Episode 27 — Climate and Weather

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Announcer:

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

Scott Graham:

Hey everybody. Welcome in to another episode of the Alabama Crops Report Podcast. I'm Scott Graham, extension entomologist.

Katelyn Kesheimer:

And I'm Katelyn Kesheimer, also an extension entomologist.

Scott Graham:

Katelyn, it's been a little while since I've been on, what's been going on?

Katelyn Kesheimer:

I think we are knee deep in harvest season, at least on my end. I imagine you're still running around the field, counting plant bugs and stink bugs and the like.

Scott Graham:

Yeah, we're pretty well done with cotton. The foliation will be starting soon and we're working on finishing up on these late planted soybeans. I'm counting a lot of state bugs right now.

Katelyn Kesheimer:

Yeah. It's nice to see you and have you back on the podcast and I'm really excited for today's episode because we have a really important topic and to help us with that topic, we have not one, but two guests on the show. And one, many of you are familiar with as a face around west central Alabama, and a previous guest of the podcast. And so welcome to one of our regional extension agents, Andrew Sparks. Andrew, welcome.

Andrew Sparks:

Hey Katelyn. How are you all doing today? Like Scott said, we're knee deep in harvest trying to finish up corn and swap on into cotton and peanuts and hopefully have a really good harvest season. Looks like a good crop out there this year.

Katelyn Kesheimer:

Fantastic. And so now Andrew, you're here both as a regional extension agent that fields pretty much daily questions from growers, but also as a farmer himself. And some of the things that you've been dealing with this year, especially in 2021, are our climate and weather. And to help us answer some of those questions, I'm really excited for our guest today. We have on David Zeirden, who is the Florida State Climatologist at the Center for Ocean Atmospheric Prediction studies at Florida State University. So David, welcome.

David Zierden:

Thank you, Katelyn. Yeah, it's great to join this podcast. I know climate and weather are a big part of what you guys do and growing crops and such here in the Southeast, so I'm excited to be part of this conversation this morning.

Scott Graham:

We're super excited to have you. And before we get started, I'm going to ask a question that probably a lot of folks in this state want to know the answer to. We'll have nice weather for the iron bowl?

David Zierden:

I'm not sure. When is the iron bowl? That's not until mid November is it?

Scott Graham:

Yeah. That's the week of Thanksgiving.

David Zierden:

Yeah, the crystal ball doesn't work that far out, but hopefully it'll be good weather. Yeah, absolutely.

Scott Graham:

Worth a shot.

Katelyn Kesheimer:

Well, looking back instead of into the future, Scott, so this has been a very wet or soggy growing season. I know we had issues with growers getting into fields to plant, maybe doing some replants, access to fields to treat for pest issues, and so can you maybe talk about, David, some of the causes and can we expect it to continue moving forward?

David Zierden:

Yeah, no, definitely. You know, often I get calls at this office and concerns about a lack of rainfall and developing drought. But this summer it's been quite the opposite, from planting season, mid to late May, I know a lot of growers were delayed getting their crops in because the field conditions were just too wet and the same kind of moist or wet conditions continued throughout the summer. And what's interesting about this year is, while some areas have received very heavy rainfall, much above normal, other areas are not that much above normal, but it's been the frequency or timing of the rainfall. It's been just about every other day like say from mid May through just the last week or two.

David Zierden:

To kind of illustrate that, many of the weather stations across south Alabama and even up into the Birmingham and mid Alabama area, since the beginning of the year, since January one, they've experienced like 100 to 120 days of measurable rainfall. So that's almost every other day or every third day at least, so it's not always the amount of rainfall that can be influential. It's also the frequency and the timing.

David Zierden:

Now, there are other areas like the Florida panhandle, the south Alabama, Baldwin County area, where they are over 20 inches above normal for year-to-date rainfall. So, we've also seen heavy amounts too.

Katelyn Kesheimer:

Now, Andrew, I know that you're here in Macon County and cover a lot of counties in the west central part of Alabama. Can you talk about some of the issues you've been seeing primarily with excess rainfall in this region?

Andrew Sparks:

Sure, Katelyn. Our biggest thing right now is just timeliness of sprays has been a big thing, especially with the peanut crop this year. Some of these guys, when they got the peanuts in the ground, they weren't able to get the first fungicide spray on some of these peanuts for the first 60 or 75 days. So, they're really behind. I think

that's what's caused a lot of disease problems this year. We've got an influx of disease in these peanuts this year. And then now, on the harvest side, we're finally getting some dry weather luckily for this corn to get out.

Andrew Sparks:

But it's just been, like David said, it's just been every week or every three or four days. You get one more rain and it keeps the soil so saturated to where you just can't get timeliness into the field to get crops sprayed and management on those crops.

Scott Graham:

Yeah, Andrew, we've had some folks kind of, in your part of the state and as you move west, particularly Southwest, but hoping maybe some of these floods will just drain insects and drown them because they haven't been able to get in the field to spray them. I think Monroe County really had a lot of flooding at certain points this year. Like you said, that's really been an issue for folks really statewide as we can't get into the field.

Katelyn Kesheimer:

Yeah, and in terms of flooding too, we've had issues with so much rain. It just washes away any nutrients that the plants need and so you can apply fertilizer, but it's washed away with those 120 days of rain that we're seeing this year. So, it's been an uphill battle for months now.

Scott Graham:

So David, I want to ask you a question that I'm really not qualified probably to even ask. I see this term lot in the news, El Nino and La Nina, have we been in the La Nina pattern this year?

David Zierden:

Not during the summer. We were in the La Nina pattern last winter, which typically means a warmer and drier fall, winter, and early spring season. However, these typical impacts don't occur every single time and last year was one of the exceptions where we were actually fairly close to normal with temperatures, maybe even a little below normal during the winter season, and even above normal rainfall. So we did not see the typical La Nina climate patterns last winter.

David Zierden:

However, currently the Pacific Ocean looks like it's going back into another phase of La Nina. So we still have to be on the lookout that we'll start seeing that dryer and warmer pattern beginning in late October/November and lasting through the winter months. So the odds are still tilted that we will see warmer and drier conditions throughout the remainder of the fall and winter, because we are currently in La Nina conditions.

David Zierden:

And also, La Nina can be thought of as the opposite of El Nino. El Nino is where there's warmer than normal ocean temperatures in the tropical Pacific and that usually brings us heavy rain and stormy weather in the winter months, where La Nina is the opposite. That same area is actually much cooler than normal and it leads to a jet stream pattern that brings us this warm and dry climate pattern throughout the fall and winter.

Katelyn Kesheimer:

So as we enter a La Nina fall and winter, if I have that correct, Andrew, what do you think that means for producers in terms of maybe planting some cover crops or winter annuals and preparing for the 2022 spring planting season?

Andrew Sparks:

To me personally, Katelyn, I think a lot of growers around the state would love to hear that. I think we're ready for some dry weather, especially if that means hopefully the tropics stay calm and we don't get any hurricanes and hopefully we can get this crop out. I think that's the biggest thing right now with a lot of growers is just we've got the crop sitting here, just like we did in 2018 with Hurricane Michael. We had a really good crop sitting there and then all of a sudden it was gone. So I think right now people would like some dry weather and would just like to get a crop out and be looking towards spring to be able to hopefully get a crop back in next spring.

Scott Graham:

And so, Dave, that's interesting, you mentioned a lot of this weather is actually kind of dependent on the Pacific Ocean, which here in Alabama we don't really think about the Pacific Ocean very often. Can you kind of give us a simple explanation of what it is about the temperature of the Pacific Ocean that affects weather over here?

David Zierden:

Yeah, the first thing that's really important is the Pacific Ocean and how it changes the jet stream patterns is much more at play during the cold weather months, November through March, or so. So, what we've seen this past summer is not really directly tied to the phase of the Pacific Ocean. So, there's a little bit of a disconnect there. The only connection is when we're in La Nina conditions, or cold water in the Pacific, it does favor a more active hurricane season and we certainly saw that last year and we're seeing it again this year. In fact, even the Gulf of Mexico and the Northern Gulf Coast has been kind of a focal point.

David Zierden:

Last year, we had 10 different tropical systems make landfall along the Northern Gulf Coast and so far, this year, we've already had six tropical systems make landfall from Texas through Florida. So, the Pacific Ocean has some influence on the tropical season, but our day-to-day climate patterns during the summer, not nearly as much as during the colder weather months.

Katelyn Kesheimer:

One thing I want to talk about is the frequency and maybe long-term changes that we may see moving forward as a result of climate. So, you mentioned 10 storms last year, six this year. One thing that comes to mind is the fall army worm mega infestation of 2021. So, we know this is a migratory pest and a lot of us are speculating this infestation was aided by a warming winter, and then these storms that can move these adult moths around. And so, Scott and I, we've talked about this a few times and maybe that these major infestations are not going to be 40 years apart anymore. And so, David, can you maybe comment on the long-term changes we may see across the Southeast as a result of climate change?

David Zierden:

Yes, some of the long-term changes we've seen is certainly an increase in temperature and it's more so the overnight low temperatures more than the daytime high temperature across certainly the state of Florida and again, the Northern Gulf Coast. Just in the last 10 years, we've seen an increase in overnight temperatures during all seasons of the year of about two degrees Fahrenheit. We really have not had a very cold or severe wet winter since I believe 2011.

David Zierden:

So yeah, these warmer conditions overnight during the winter months, I'm not an entomologist, but I'm sure it can really promote populations of pest and insects that could be damaging to crops. Another trend we have also seen is over the past two or three decades, the Eastern United States is getting a little bit wetter and has experienced more rainfall where the Western United States is actually getting drier. And we've certainly seen that play out this summer with the heavy rainfall or much above normal rainfall for most of the Southeast and the Eastern United States, while California, the Western states, are in the midst of a multi-year what some call a mega drought where Lake Powell is at historic lows right now, along with lows on the Colorado River that'll take several years to recover from.

David Zierden:

So, that's one of the changes we're seeing, a wetter Eastern United States, a drier Western United States.

Katelyn Kesheimer:

I think it's important to remember too that we know insects are cold-blooded and so if we have an increase in winter and nighttime temperatures, they're just that much more comfortable and able to survive. They can't go into their homes and turn up the AC or turn down the heat and so their survival is going to be increased. And so now that we've kind of covered some of the issues, Andrew, I want to kick it to you and maybe put your producer hat on and talk about maybe some changes and coping strategies that you guys have used on your farm to deal with this variable and changing climate.

Andrew Sparks:

Sure Katelyn. Yeah, we seem to be in this pattern of wetter climate here in the Southeast and in Alabama over the past probably two or three years it seems like. We've definitely been, every summer, especially with the

corn. Dry land corn in Alabama is always a big risk and we've probably had some of the best dry land corn crops ever in the past couple of years in the state of Alabama just because of this rain and staying out of the drought.

Andrew Sparks:

So, we've really had to make changes as far as on the planting side. It's really tough when it gets wet getting in the field and getting planted timely. We're having to start earlier just because of the wetness and trying to spread that planting time out. It seems to be really helping right now. And then really just sitting on go. That's the biggest thing is just being ready when you can go and get in the field. So really, farming's all about timeliness and so if you can get in the field when you need to, you seem to be ahead. So that's the biggest thing right now.

Scott Graham:

Well, David, we'll come back to you and hopefully you've got some good news for us kind of looking at this upcoming harvest season. What do you think about that?

David Zierden:

Yeah, luckily we had our first cold front of the year come through last week that brought us much cooler and drier conditions and a lot less rainfall and the forecast for the next seven days or so is not as cool, but it looks like the subtropical high is going to kind of be in play right now. And again, a fairly dry forecast for the next seven days going forward. So, in the short term, that's certainly good news to get harvest operations going. Looking further out, once we get into October, that historically is one of our driest months of year. So we're in a time of the year where it naturally gets a little bit drier. And then also, with the La Nina phase kicking in, in the Pacific Ocean, which leads to a drier fall, all those kind of point to that we might be getting a break from all this rainfall and might be able to get a lot done during the harvest season.

Katelyn Kesheimer:

That's great news. And I will say that last week, when we kicked off fall on the calendar, it was a very welcome break from all the heat we've been having this summer and so it felt like a true start to fall. And so David, Andrew, I want to say, thanks for joining us today. This was really interesting and I hope it's helpful to our producers. We'd love to have you all back maybe in the springtime as we're gearing up for planting season to talk about what that means and what we saw this winter in terms of La Nina weather patterns.

David Zierden:

Yeah. I'd love to come back. Thank you for letting me join this conversation this morning. It's been great. I'm not a farmer or producer, so I don't really know all the ins and outs, but I learn more each time I have meetings or talk with you guys. And so it's very exciting to me and always love to be part of the conversation.

Katelyn Kesheimer:

Well, we appreciate your expertise and Andrew, thanks for joining us again and all listeners, thanks for joining us on another episode of the Alabama Crops Report podcast, and as always, feel free to reach out if we can of any help or you have any questions.

Announcer:

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