



Season 6 Episode 18 — Weather and Climate Outlook

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Announcer:

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

Chandler Gruener

Welcome into the Alabama Crops Report podcast. Today we have a guest of David Zierden, who's a retired Florida state climatologist. And the new Florida state climatologist, Emily Powell also joined me here in the studio as Josh Lee. Hello. So I guess we'll get into the questions here. So today's focus is going to be, you know, about the podcast.

Chandler Gruener

It's all going to be about climate. So you know today as we're recording this on September 22nd, we just had a shower here and we had a shower down in Florida as we've learned. And so we're kind of got some of these questions about, you know, the El Nino and La Nina and the changes and the transitions.

Chandler Gruener

And we've heard that it's kind of been a record year. So kind of little background story on that, if you guys don't mind.

David Zierden

Yeah. We in my career we I've been through several of these very strong El Nino episodes. 1982 and 83 was really what piqued my interest in meteorology. The before I was a trained meteorologist, but then again in 1997

and 98, most recently, the last very strong El Nino was 2015, 2016. And this current one is coming on early and reaching strength as far as the sea surface temperature warming.

David Zierden

That we haven't seen before. So this this is a record breaker already and it's early in the game. They usually peak around December or so, it could still become stronger.

Josh Lee

So, David, could you provide a refresher? Mainly for me, but just what is an El Nino? What does that mean?

David Zierden

Okay. El Nino is a, periodic warming of the Pacific Ocean along the equator, basically from the coast of South America, all the way to the International date line. And these episodes of unusual, unusual warmth. High sea surface temperatures occur on average every 2 to 7 years. So it's nothing new. It's something we've always dealt with.

David Zierden

But that's one phase. Other times, the same area. The Pacific Ocean can get colder than normal. And that's called La Nina. And we just went through a weak La Nina event last year that was a partial contributor to the drought that developed over the winter and spring of last year. But then we rapid transition during the spring and summer to the warm phase or El Nino.

David Zierden

And like I said before, this looks like a record. Record.

Chandler Gruener

Yeah. Like I like how you mentioned drought there. So, you know, as we're going into these changes. And so one of the things we're always thinking about is, you know, farmers and producers is what does this mean for the drought? Do we have any indication for that? What that would look like for this fall time frame going into spring.

Chandler Gruener

So I'm a cover crop person, so I like to plant a cover crop. So do we have any indication of there what that's going to be.

David Zierden

Well the good news is this past drought was one of the most severe in a decade or more for the Southeast United States, and it really peaked around late April, early May. We've had some relief during the summer time, but, hydrological with groundwater, surface water, river flows, we really missed out on the winter recharge last year.

David Zierden

So the fact that we're going to go into this strong El Nino, which means more rainfall, more storms, more rainy days. Basically from late October through March or later. That's actually good news to catch up from the deficits we've been running ever since this historic drought.

Chandler Gruener

Okay. That's good news to hear. You know.

Josh Lee

So it sounds like it's a more projected, more rainier season. You said going into late October into March. Is that correct?

David Zierden

That's correct. And for the southern part of the state, South Georgia, the Florida Panhandle, during these El Nino episodes, we can usually expect up to 3,040% more rainfall than normal in those winter months, November through March or even into April. So that's the usual impacts. It doesn't happen the same every year. But that is what we're expecting, especially with the strong El Nino like this one, a very strong El Nino.

Josh Lee

Okay. So from my standpoint, you know, as a cotton specialist, that's, that's something that my growers definitely need to listen to and adhere to. You know, if we're getting these rainy events going into late October, going into November. We've got a good bit of later planted cotton, especially in South Alabama. And there's some stuff that needs to come on out of that field.

Josh Lee

So we don't really want to delay, you know, defoliation and delay that harvest. We want to be able to get in there and get that crop before this rain comes in. And it kind of prevents us from getting in that field and harvesting that crop. So definitely something some good words of advice here for our growers.

David Zierden

Know that. That's absolutely right. Back in 2015, we were in a similar situation with the really strong El Nino building, and we got the message out that, really take advantage of any good weather window you can and harvest as quickly and as early as you can because these winter rains are coming. I know it plays havoc with cotton harvest, but also peanuts fields.

David Zierden

You too wet to get your equipment. And it's a big problem there, too. So that's a take home message is as we go into the harvest season, be prepared. Get it done with every good weather window that we see.

Josh Lee

Timeliness is key. All right. Of all that, I write a good bit of timeliness in management plans and everything else, and that dictates all the way from planting all the way to harvest. So we can just I know it's a lot easier said than done, but if we can be timely, we can make a good crop and get on out here.

Chandler Gruener

Yeah, timeliness is important. So one of the things we thought about timing this year is, you know, producing crops and so especially cotton, we were thinking about the cotton acid. You know we thought like the weather and the hurricanes would play a role in it. And we kept thinking the whole year, as soon as we get a hurricane, he'll push up all these insects from the south and they'll move up.

Chandler Gruener

But we never really got a hurricane this year. So is there any kind of reasoning behind that, or why didn't we see them hurricanes?

David Zierden

Oh yeah, that's very much expected. With the El Nino phase and the Pacific Ocean, it creates an environment of unfavorable upper level winds or vertical wind shear for hurricane formation over the entire Atlantic basin. And we've seen that in spades this year. In fact, just yesterday we broke the record as far as being the as late as we are into the season without a hurricane yet forming in the Atlantic basin.

David Zierden

Now the Pacific is a different story that that that's because gangbusters within El Nino. But yeah, we just broke the record for the latest in the season where we haven't seen even one hurricane yet and nothing's really on the horizon. So, that's good news as far as damage and, wind damage, excess rainfall. But also it can be bad news.

David Zierden

We here in the southeast, we get a good bit of our fall in late summer rainfall from tropical system. So we've kind of missed out on that.

Chandler Gruener

Yeah, I guess there's a little good and bad there. We didn't have the insect pressure. We didn't have the wind damage that we sometimes would get from the hurricanes, but trade off as we may not have got as much as we like.

Josh Lee

That's true. Yeah. And we're I mean, we're limited on, you know, overhead irrigation and those kind of capabilities. So that kind of hindered. But, I speak for all of our growers. We, we if we can get out of here out of

the season without a hurricane and out damage, that's a big win. So. So what for right now, you know, we were talking about the super El Nino and that kind of stuff.

Josh Lee

What are some of the key climate drivers that y'all you're watching right now. You know, to kind of make these predictions. And what do you think that's going to how it's going to set the stage here for the next few months. And I know we kind of discussed that just a little bit ago.

Emily Powell

Yeah, I mean, we talked about this a minute ago. I think that timing of onset of El Nino winter weather conditions is still a bit uncertain. And we see some disagreement in the models for kind of the near term, October. If you look at the Climate Prediction Center's October outlook, it's still showing kind of equal chances for above, below and near normal precipitation.

Emily Powell

I think when we look at the larger model ensembles, they show more of a transition to a weather pattern in November when confidence in those models increases. So we could be looking at, mixed conditions in October. You know, as we just mentioned, we haven't had any tropical rainfall. And so we've been reliant on that spotty convection over the summer.

Emily Powell

And so we've had areas that have been really wet and doing really well, and we've had areas that are starting to dry out, particularly in western Alabama and parts of the Florida Panhandle. So I think in the near term, you know, I think we could be struggling a little bit if we don't get that rainfall, it could remain a bit dry.

Emily Powell

I know temperatures are expected to stay warm or well above average moving into October, so that might be something to watch. But again, as we move into November and certainly through the winter, we should really see that Ill Nino weather pattern really kick in. And that's region wide. I should, I should say.

Chandler Gruener

And so, you know, that takes us into winter. And so looking at the spring, do we, you know, we had a pretty good planting window this early spring. I know, David, you were on this podcast in the spring. We were talking about climbing some different things, and we had a pretty good time for corn for a couple of weeks.

Chandler Gruener

And all of a sudden we had a drought for about 3 or 4 weeks. And so, you know, that was maybe kind of happens here and here, but it happens every couple of years. So I was kind of curious to do so if we have, you know, these rainfall patterns changing now, does it look like an early or later predicted window?

Chandler Gruener

I know we can't say much now, but I don't know if that leads to any predictions for an earlier or later window or if we're I have another long drought like we did this year.

David Zierden

The best I can say is that the plentiful, winter and even into early spring rainfall that we expect with El Nino being in place, that will provide a lot of soil moisture and a good antecedent conditions going into the planting season, unfortunately. One, the El Nino events, they tend to fade away the following spring. And also once we get into April, May, for sure, it really loses influence over our climate patterns.

David Zierden

So that's an easy way to say we don't have much predictability as we get later into the spring. So, the good news is should have plentiful soil moisture going into planting season. How that shakes out as we go into late spring and early summer. That's just kind of a wait and see.

Chandler Gruener

Well, that's good to hear. You know, sometimes we hear these, you know, legends or mythical stories of like, you know, if you have a fall like this or a winter like this, you know, it's going to cause this for your planting season. But it's good to hear that, you know, we should not be able to fully predict that, that we should still have a good, solid planting season. And there's no key indicator yet for a bad one.

Josh Lee

Sure. As long as we you know, and that's one of our biggest limitations here in Alabama plant. You know we have to have soil moisture. There's no you can't like you know I was just thinking about down in the Wiregrass region. You know I know Chris Parker had that video of him digging I think what, 12in or whatever a foot deep to find soil moisture.

Josh Lee

And I remember that was a window, man. You just couldn't you just couldn't do anything. You couldn't plant, couldn't do whatever. And then, you know, rainfall and all that, all that happened and overall looks pretty good crop shaping up pretty well down in the south part of Alabama. So I think we're in pretty good shape. But that's some that's some good news to hear.

Josh Lee

You know looking at the future, we're going to have some soil moisture in that kind of stuff. So hopefully we'll have a smooth planting season.

Chandler Gruener

Yeah. Do you guys have any other key things you're thinking about right now for maybe even the summer of next year? Kind of like based on the weather patterns of this year. You know, we're starting to.

Emily Powell

Look I mean, yeah, as David mentioned, it's yeah, it's really hard to say. But, you know, we will be transitioning out of the El Nino. We could transition and we could see in some neutral conditions for a time, or that could quickly transition to another line. We really don't know at this at this point in time. But, I mean, one thing we could probably say with some certainty is that without that El Nino next year, tropical activity in the tropical season outlook for the Atlantic basin is likely to be closer to normal, if not again above normal next year.

Emily Powell

So I think the risk for a more active hurricane season. You know, goes up as we move into next summer and fall. So that might be something to just keep note of.

Chandler Gruener

So yeah, kind of the last two years we've had pretty limited no hurricanes this year and pretty limited. Yeah. So that.

Emily Powell

That's really rare. Yeah. Two back to back hurricane season without direct impacts, especially for here in Florida that that's only happened at maybe a handful of times over the entire record going back to the mid 18s that, you know, we as far as we can say we have less certainty as we move further back. But yeah, back to back hurricane seasons with no direct impacts.

Emily Powell

That doesn't happen often. Yeah. But we'll see. We still have a lot of season since season ago. So we and over the modern satellite era, you know we haven't seen a season in the Atlantic basin without at least two hurricanes. So if we end up with zero hurricanes or even one that's pretty impressive. I mean, that is a record low season.

Chandler Gruener

So it sounds like, you know what, you guys were mentioned earlier in record low hurricanes. And so we like mentioned we don't get a lot of that. Rainfall will be kind of low on soil moisture. So that could lead to some drought I don't know like how much drought impacts I know we're probably a little bit in a drought right now.

Chandler Gruener

I don't keep up with the maps fully, but I know we're a little bit in a drought now in some areas, and so that could really drag into the winter time. So it couldn't be difficult for us to get our cover crops going initially.

Maybe if we have a little bit we're behind on so moisture, but sounds like we'll maybe catch up in the springtime itself. I'm understanding correctly.

Emily Powell

Yeah, hopefully we'll catch up through the winter and early spring, and that will give us enough recharge, enough moisture to carry us through, you know, the dry season and the planting season of 2027. But again, it's really hard to know exactly how much rainfall will get, where that happens and how that will play out in terms of frequency.

Emily Powell

Will it come in the form of, you know, average conditions that, are spread out over the course of the winter and spring months? Or will it come in the form of really heavy rainfall and more stormy US? It's kind of hard to say at this point, but that will certainly have a factor in what kind of conditions we're looking at moving into, you know, spring of 2027.

Chandler Gruener

So yeah, there's a guy I worked with previously. And so he always told me he's like, well, average years are always kind of funny because everyone always asks us what's the, you know, like what's the average going to be? What's it gonna be like this? And well, it's talk about averages, averages, averages. And he's like, well, the average just means you have one rainy year and one dry year.

Chandler Gruener

And we talk about the middle and it's like we can't plan to plant in the normal year because there's no such thing as a normal year. It's going to be really rainy one year and really dry the next, but you never know if it's going to be next or two back to back or which way it's going to work, or it's early, dry or later dry in the year, or what's it going to be.

Emily Powell

Yeah. That's right. I mean, we probably will not be persistently wet or persistently cold through the winter and spring. On average, we might be above average and, you know, with precipitation and maybe cooler, maybe cooler than average with temperatures. We'll see. But yeah, I think it's more important to think about, you know, the risk for increased heavy rainfall, increased storms and how frequently we actually receive rainfall.

Emily Powell

We're getting rain back to back to back, you know, that can create issues. Whereas, you know, we might have a period or periods throughout the winter and early spring that remain nice and near average or even drier. So it does. Yeah. It will depend on how all that plays out. But yeah, we can look at this as a whole and say, we are certainly seeing those classic El Nino signals in the model.

Emily Powell

Now for wetter conditions, it's just harder to say how that will actually look on the ground in the months ahead.

Chandler Gruener

Okay. So you mentioned something there temperature. And so we've been talking a lot about rain stuff like that. But temperature is like I know last year is kind of cooler for Alabama. I don't want to say Coke and I'm from the Midwest. So to me it wasn't really that cold. I lived in North Dakota previously, so it wasn't really cold, but it was cold for Alabama.

Chandler Gruener

And so, you know, would we see some of that cold temperatures or cooler temperatures that kind of the predicted general theory for this winter time.

Emily Powell

Moving into winter? Yes. So yeah, and David can add to this, but really not until probably, I would say December and January, when we might see those cooler conditions kick in. It's really a it's the cloudier, wetter weather that can impact temperatures. And, and that might end up having a bigger influence on our daytime or maximum temperatures.

Emily Powell

It might actually keep our nighttime minimum temperatures closer to average or even somewhat mild. It can decrease the risk of freezes if we have a lot of rainy, cloudy weather. So it can average out to be near to below normal, but we might that hasn't really played out in past strong El Ninos or even the very strong El Nino.

Emily Powell

2015 to 2016 is a good example, where we didn't really get that cool signal here across the southeast. So it's not a certainly not a guarantee. Again, it'll probably depend on how that rainfall and how that risk for increased stormy this kind of plays out. If it is a factor sort of routinely across the season, then that will have a bigger impact on temperatures overall.

Emily Powell

But yeah, we haven't seen the temperature signals clearly with past strong to very strong El Nino. And but on the whole, if we do get those wetter, cloudier conditions we can expect temperatures will be maybe closer to normal, maybe at best. David, I know you've mentioned that in the past, with the temperature signal getting a bit muddled.

David Zierden

With it is getting muddled. And that goes into we we've talked a lot about rainfall because that's a primary importance, but also temperature. We can say a little something about especially summertime growing season

temperatures. In South Alabama, whole state of Florida, South Georgia. We experienced a top ten warmest summer on record. And that just continues a trend of increasing summertime temperatures that we've seen over the last 10 to 20 years.

David Zierden

So that's in the backdrop to. So yeah, if you were going to I can't give you any prediction about rainfall next summer or next growing season, but I can say with a pretty good confidence that it'll probably be warmer than normal or warmer than it was 30 years ago.

Emily Powell

Yeah, that's a good point. I noticed that most of Alabama and Georgia, at least the northern half of the states, they're tracking record warm over the past two months. So I looked at the month to date temperatures for September record warm. But even going back one month and two months, we are seeing record warm temperatures moving into the fall.

Emily Powell

And so I think yeah, that's something to just keep in mind.

Chandler Gruener

I know they recently moved up all of the planting like, you know, the zones or whatever. I know they recently moved a lot of them further north for a lot of crops. And so.

Josh Lee

You know, Ron and I were talking about, we feel like Ron said, you know, Ron Smith is like, I feel like it's really hot this summer. And I said, I agree with you. And this just confirmed it. We were dead on. So, yeah, I mean, because crops matured really quick, this summer. So that explains all of that.

Chandler Gruener

Sounds good. I don't know if you guys got any closing thoughts or remarks you want to share with us.

David Zierden

Yeah. Just one. You know, we talked a lot about how strong this current El Nino is and how it could be a record breaker. But it's very important to keep in mind is the strength of the El Nino and the Pacific Ocean. Just how warm the ocean temperatures get does not necessarily correlate with more or less rainfall, or a more dire impacts, but it does correlate with is it's us more confidence in the forecast that the expected impacts are going to occur.

David Zierden

So if this was just a week or run of the mill El Nino, I would not be as confident in in saying that. Yeah, we're going to have a rainy winter. But this one being so strong I'm very confident in that.

Chandler Gruener

Sounds good.

Josh Lee

Awesome guys. Well, I think we're going to wrap it up here. Again, a special thanks to Emily and David for joining us here in the studio. And thank you, Chandler, also for posting. You know, as we as we go into this crop season, if you, if we got any questions or anything about whether crop management forage, anything like that, please give extension a call.

Josh Lee

We'd be glad to help. Thank you.

Announcer:

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