs and comments. So good to be back.

Scott Graham:

And snorts, too.

Katelyn Kesheimer:

Oh, yeah. Well, that'll be our Christmas episode. Is just Katelyn laughing and snorting.

Scott Graham:

Well, Steve, speaking of laughing, I'd say we were all in the cotton world, in Alabama, in a pretty good mood last week about this time.

Dr. Steve Brown:

We were. We had experienced some rainfall back, I guess, beginning in July. But then we fared off maybe a couple of weeks ago and thought, "Man, we've turned the corner and we've entered the edge of harvest season. We need sunshine. We need a breeze." We had all that. And now the first few days of October, we have been drenched. Probably more so in Central than maybe in Southeast Alabama. I know Southwest has gotten soaked, too. But rainfall this time of year on the edge of harvest or in the midst of harvest, when the crop is ready or multiple crops are ready, it's very ... it's somewhat discouraging to experience that and to see the loss or the impact of that. The negatives of that in terms of yield and quality.

Scott Graham:

Yeah, absolutely. And even in North Alabama, too.

Dr. Steve Brown:

Sure, yes.

Scott Graham:

They've gotten a lot of rain.

Dr. Steve Brown:

Yes.

Scott Graham:

And like you said, folks are ... I feel like, and Katelyn might can speak better, I feel like we're close to, if we're not done with corn at this point, getting it out.

Katelyn Kesheimer:

Yeah. I think we got real lucky with the timing of the rains. It worked out for corn, but not so much for cotton.

Scott Graham:

Yeah.

Katelyn Kesheimer:

We got some good stands up early with timely rains. And then the majority of harvest is done. North Alabama is still ticking away, but we're in good shape for corn. I fear it's not the same for cotton right now.

Dr. Steve Brown:

Cotton and peanuts I think are, are hurting.

Scott Graham:

Yeah.

Dr. Steve Brown:

Just because the crop's ready. Particularly peanuts, they feel the pressure because of disease and the loss. And certainly in cotton, we feel the same, too.

Scott Graham:

Yeah. And I know some folks are starting to get early beans out and stuff like that.

Dr. Steve Brown:

Yeah, yes.

Scott Graham:

And our late beans are ... we'll see what all this rain and storms does for them.

Dr. Steve Brown:

Yeah.

Scott Graham:

I did see last week on Twitter that there was a picker going in the black belt.

Dr. Steve Brown:

I don't doubt there's been a little bit of cotton picked and I'm happy for anybody. I know there's been some defoliated. But where I've been, and I haven't certainly been all over the state, I haven't seen any. But I hope some people got some in the module before this latest round of rain. So that's a good thing. But there's many people have not commenced or have just commenced defoliating. And there's so much to be done in terms of getting the crop ready and to go. And then in the gin.

Katelyn Kesheimer:

Steve, what does this mean in terms of, you mentioned defoliation. What can producers do as they're waiting for it to dry out?

Dr. Steve Brown:

Well, defoliation is really a broad ... We probably use that term to say a lot of things. It's really harvest date application. We're trying to do multiple things with that. We want defoliate the crop. We want to remove the leaves, both mature and immature leaves. But we do other things, too. We want to suppress regrowth and then we want to open bolls. And we may do even a few other things. Maybe we want to dry down some weeds. But while it's too wet to get in the fields, not a whole lot you can do. Maybe some places that have access to aerial application, we can go ahead and proceed. But we probably want to let this front move on through and get a little sunshine before we commence to getting in the field with our harvest aid products.

Scott Graham:

So in speaking of harvest aid products. I know, I hear and read a lot of stuff about defoliation and boll openers and all that kind of stuff like you mentioned. And I see a lot of times folks talking about a one shot approach or a two shot approach. With the weather that we've kind of been seeing, would there be an advantage this year to trying to do a, quote, one shot approach?

Dr. Steve Brown:

Well, my aim is always to make it in one shot. Because of the cost, the timing. What you can do is gear up. I'm going to make one application and then, hey, if it hasn't done quite enough, then we get in and re-treat. The other approach is under a heavy canopy, a dense canopy, some folks will plan on a two shot program. They'll make an application with a little bit of defoliant, a little bit of boll opener. And they'll wait, say a week or so, and then come back with a more aggressive, full orb rate of defoliants and boll openers, et cetera. And so they'll plan for that. To me, that's an added expense. And now smarter guys, they know their ground and they know what's how difficult it is to remove these and open bolls. And plan for that.

Dr. Steve Brown:

Almost always, when you go to a setup and plan for a two shot program, you do a great job. My thought is, hey, let's try to skate by and be a little cheaper. Again, time and money. And maybe we get enough. If we don't, we

touch it up. But I like that approach. And I would say probably 95% or more of our acres are most people approach it with a one shot application mindset. They may have to touch it up, but there are a few that are committed, have great fertility, great growing conditions. They say, "No, we got to have a two application program." And I certainly don't discourage that, because they know what it takes to do something on their farm.

Katelyn Kesheimer:

So given the one versus two shot approach, can you talk a little bit about timing of these applications? And then maybe go into what specific products we're going to be applying?

Dr. Steve Brown:

Most timing decisions are based on the maturity of the bolls. Now, frankly, we have gotten ... We're in the first week of October. And so a lot of fields are ready and just the weather has hindered us from getting at them. Now our crop has been generally a little later than normal. But timing is gauged multiple ways. You can ride down the road in a pick up truck and say, "Oh, that's 50 or that's 70% open." That's one way. And it's not overly accurate. I find myself making some errors and some gross mis-estimates there.

Dr. Steve Brown:

But that's certainly a way, but you should be able to tell the difference between 50 and 90% open. Some more sophisticated ways. If you have a first position boll that's open and then any boll, first position boll, above that say four nodes and possibly five nodes, they should be sufficiently mature enough, advanced enough in growth that you can put on a boll opener, a defoliant. You won't reduce yield or quality. So that's another way.

Scott Graham:

What you just said is if you find an open first position boll, which is the boll closest to the main, to the stalk.

Dr. Steve Brown:

Correct, right.

Scott Graham:

The next four or five first position bolls above that should be sufficiently matured.

Dr. Steve Brown:

That's right.

Scott Graham:

To get it going.

Dr. Steve Brown:

Another way to assess an area ... And you always have to think about, if I'm looking at an area, how representative is this of the whole field or the bulk of the field? Is taking a pocket knife or some sort of cutters, clippers or something, even the PVC pipe cutters, and cutting through the boll and slicing a cross section. And seeing, is it still jelly-like and not the cotyledons are not well formed or can you begin to see some discoloration or some tanning or browning or even blackening of the seed coat? And you'll observe that very well in a cross section cut. And then also a boll that's mature is pretty difficult to cut with a pocket knife. So that's sort of a confirmation of the visual looking. But I think we got a lot of fields ready to go in terms of timing.

Scott Graham:

We talked a little bit about timing there. What about products? And I know a lot of these are generics and there's a world of different names. So I don't know if you want to talk about active ingredients or if you want to give general?

Dr. Steve Brown:

Yeah, there are many products. But let me just talk about function again. I mentioned it, but we want to ... Actually, there are five different functions we can accomplish with our harvest aid products. Number one, we want to remove mature leaves, certain products do that well. Second thing is we need to remove juvenile leaves or juvenile growth. The third thing is we want to suppress regrowth. The fourth thing is ... And maybe the order these may switch around in certain situations. But we want to open bolls. And the fifth possible thing is if we got some weeds out there, we would love to dry them down a little bit. And we got some products that may do that.

Dr. Steve Brown:

In terms of leaf removal, both juvenile and immature. We've got multiple products and probably three groups. The main one is the phosphate or the Tribufos type product, Def or Folex. That's the characteristic odor that people smell when they think about cotton defoliation. The second one is going to be a product that ... the original product was Drop, or it's known now as Thidiazuron or TDZ. And it's a good defoliant. It does some other things.

Dr. Steve Brown:

And then we have several products that we would be herbicidal type products in the PPO herbicide group. And those would include Aim and ET. And there are probably a handful of others that are generics or even close to that, that I haven't named. But those would be the three products we would use in terms of leaf removal. Of those, excuse me, the Drop, the TDZ-type product, is probably going to be the best material to handle juvenile foliage. And Drop or TDZ is also going to be the best product to limit, inhibit regrowth. And regrowth can occur from the base of the plant, at the stalk. It can occur in the top of the plant. And it is problematic in that if you've got a lot, you may get the leaves off. But if you have a lot of regrowth, you may create some green stain on the cotton. That would be a negative that you may have to deal with later on. So those would be the products we'd think in terms of leaf removal.

Dr. Steve Brown:

And in terms of regrowth inhibition, another product that's used extensively would be the ethephon products. The original product was called Prep. And now they're probably 16 different generics of that. And some fancified versions of that. But it's a boll opener. But at the high rates at which we're using it today, it also provides some help with defoliation.

Dr. Steve Brown:

And so, I would say without, almost without exception, we need to be using combinations of products. Because combinations are far more consistent in doing even leaf removal than a single product alone. We could use the best product, use it at the highest rate, and not do a great job. But if we use a good product ... If we use two products that are intended to remove leaves, and that could include the ethephon product that's also a boll lumper, we do a much better, much more consistent job in terms of getting the leaves off and getting the crop ready for harvest.

Scott Graham:

How much does weather, environmental factors impact this?

Dr. Steve Brown:

Yeah, weather certainly effects. If I knew this big rain was coming in a day or two, I'd probably want to hold off making my application. And we're still really warm. And we're in the 80s in many parts of the state. Now we dip down briefly, but we're still very warm. But on the other end of the spectrum, when we get down and we start getting close to average frost dates, if we knew a frost was coming in four or five days, we may want to proceed. We would love to be out, again, four or five days ahead of that, rather than the night before or the day before a frost or freeze was coming.

Dr. Steve Brown:

Now, freeze is, to impact bolls, is probably going be somewhere 29 or 28 degrees for several hours. A light freeze may actually burn the foliage and sort of help set the crop up for leaf removal and the proceeding of our normal defoliation and the boll opening. In fact, what we're doing with these products is actually just accelerating what's naturally going to happen. But we're trying to speed it up so we can have a once over harvesting, get it done in good fashion to preserve yield and net quality.

Scott Graham:

So a light freeze can help. A hard freeze, not good.

Dr. Steve Brown:

A light freeze can help. Some people might argue with me. And how do you judge the impact? Will you judge the impact maybe a day or so after you walk out, if you smell it, you know that those upper bolls soured and it got cold.

Dr. Steve Brown:

In a field, even a field that has some slope, you'll see a gradation of impact of cold weather. I've seen it frost, be less at the top and more at the bottom as it got cooler. And then you see airflow effect that, too. So yeah, a light freeze.

Dr. Steve Brown:

The big thing we need to be concerned about, if we know a serious cold front is coming, we're going to see freezing temperatures. We need to be several days out with our application and particularly with our boll opener, to set the crop up for leaf removal. As well as getting the leaves off and then being able to harvest in a timely fashion behind that.

Dr. Steve Brown:

With most of our harvest aid products, we should be looking at ... The leaves will come off pretty fast if we get the right combination. We might see leaf removal in four or five days. But boll opening may take another several days. And with some of our premium products, which I didn't mention a product like Finish and Ginstar, there's some other products that are combinations in and of themselves. They may get the job done a little faster, say rather than wait 14 or 17 days to pick, they may accomplish it in eight or 10 days. And we should get it ... If we're going to use the premium products, or if in fact our application works so well that we get the leaves off, we need to proceed as rapidly as possible. Not wait three weeks out. Go ahead and get the crop out. Because time is ticking. The crop is subject to weather events, heavy dews and so forth.

Scott Graham:

How do you advise a farmer who maybe had planned a one shot approach and something, maybe ... Some of these storms are localized and they pop up on you and you didn't know you were going to get it. How long do you wait to evaluate to say, "Hey, I need to go back."

Dr. Steve Brown:

Yeah, I'm probably going to wait at least a week to see. And if I still have a lot of green out there or my boll opening wasn't sufficient, then I may touch up. I may touch up with the PPO type. If it's just green foliage, juvenile foliage out there, I may use the PPO herbicide type product. Spray it, get a very rapid response and pick it quite rapidly.

Dr. Steve Brown:

If it's a boll opening response that ... boll opening, that I haven't achieved, that's going to take some time. So I may make an application, I'm going to be waiting probably a week or more to sufficiently get bolls opening to pick.

Katelyn Kesheimer:

Now are there any other adjustments or, looking ahead, things producers should consider right now, as we do get all this rain? I mean, we're sitting at several inches in central Alabama currently. So what other things in addition to harvesting applications, should they be concerned about getting ready for?

Dr. Steve Brown:

Yeah. Just as in general, as temperature declines ... And we do hope we're going to see some truly fall temperature soon in some respects. We want to see it cool off. As it cools off, typically with a lot of our products, we're going to slightly increase our rates. We might get a little more aggressive. We might even add some adjuvants with our defoliant mixture. We wouldn't want to do that when it's particularly warm, but as it gets cooler, they may enhance the overall activity. So that's something else we might do.

Dr. Steve Brown:

Wet weather, I don't know that there's anything other than the fact that we know we got sufficient soil moisture to have regrowth pressure out there wherever we go. And that means we probably would be more aggressive with our TDZ rate. We may bump that up a little more to inhibit, to prevent, and to dry up that regrowth that occurs.

Dr. Steve Brown:

So that's the one thing, to me, as warm as it is and as wet as it is, every field is probably going to be dealing with some regrowth. That means, hey, we got to have TDZ to deal with that regrowth. And it's kind of like say you got three products you might be using. You got little knobs and you might adjust up or down. Well, that's the ... And as you get into it, you get a little smarter and you realize, "Well, last week I should have done this." Going into with this kind of regrowth pressure, the TDZ rate, the Thidiazuron rate is going to have to be a little more aggressive this year in my mind.

Scott Graham:

And I would say something else we could be doing while we're sitting here and we can't get in the field anyway is double and triple check our pickers.

Dr. Steve Brown:

We need to be ready to go. I guess I've been driving over the lower Southeast for a long time. And I'll cringe, I'll pass the cotton field and it's ready. I say, "Well, where is the picker?" And I wish I had some kind of magic vacuum cleaner to suck it all up. But there's a lot of ... It's easy to sit from in the office or the pickup truck, say,

"This ought to be done." But a cotton picker is a complicated machine, an expensive machine. Requires a lot of maintenance. And so, again, it just all doesn't happen at once. But you got to get with it. And we have some distractions with peanut harvest and other harvests going on. So a lot of things go on to ... We got to slow and steady and chip away at it. And get with it as best we can.

Scott Graham:

Absolutely. Well, Steve, anything else we need to cover, you think?

Dr. Steve Brown:

One thing I would say is a cotton picker is, again, a complicated machine, a massive machine, a lot of moving parts, a lot of dangerous parts. There are other aspects of what we do at harvest, whether that's module building or moving modules. There's a lot of opportunity for injury. And so I would encourage ... And it's easy, because harvest time is such a rush time and you want to get her done. And I'm all for that. But safety is such a critical ... There's so many things that can happen. So I just encourage an extra sense of caution and even patience at times, so that we don't have some injuries. It could be extremely painful immediately and long term. Safety is, I think, it should be at front of our minds as we think about harvest.

Katelyn Kesheimer:

Yeah. That's a great point. And it's like my mom says, "Things can be replaced, people cannot."

Dr. Steve Brown:

That's right.

Katelyn Kesheimer:

So keep that in mind. And thanks, Steve. And producers can find all this information and more in your Cotton Shorts Newsletter, which is a wealth of information. If they want to subscribe to that. And check us out next time on the Alabama Crops Report podcast.

Announcer:

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