

Untitled - August 27, 2026

Speaker In this week's episode, we look back over the previous week. Talk about tomato spotted wilt virus in peanuts, and then look ahead at the upcoming week. All of this on Searching for the brighter pod. Welcome to Searching for a Brighter Pod. This is a podcast about peanuts in our state. I'm Gary Little and with me is North Carolina peanut extension specialist Dr. David Jordan. Let's look back over the previous week. Yes, let's do that. Gary. Let's just take a quick look at that. Maybe the last seven to ten days and what's progressed in the crop. We had caught really good rains and our crop had been moving along across much of the region. Certainly we hit a little bit of a dry period, especially depending on what location you were at across the state. But again, this past week, rains began to develop again. We expect this weekend that we might pick up even more rain. So I think for the most part, growers, when you get into August, you're sort of in this consistent pattern of taking a look and make sure you don't have caterpillars that can cause damage, but also you're staying on your fungicide spray programs. And that's been important for growers to do up until this point. (Music) And. Now, this week we want it to cover tomato spotted wilt virus in peanuts. It's a very important topic. Please tell us more. David. Thanks, Gary, for bringing up a really important topic for growers in North Carolina, Virginia, and certainly South Carolina as well. And that's tomato spotted wilt virus. We know a lot about the virus. We have some good ideas on how to manage it. And we talk about that every year. We have good information for growers to use. I think if I were to look back over the last twenty to twenty five years, we have been able to manage it. We had a really tough run in the early two thousands where we had to make some adjustments. But after those were made, we kind of got on a on a pathway of of knowing that Spotted Wilt was there, but having tools in place to manage it and not having tremendous outbreaks of it. Now, fast forward to 2026 and we have seen more this year than we've seen, I think, in the last maybe fifteen or twenty or more years. And there are certainly some hot spots around the state. Certainly there are probably some in North Carolina, but I'm mostly hearing some from out of Virginia in in a certain area up that way. So but as I go into fields, I know that in almost every field I go in, I'm probably going to find some. And that hasn't always been an issue for us. So what I thought I'd do in this podcast today is go back in time, um, close to thirty years ago and talk a little bit about how we got to where, uh, we developed management strategies and what brought us to twenty twenty six. Talk a little bit more about what we're seeing in twenty twenty six, and then talk about what we will think about doing as we move forward. So if I were to go back in time to nineteen ninety six, so that's when I started in this position, uh, tomato spotted wilt to my knowledge, uh, wasn't around or certainly wasn't around at levels that that caused any concern. If we went further to the southeastern US, Georgia, Florida, Alabama, uh, they had a lot of tomato spotted wilt. And in fact, it was the key pest that they were trying to manage during that period of time. So when I would go to a conference, uh, the American Peanut Research and Education Society, at that point in time, tomato spotted wilt seemed to be a part of almost every presentation. So we saw that from or I saw that from the outside looking in and heard a lot about it with colleagues in those states that were developing strategies. They developed a tomato spotted wilt index, which is a part of the peanut program or tool that they have in the southeast. And that is much like our risk indices we use here. You have points that are assigned to different strategies or, or practices that could influence the

virus. And then you have this relative scale. If you have more points, you have greater risk. The goal is to help farmers look at multiple approaches and pick among those that they can easily or most effectively put in place, and that can minimize their risk. So that risk index was developed by Steve Brown and his colleagues at UGA, and also some other states were involved. And for us, when we started seeing spotted wilt in around twenty two thousand and two, two thousand and three, in that window, we we knew that our practices were somewhat different. Our genetics were different here with our varieties, but we had a template to work with, so there were a team of us during that window of time. So Rick Brandenburg, Jack Bailey, Barbara Shew myself, Tom Isleib, the breeder, county agents that were on the front line. Um, we really started looking at that particular issue that we were having, and we were able to create a spotted wilt index that was appropriate for North Carolina. We work with folks in Virginia. So Ames Herbert, Pat Phipps, Charles Swann, um, Walt Mozingo was a part of the team up there as well. So we worked, we worked on that. We came up with a spotted wilt index that was geared towards our Virginia market type production. So one thing that Spotted Wilt does is it brings people together because it's, it's the virus is certainly a virus. It's a pathogen. So that pulls in the pathologist. Um, virology virologist. If we had somebody in that area. Um, it also pulls in the entomologists because the, the vector for tomato spotted wilt is thrips. And so you're managing the insect. You're thinking about the virus once it gets in the plant. And then the management strategies often include things like planting dates, plant populations, um, tillage systems and so forth. So all of a sudden you're bringing in the agronomist wheat scientists. The breeder is certainly a part of that. So it builds teams. And um, I would say that if there's one good thing about spotted wilt is that it builds teams. Now that's about the only good thing about it in our production systems. But that's an important one to think about. So one thing that was going on in the late mid to late nineties is, uh, Doctor Islip was breeding for things like sclerotinia blight, um, which was a big issue. CBR or black root rot. Those were key parts. So his program had worked towards varieties for those. And he had a couple of really good ones. So NC twelve, for example, and then a variety called Perry was released primarily, if I remember, because it was designed for black root rot suppression or protection from that or resistance. Now, it turned out that that variety was very susceptible to tomato spotted wilt. So when it got released and started being grown around two thousand and two, it failed miserably in a lot of places because of the increase in tomato spotted wilt. So we experienced in that that period of time, I think what the people in the southeast had experienced a decade or so before, where the genetics just that they had just weren't good. And then you had a lot of ours and then and then you were scurrying around and trying to figure out what to do to manage it. Um, so we built on the UGA tool or, or and cooperation with other states. Um, it was fortunate for a window in there that, um, we had a variety called NC V eleven that had been around for a while. Uh, but also a variety called Gregory, uh, that really had been released, but it wasn't grown on appreciable acreage. It had, you know, it had some issues in the sense that it was susceptible to some of the, some of the diseases that we already had, but it turned out NC v eleven and Gregory had resistance or, you know, partial resistance, noticeable resistance, whatever term you want to use. So that genetics, uh, over a period of a couple of years, we were able to get those varieties tooled up more. They became, uh, grown more often by growers. Uh, and we were able to hammer away at some of the resistance through genetics. But during that period of time, we also realized that there were

production things that we needed to do that could minimize it. So when you think about integrated pest management, pulling all these things together, spotted wilt forces you to look at all your tools and try to have at least three or four of them that you put in place to minimize the risk. So even back then, so this is going back, you know, twenty, twenty five years, we knew we found that if you planted in mid-May, you had less virus, if you increased seeding rates, you had less virus at the end of the season or virus symptoms on plants. If you use the insecticide phorate or thiamet, um, you had less virus. And that was certainly proven in the southeast before we did it. Um, we also started transitioning to more conservation or reduced tillage during that period of time. And we've got a chart in our peanut information guide that shows what our tillage systems have been on a roughly five year basis, um, since I started in this position. And so if you looked at the early two thousand, say, two thousand and two, two thousand and four, up to maybe twenty ten, we had this increase in conservation tillage, and we found that we had less virus when we had reduced till there were some challenges with reduced till with peanuts. But if we're talking about virus, it was helpful there. And then the genetics of NC V eleven and Gregory really helped us have those options um to in our tomato spotted wilt um index that folks use. And I, and I do think that folks used it, um, we were forced into using in part if you were to, I just can and I have a slide or two that I use even in my class today where I talk about tomato spotted wilt and it's, um, some slides from Tom's breeding plots where um, things got hammered because they were at wider plant spacings. Um, so one, as I say that one thing that um doesn't always happen, but it certainly happened with tomato spotted wilt. And many of you all know that Jeff Dunn is our breeder now, but Tom Isleib was the breeder prior to that and then Johnny Wynn before him. So we're going back in time. But they have a limited amount of seed that they can use for a particular line. So the way you increase the amount of seeds you have for a line is you don't plant at close spacings, you plant with, with the plants further apart. So you have more pods and kernels and seed produced from an individual plant. So that's one way you do it. Now that was a historical part of the program. It still is today, in part even for Jeff because he has limited seeds. So he wants to increase that. So in some ways, that approach to breeding allowed Tom to get to some resistant varieties maybe more quickly because it was a the selection pressure for spotted wilt, especially at Lewiston, was tremendous. And you could see what actually worked well or what had resistance because Tom was planting those at at wide row spacings and conventional tillage, if I remember correctly, because of how they planted, they didn't use an in-furrow insecticide. So a lot of things were going on to see a lot of pressure from tomato spotted wilt in the breeding programs. And then that allowed actually Tom to pick the best ones and it wasn't planned out. And you know, when Johnny Wynn or whoever was before Doctor Wynn started that that that approach, it just worked in that way. So over that period of time, one thing that, um, came out is, is there were a couple of varieties like Bailey, Sugg and Sullivan. So if I were to go back, you know, I the decade I'm getting on it now, the decades to kind of run together on me a little bit. Um, but those varieties had, um, enhanced resistance to tomato spotted wilt. And the idea was if they were going to survive Tom's breeding program with the wide spacings no insecticide, conventional till all that. Um, they had to have some resistance to tomato spotted wilt. And so Bailey Sugg, Sullivan came along. They, they, they were um you know, leaps and bounds better than, say Perry, NC twelve C, Virginia 98 R, Champs. Those varieties that were prior to that. Um NC V eleven and Gregory we were fortunate that those were there.

They gave us some resistance, but not at the level that Bailey, Sugg, Sullivan did. And then over time, as we moved towards the high oleic version of varieties for the In-shell trade for enhanced shelf life, um Bailey 2 came along and certainly we grow Bailey 2 and Emory. Now those are our two primary Virginia types, even though we're getting some spotted wilt in fields and and, and those fields that I've seen pictures of are getting hammered by it. Bailey 2, and Emory have much better resistance to spotted wilt than anything we've had up to that point that we've used in the in-shell industry here. Um, so we do have some, you know, that's our genetics now. So the question is, um, why do we have those issues in twenty twenty six? And, and certainly there's probably a lot of components to that answer. But I'll my view right now, and we're going to do some survey, more survey work this year across the state to get a better handle on it. Certainly we work well with the folks up in Virginia. So we'll we'll do a lot of cooperative work. But I think one thing that the resistance in Bailey two, for example, to spotted wilt, it was it was good enough. And if you compare it to the older varieties, that. It was a great buffer to that particular pathogen, to the wilt and the breeding program. Yeah. So Bailey two had resistance to spotted wilt, but also resistance to sclerotinia blight and leaf spot and probably some stem rot. So it was a powerful variety to have the resistance to tomato spotted wilt for, you know, the last ten to fifteen years in Bailey or Bailey two has been adequate enough so that we just don't notice as much spotted wilt on the landscape. And so when you start having genetics that are so successful and giving you those buffers, um, you start beginning to, to maybe flex away from some of those other components of the tomato spotted wilt index that if your genetics are good enough, you maybe you say, well, you know, I can plant earlier. We know that that creates risk. I don't need to use Thimet or Phorate. That's a granular. It's, you know, it's a very effective insecticide, but it's, you know, it's an older material that has some risk to it when you handle it. And it's a dry, you have to have the boxes on the back of the planter to put it out. Um, so maybe you get away from that if you don't need it. Um, there was an insecticide that came along. Admire Pro there's a lot of generic Imidacloprid, Imidacloprid now um that we're using, they're very inexpensive. Um now we've got resistance in thrips to those. Now it's not as maybe good as it was ten years ago, but it was very cost effective and it gave you enough thrips control to, to get where you needed to be, especially if you used an inexpensive acephate application as a follow up. So all those contributed to getting away from some of those key components of the index. Um, and I will say, if we look at early planning, a lot of risk there for spotted wilt. If we look at imidacloprid itself, uh, the folks in the southeast and other areas have routinely seen that when you use that in-furrow, you can increase your risk for spotted wilt compared to some of the other products, um, like, um, ag logic or maybe even Vydate or certainly Phorate or Thimet. Um, so all of a sudden we're, if we look at what we've been doing more recently, there's a lot of logistical reasons why people want to plant early. We feel like April has warmed up and why don't we just go ahead and plant peanuts now. We still have the same genetics, Bailey 2, but we're planting early in many in many cases. Uh, we certainly are trying not to wait till the middle or latter part of May to plant. We've been using imidacloprid in-furrow seed for when we surveyed growers, I think for the last decade or more, um, in the ballpark of seventy percent of the growers use that as an in-furrow treatment. So we are using an insecticide that is probably increasing our risk some. And so when you add that to planting early, um, you know, we just are elevating these, these small things build up to big things. Um, the other thing is we, we had this run at reduced till, at least

in North Carolina for a while, I think in Virginia, South Carolina. They still have a considerable amount in conservation or reduced till. We, we shifted pretty far back to conventional. Maybe twenty percent reduced till at the most. So all of a sudden we took one of the other components out of the risk index tillage, um and put back to went back to conventional which is high risk for spotted wilt. A lot of good reasons for doing all this. There are good reasons to plant early. There are good reasons to use imidacloprid in the seed furrow. There are good reasons to do conventional tillage. Good, good reasons. But if you have tomato spotted wilt. And if we see that increasing on the landscape, you have increased your risk substantially for that. So those are some of the big things I see with the increased um, risk and the increased prevalence and incidence across North Carolina and in some places, but certainly up in Virginia where they're having some issues. Thank you. That was a lot of information to take in that included a lot of historical information. Is there anything looking forward to talk about? That's a great, great comment, Gary. Um, and I'll just give you a it is a very important issue. Um, last night I got a text from a really good consultant up in the northeast part of the state. He works in both Virginia and North Carolina. And as as you know, Gary, I can I can get a little long winded. I had a little time and I, and I, then I followed up this morning as well with a little bit more. So I know I exceeded the, the word limit on an individual text by fifty fold. But in the process, um, of explaining some of the reasons why I think we have Spotted Wilt more right now and, and some of our guesses on that. Um, the question is really what, what do, what do we do forward? And I think what we have to keep in mind is with tomato spotted wilt, we have to put in a series of practices to minimize the risk. We don't have a rescue treatment for tomato spotted wilt. Now, if you look at most of the other pests we have in peanuts and it's I mean, it's not true across everything, but for most of the pest we have. If something shows up, we usually have a pesticide that we can use. If we can get it out in a timely manner, we can essentially rescue the crop from the major damage from that pest. When you walk away from the field or drive away from the field after planting, you have put in your tomato spotted wilt management program for the year. So once that once that seed is in the ground outside of maybe a little bit of a help with a foliar insecticide application, very minor contribution to that. You're. You've got it in place. So I sent out this fairly lengthy, um, text to the consultant up in the northeast. I'll certainly post what I sent that person on the portal. So you can look at it in detail. But it's what we're talking about here. So best management practice for tomato spotted wilt. All right. Plant in mid-May that's been proven in the southeast. That was proven fairly effectively back twenty years ago. That still holds for us a lot of reasons to plant early. But if spotted wilt is driving what you're doing. The mid-May planting is important. I don't have time here to go into thrips populations and when they're at their peak, but that plays into it. Establish five plants per foot of row in single rows. That means you need to plant six seed. If you, you know, are assuming about eighty percent germination, you just have to put the seed out there. If you're in twin rows, you would need to have six seed per six plants per foot, three on each of the two twins. Um, there's, there really is no replacement For an adequate plant population. Part of that, the big part of that is if you have virus that affects plants, which is going on, you have more plants in the field that probably don't get virus, and they compensate for the ones that do. All right. So it's it can be expensive when you look at seeding rates, but there's there's just no way around it. We've got to get our seeding rates up and plant in the middle of May. And this is one that's even trickier. Folks have gotten really used to in-furrow sprays of

insecticide. Imidacloprid has served us well in that role. It mixes well with our inoculants for nitrogen fixation. You're putting that into furrow. Um, there are people that are going to have to figure out how to get boxes back on their, their planters to deliver phorate or thimet. But we know that insecticide does a really good job of suppressing the virus. Um, the other two components. Um, tillage is one. So we know we have less spotted wilt and less thrips damage when we are in conservation tillage. The challenge is you have to really consider the soil texture, the soil characteristics before you just jump into reduced till. We know that we can have some challenges on some soils with digging peanuts irrespective of tomato spotted wilt. So tillage is a little bit more delicate to think about. And the benefit of reduced till. Um is there, but it's not as high as the insecticide choice, the planting date choice and the plant population, the genetics. If we could get a variety and, and Dr Dunne is working on that, um on multiple fronts for pathogens and so forth and that we have, um, that would be that number five things on the list right now and for the foreseeable future. Bailey 2 and Emery are what we have. Um, they they have much better resistance than historical. We've got NC twenty, NC twenty one and NC twenty five that have various levels of seed availability. Uh, we're going to learn a lot about those and their resistance to spotted wilt, you know, in the coming years. And that might help make and help us make a good decision on what we need to adopt, uh, from there. Um, so again, just keep in mind, this is, I think, really important. And I know I drive the same things over and over again is that your spotted wilt management is complete when you drive away from the field at planting. So you just have to think well ahead of time about what you want to do. When you're going to plant, how much seed you're going to put out, what your in-furrow application for insecticide is, what tillage you've got. And certainly we're kind of restricted with the genetics we have now, but that's a really important consideration. Thank you for the information about the spotted wilt. Now let's look ahead to the upcoming week. Any issues to be on the watch for? That's a that's a great question, Gary. And so when we get into August and certainly the latter part of August and into September, there's a couple of things that I think most folks are thinking about. One is just finishing out our fungicide spray programs for leaf spot and stem rot and keeping our eyes out to see if we've got any sclerotinia blight developing. And then we might adjust our spray programs based on that. So farmers are thinking about that. Um, the other thing that growers are beginning to think about are heat unit accumulation, growing degree days. How far along are we with the maturity of the crop? We, you know, we're, we're well above two thousand heat units. Now we need about two thousand six hundred for Bailey two, our most popular Virginia market type, but we really don't know for sure on the maturity. Honestly, until we get to about the second week of September, we can see some things earlier, but for the most part, when we start doing our pod blasting, that's when we can learn more about the maturity crop. But folks are thinking in that direction. Um, a couple other things. We have, uh, some educational opportunities for folks, uh, in, in the state. So just a couple of dates to keep in mind if you've, if you're free next week, uh, August twenty seventh, there's the Chrome field day. Um, if you don't know what that acronym stands for, it's Chowan, Roanoke, Meherrin rivers. And so it's those, uh, those counties that are associated with that is up at Lewiston in the morning. And peanuts will be a part of the, of the field day there maybe, um, two stops or so out of four or five, whatever it is. But that's a good opportunity. They certainly have continuing education credits. If you're if you need those. Uh, September tenth is our traditional peanut field day at Lewiston. Um, that will start in the

morning with a tour. And then the Peanut Growers Association has their annual meeting after the field tour. Um, that's a good event. That's the, this will be the seventy fourth North Carolina peanut field day this coming year. Um, the following week, on September sixteenth, we have a field day, um, in Wilson County. Um, and we can get you that information, but it'll be in the afternoon. We've got, uh, the PVQE program has a variety trial there. We've got some large plot varieties and then some tillage systems that we can look at, but that's on the sixteenth, uh, the twenty third. The PVQE program is having their traditional field day up in Martin County near Hamilton. Um, that late that morning, There'll be a lunch there. So that's something you could put on your schedules. And then one more the week following on that Monday on September twenty eighth, we've been having a what I call the late season disease and harvest tour. Uh, that will be Monday afternoon. Um, that's a, it's, it's a, it certainly is a, a formal field day. Uh, but it's not like the peanut field day on the tenth or, uh, the other ones I mentioned, this is more of an in depth walkthrough plots. So we might have, um, county agents that come, um, industry reps. So we like to say, okay, this is not a stop with people looking from a trailer. We're going to actually walk through plots and discuss that. So anybody's welcome to attend that, but that's going to be some walking and looking and discussion of, of some of the fungicide programs and other disease management practices and plant growth regulators as well. And so, Gary, that's what we got to look forward to. I do want to mention just circling back on Spotted Wilt for a second. It's hard to let go of that one. Um, we have, we have good people in the three states, uh, researchers and extension folks that are working on it. So if I were to think about North Carolina. Uh, Dominic Reisig is our entomologist working in peanuts. LeAnn Lux is our pathologist. Jeff Dunn is is our breeder. So that's a core group of people that are working, um, across a lot of different pests, but there's going to be some focusing on tomato spotted wilt based on what we're seeing now. Excellent scientist and extension folks. Um, up in Virginia. Tim Bryant, David Langston, Jacob. Jacob Forehand um, that's the three. Maria Balota had done some work, um, you know, previously in some of these areas as well. But they've got a good core of folks that are, that are going to build strategies and look at things to handle spotted wilt, and certainly down in South Carolina. Dan Anco is the specialist there, and he's got a group of people that work with him on different strategies. So from the Virginia Carolina region perspective, we got a lot of good scientists and practitioners and our county agents, consultants are, are, are top notch to help us come up with strategies to, to handle spotted wilt. But all the other issues that that growers face. This has been searching for the brighter pod. Please contact us at brighterpod@gmail.com. Thank you.