



## **Episode 3— Managing Weeds in Corn March 18, 2021**

Announcer 1:

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

Scott Graham:

Hey everybody. Welcome in to the Alabama Crops Report podcast. I'm Scott Graham an extension entomologist.

Katelyn Kesheimer:

And I'm Katelyn Kesheimer, extension entomologist. We're excited to be releasing regularly scheduled podcast episodes with up-to-date information about Alabama crops throughout the year. You'll be hearing from extension personnel from all over the state with the latest research and management recommendations.

Scott Graham:

Katelyn, how you doing today?

Katelyn Kesheimer:

I'm good. Yeah. Getting ready for planting season. So there's a lot of movement and activity and information to be shared, so glad to be here.

Scott Graham:

Yeah. I'm excited already to start getting going. So thinking about it's time to start planting, we thought we'd do an episode today on corn and talking about some burndown options and weed management, trying to go into a

weed-free field. And then also we'll talk about insects a little bit later. But first we're going to visit with Dr. David Russell our new, I'll just call him our corn weed specialist, but he's got a lot more responsibilities than that. And we'll let David introduce himself. David, how you doing today?

Dr. David Russell:

Doing good Scott, glad to be with you.

Scott Graham:

So tell us a little bit about yourself, how you got here, and what your responsibilities are with ACES and how you try to help growers across Alabama.

Dr. David Russell:

Yeah, sure. So I'm the extension weed specialist. My responsibilities include corn, soy beans, small grains, forages, and non crops. My background is more so in weed management and forages, where I spent the majority of my time, about five or six years at Mississippi State as an extension associate, where we primarily focused on forage, pasture and non crops. I began here with ACES in Auburn University in July of '19 with these new responsibilities.

Katelyn Kesheimer:

So I feel like I'm the odd man out here since I'm not from Mississippi State at some point in my career with both of you guys. But we're glad to have you here both on the show and here at Auburn, David. So we're talking about pre-plant burndown considerations ahead of corn primarily. And so what are some of the most common or troublesome weeds that growers may encounter ahead of planting? Really, what makes your phone ring that gives growers headaches this time of year?

Dr. David Russell:

Yeah. So when we think about the timing of corn planting, we're obviously dealing with a lot of our cool season annual and perennial weeds. I think annual rye grass, or Italian ryegrass probably tops that list as being the most problematic. But when we think of just overall cool season weeds that we're dealing with from about the fall of the year all the way through this time, it's things like the broadleaves, henbit and the chick weeds and the common groundsel, that are germinating in the fall of the year.

And then you have the group of grasses that include annual ryegrass, the annual blue grasses, henbit, and many others.

But I think again, what becomes most problematic this time of year and what I hear the majority of the questions on are the annual ryegrasses.

Scott Graham:

So why do you think that is David? And again, I'm just a lowly entomologist, so I don't understand all your weed stuff, but is this because when we're thinking corn, we're trying to kill a grass and plant a grass in the same field? I know there's some resistance across a lot of the country with annual ryegrass. What's causing those issues?

Dr. David Russell:

You know, across the board in general weed management and all the crop responsibilities that I have, primarily the small grains, corn and forages, we're dealing with grass crops. And that's probably the most difficult part of my job is removing the grassy weeds from a grass crop. And when we rely on herbicides, there's just not a lot of selective options that will take one and remove it from the other.

So in regard to annual rye grass, I think that's one that it's a prolific seed producer. It has really high growth rates starting in the fall of the year, depending on environmental conditions. And when it really gets going, especially this time of year, if it has established in the fall, because it grows really fast, it has the ability to either metabolize or sequester many of the herbicides that we apply on it. And if it escapes the herbicide application, it has the ability to then hybridize within a population and then develop naturalized population.

And a lot of times what we've seen over the years and the history of herbicide resistance on this particular species, that genetic makeup changes for whatever reason, so that whenever it creates a new population, it's then sort of mutated into a new hybrid crop. And so it's resistant against whatever we've thrown at it in the past.

Scott Graham:

Well if there's anything we scientists are good at is causing a resistance issue.

Katelyn Kesheimer:

And entomologists take no responsibility for any resistance. It's all weed scientists.

Dr. David Russell:

That's right. That's right. Well, there's not a lot of new chemistry coming out. It's been several years since we've seen anything new. And so we try to emphasize proper stewardship and integrated pest management. And I know Katelyn that crosses over into your world as well.

Katelyn Kesheimer:

Yeah, absolutely. So I know I preach the importance of burndown and Scott as well. So what are some common spring burndown options for producers given the slew weeds that you just mentioned and issues we see?

Dr. David Russell:

Yeah. So since a lot of these cool season weeds really began getting established and germinating in the fall, I would say for the most part, we encourage growers to start that weed management process at that time.

Because again, no matter what crop we're dealing with, when it comes to weed management and the use of herbicides, we typically want to tell producers to catch those weeds when they're small and actively growing. And a lot of times in the fall, that's when we can find them when they're small, when the weather conditions are more favorable.

Thinking back to the winter of '19 and '20, we were so wet. We had record rainfalls across the Southeast. And there were a lot of situations where producers could not get into the field in the fall to do their timely burndowns or in areas where they could conduct tillage, it just wasn't possible due to weather conditions. And that year, when we think back to that last winter, for that reason, we saw huge explosions of problematic weeds, like annual ryegrass has taken off that spring, which prevented a lot of early planting.

And so, so that's what I would encourage growers to start is the fall of the year. It depends on the planting situation. You know, if you're in the South part of Alabama or on a more flat ground in areas where we see conventional tillage, tillage is obviously an option. But here in the North, we see a lot of no-till or reduced till ground and so that's really out of the equation. And so going back to the fall with burndown, that includes things like just Gramoxone or Roundup. And maybe even if we want clean fields throughout the winter months, maybe including some dual with that to prevent any weed emergence, like annual ryegrass.

And so that would give us a clean field throughout the winter months. But you know, that's not a blanket application for all acres. Obviously in highly erodible areas we want some cover and we want that residue to remain on that ground just to prevent the erosion. But those are the two or three there.

And I'd say specifically for annual ryegrass, we're really only down to about two or three. And that's again with Roundup and Gramoxone, and then maybe even Select Max or Section Three, which is clethodim. There is resistant populations out there of glyphosate-resistant annual ryegrass. There's also some clethodim resistance. So we need to steward that properly.

Scott Graham:

So what are you looking at I did a decent job of burn down in the fall, not a great job, not a bad job. What you may say, if there's one weed, that might be a bad job for management resistance. But for our producers who are getting ready now, we're at that part of the year where I'm starting to see a lot of pictures of temperature gauges in the dirt, we're looking at getting ready to hit where we need to start putting corn seed in the ground. What are we doing right now to try to get ready to plant our corn crop this year?

Dr. David Russell:

Yeah. So the temperatures are getting close. I know we looked at some probes last week and we were already in the low 50s, low- to mid-50s. But I would say on most acres here in North part of Alabama that haven't been planted yet, they're going out with Roundup or Gramoxone and either of those can be tank mixed with Sharpen.

So Sharpen is a relatively new herbicide that's going out on a lot of acres that's really good on a lot of our broadleaves, and it's a good tank mix partner with both Gramoxone and Sharpen. So that does a really good job on just general burndown.

When it comes to annual ryegrass that maybe we've missed in the fall, that's really getting its feet under it and starting to really increase its growth right now with ideal weather conditions, they become a little bit more difficult to control. And so assuming we do not have glyphosate resistance, then we rely on obviously the Roundup applications and Sharpen can be added in there to kind of heat that up, especially on some of the broad leaves. But the clethodim is really our go-to. But we need to consider the plant back restrictions on clethodim.

Katelyn Kesheimer:

So what can growers expect in terms of weed control or weeds in their fields, if they miss this burndown opportunity, or they just don't take care of their weeds for they can't get on the field or there is resistance issues? What are they in for?

Dr. David Russell:

Yeah, that's a good question. So again, I hate to harp on an annual ryegrass, but it really does top the list when it comes to problematic weeds. So there's been a good body of research that has been developed here in the last few years, especially out of the Delta regions of Mississippi and West Tennessee, where they have those resistant cases.

A lot of that research has shown that there's about one to two bushel decrease in corn yield per day, actually, if burndown doesn't occur within about three to four weeks ahead of planting. So in other words, if ryegrass is left alone to continue growing, if that burndown is not successful within three to four weeks, there is a yield decrease.

And I think the reasons there are twofold. Annual ryegrass does have some allelopathic effects. And that just simply means it's a built-in defense mechanism that some of these weeds have to prevent other plants from growing around it. And then you have the competition effect.

Scott Graham:

A comment on a question following up on that, David. The comment is, the entomologists are very happy to hear somebody else say we want to, three to four weeks prior to planting it. The question is, are you saying, to make your burn down application three to four weeks prior to planting, or we want those weeds dead three to four weeks prior to planting?

Dr. David Russell:

We really want those weeds dead three to four weeks prior to planting. And here I'm specifically talking about the annual ryegrass, because it is such a fierce competitor in corn. Gramoxone, or Paraquat can go out three to four weeks ahead of planting by itself. And if that ryegrass is six to eight inches already, you can expect that it will still try to regrow. And so therefore a lot of those programs recommend that you come back with a second shot about 10 to 14 days after that first one, just to kind of knock it on out.

Scott Graham:

All right, well David, we appreciate your time. And before we let you go, I don't think we can get away without dropping the D word, talking to a weed scientist. So do you have any Dicamba trainings and things coming up across the state in the next couple of weeks that folks should be thinking about?

Dr. David Russell:

Yeah, dioxin training is ongoing with my counterpart, Steve Lee. I had to give him credit. He's kind of the one that's headed that up. I would encourage growers who haven't already signed up to go to our website and find a list of dates there. This year is a little bit different where we have virtual trainings. And so you can click on an online link and listen to a Zoom training there and take a little quiz at the end and get your certificate.

Alternatively, I would check with your local offices to see if any of your regional agents or county coordinators are organizing in person meetings to a smaller scale. In those cases, small groups are meeting to have a watch party where several folks can gather to take a quiz at the end and get that certification.

Scott Graham:

All right, well Dr. David Russell, we appreciate your time today. I'm sure if anybody's ever got any questions or follow-ups, he's more than happy to talk about it. So please let him know. David, thank you very much.

Katelyn Kesheimer:

Thanks, David. All right. Well, that ends our time today with David. Thanks so much for joining us and talking about proactive weed management, controlling corn. Check us out on [aces.com](http://aces.com). We have our Alabama Crops Report newsletter, and you can listen to Alabama Crops Report podcasts wherever you find podcasts. Thanks everyone have a great day.

Announcer 1:

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