

# The Southern Fruitcast

## *Episode 4: Muscadine and Blackberry Production with*

*Ervin Lineberger*



**[Intro]** Thanks for tuning into the Southern Fruitcast. This podcast aims to cover the people, technology, and latest developments in small fruit production in the Southeast. We were brought to you by the Southern Region Small Fruit Consortium and the University of Arkansas System Division of Agriculture.

**[Cato]** I am Dr. Aaron Cato, Extension Specialist for Commercial Fruit and Vegetable IPM at the University of Arkansas.

**[McWhirt]** And I'm Dr. Amanda McWhirt, Extension Production Specialist for Fruits and Vegetables at the University of Arkansas.

**[McWhirt]** Everyone, welcome back to the Southern Fruitcast. This is our fourth episode in the series. And today we're going to be talking to Ervin Lineberger. Ervin owns Killdeer Farms in Kings Mountain, North Carolina, with his wife Debbie. They've been farming since the early 1980s in western North Carolina on their ground that is located between Charlotte and Asheville. Currently, they grow muscadines and blackberries for wholesale markets, but previously they've grown strawberries, peaches, and vegetables for retail markets. Ervin is president of the North Carolina Muscadine Growers Association and is active in the North American Raspberry and Blackberry Growers Association. Previously, he was a Dean of Instruction at Catawba Valley Technical Institute, now Catawba Valley Community College, but before leaving to go back into farming on family land.

**[Cato]** Thanks for coming on today and just to start out we figured we'd let you talk a little bit about what you got going on there in North Carolina. So just tell us a little bit about your farming operation.

**[Lineberger]** Okay. At the present time, my concentration is our focus is primarily on blackberries and muscadine grapes. Although I have some seeded bunch grapes, Sun Belt and also some of the Arkansas Seedless bunch grapes that are doing very well for us. I have in the past tried retail marketing on the farm. Pick-your-own on all kinds of vegetables and fruit, including strawberries. But about ten years ago decided that we wanted to do only wholesale marketing. And so we selected the crops that seemed to

be in high demand for wholesale. So we focused on blackberries and muscadine grapes, primarily to balance out the labor demand. Blackberries would come on earlier and muscadine grapes would come on later. And also it would spread the marketing of into a longer window. And we've done very well with that, except for a few glitches here and there. The main problem that we have is from finding enough labor, all these are handpicked. And so at times it's hard to find labor, but we're pleased with the wholesale prices in the past. We still have demand for Pick-Your-Own, which we kind of resist. But if my children decide to continue with the farming operation, it's possible that they will go back toward a direct marketing approach and away from wholesale marketing. So that's pretty much what we're doing now as blackberries and muscadine grapes.

**[Cato]** Okay. So for blackberries, which cultivars do you grow?

**[Lineberger]** I've grown a wide variety of cultivars in the past, starting with Cheyenne and Shawnee, and those were some of the first that came from Arkansas. We're now concentrating on Natchez, Osage, Ouachita and the latest one that we've added is Von, V-O-N, and that's an NC State variety. We're real pleased with it. It's later than Navaho. We've taken up all of our Navaho and Von seems to be a replacement for those. So those are the ones that we have now.

**[Cato]** How much of a gap do you think you're getting between your last cultivar, your latest cultivar and then into Von? So how much of a gap in between when they're ready to harvest?

**[Lineberger]** Well, there's actually no gap. We're still picking Von right now. But all the others have finished and we'll have Von for another two weeks, it looks like. But the season starts with Natchez early and Osage, Ouachita and Von without any gaps. We're not sure since Von is very early. We're not sure how the late crop is going to be. But so far it looks really good. There is a gap between blackberries and muscadine grapes this year, which is a little problem. Usually, we have lots of grapes coming on maybe the week after blackberries are finished. But this year we have two or three weeks, it looks like, before our first muscadines will start to get ripe. And that's a problem in trying to retain the workforce. So we're having to make work for them right now.

**[Cato]** Right. And so just to go on with the same cultivar question on muscadines. Which cultivars do you all lean on? You know, for most of your production?

**[Lineberger]** Well, like I mentioned, all of our muscadine grapes are sold on fresh market. We did not produce wine grapes for muscadine. And so we start off with Tara and Tribe. These are Bronze. Summit come in there, early Fry and then our last bronze is

late Fry. Then the black ones. We start with Lane and Supreme and Nesbitt. So we have eight varieties there that we've tried to space so that we have a continuous supply from about the 10th of August through about October 15th. And we're picking in clamshells. We supply to chain stores. We just finished up last year with Walmart and we've gone in with two or three other chain stores, along with a couple of brokers that handle some of our clamshells. We produce about 30- 35,000 flats a year with our clamshells, with our muscadines. I might also mention a couple other things. We have worked to help try out some seedless muscadines. And we have about six and a half acres of trials, including Razzmatazz, which we're going to market through NatureRight. Right. We also do Oh-my, which is a bronze, and then we have some numbered varieties that we're selling in clamshells on a limited basis to some supermarket chains. And we also have, as I mentioned, Sunbelt, which is they see this bunch grape, very good. We've had good results from our customers, all those that are using them for juice and eating fresh also. But we have three acres of those.

**[McWhirt]** Great. That's great info. Ervin, you mentioned something about how you have this break in your season this year. Can you talk a little bit more about, you know, how the season has gone both for your blackberries and muscadines and why you're seeing that break in between the two crops?

**[Lineberger]** I'm not sure I quite understand that, Aaron, can you interpret what she's saying?

**[Cato]** Yeah, I'll. I'll try. I don't, I don't think it's having a good time trying to pick Amanda. Yeah. And so Amanda was just asking just to continue on with kind of what you said with the gap that you observed this year. So she was asking if you would talk a little bit about how your season's gone this year and why you all saw that gap where maybe I don't already know, normally you've planned where you don't have it.

**[Lineberger]** Yeah, I think it's, it's mostly weather related. Um, we had a very wet and cool spring. Um, and so it held back the muscadine pollination primarily. So we have some, some late pollination. Um, we also had, um, a virus in, in some of our Ouachita and Osage that caused our blackberries season to finish up early. So it was a double trouble problem. Um, we don't know that that's gonna be repeated in the future, but we've got to work on that because it is a problem to have a gap of that size. When you're selling to retailers, they want to know maybe a month or even longer in advance what you're going to have every week. And they plan on that. So if something happens in terms of the weather or drought or problems, it's a problem. So we have to guard against that and try to plant varieties there that fill in the gaps.

**[Cato]** I gottcha - on that virus you said you had in Osage and Ouachita, or maybe just Ouachita. Do you remember what the diagnosis was on that? And, you know, whether it was plant source related or you got older plants out there and what was going on?

**[Lineberger]** Yes, we did tissue sampling and the report came back that the lab had experienced with blackberry growers five viruses that they had seen in blackberry this year in North Carolina. And we have three of them. Um, the most critical virus that we have is the yellow vein virus complex. And the reason that's critical to us is that it has an effect on of the pollination of the fruit. The fruit is deformed and it's just unsavable. The only thing that you can do with them is sell them for wine. Some of the other viruses that were mentioned, I'm really not familiar with they're new they at least they're new to us. And it looks very critical for blackberries grown in the in the kind of temperature and humidity and rainy periods like we've had. So it's been a real problem for us this year. The viruses.

**[Cato]** On those plants that where you have a yellow vein, you know, complex of viruses are going to pull those out or what's the plan on those? I know we have a few places here in Arkansas are starting to see similar virus loads, especially seeing some of this yellow vein popping up.

**[Lineberger]** The only solution I've found and I've had experience with the yellow vein, but not to this extent. But the only experience or the only solution is to take out a field or a section or in the area where there's the yellow vein virus and eliminate it from the planting. The problem I have is that we have neighbors that have wild blackberries and there are other alternate hosts for viruses and our bees and our other pollinators tend to spread it from the wild to the tame and back and forth. So a solution here on my farm is to go to a field away from the blackberries, take out some of the muscadine grapes, and put in blackberries in their place, and hope that the virus doesn't follow them over there. But I'm taking out a lot this year already, and I'm trying to find some relief or some solution somewhere, but I'm not sure where there's going to be. The virus, in my opinion, is the number one problem with growing blackberries in my area right now.

**[Cato]** I think that growers in Arkansas and probably other places across the Southeast would agree with you. We had a lot of misshapen berries coming out, just overall fields that were just devastated and you know, what they expected to get versus what they're getting coming off of. And I know Ouachita seemed to be a cultivar of that where we saw a lot of the similar stuff. And I know Amanda, didn't you just recently go to a field that was looking like that?

**[McWhirt]** Yeah, absolutely. We definitely seen some of that here as well. So it's definitely an issue region-wide. Kind of following up on that, Ervin, you know, in one of our first podcast episodes, we talked to John Clark about cold damage on blackberries occurring across the southeast. Did you experience any of that happening this year?

**[Lineberger]** We had some cold damage. Our farm was not affected as some of the farmers were further west from here. But the cold damage in our area was very spotty. Low areas and low elevation areas on the farm seem to be as much as 50% damaged, whereas the higher elevation, maybe no more than 200, 300 yards away, was saved. So we were on the edge of frost damage. It was not winter freeze damage, but it was frost damage while they were in bloom. And yes, we did have that problem. And I think some of the grower's mistake the cold damage and the virus damage to be the same thing. But I think there's two different things at work. And so we have growers now picking very small fruit that they thought was damaged by frost. But I think it is the yellow vine virus at work.

**[Cato]** Okay. So well, you know, speaking kind of in the same vein, I think you just indicated that these viruses are probably your number one issue. It seems like trying to figure out where to put blackberries to try to get away from these viruses seems to be pretty difficult. But outside of that, what do you think? Ah, you know, year to year, your biggest issues in production. I know this year you, you said labor just because of the gap and trying to find something to do with the viruses but just kind of disease, insects and all that together. What do you find is like some of your hardest challenges from year to year?

**[Lineberger]** Well, this year, we seem to have a different major problem every year. But this year, aside from the epidemic that we have with the human virus, we also have gone from a very wet period when blackberries were first starting to get ripe. So it was hard to find picking time that the fruit was dry enough to ship in clamshells. And then there was a low-price area in there where we were barely making picking costs. But then it turned from wet and cool to hot and dry. So the weather in the last 15 days has been in the mid-nineties here and it's difficult for us to pick clamshells that will ship very far if they're soft due to the heat or sunburn even. So those were the two that the, you know, weather-related or the two major problems in addition to the virus. Labor has not been the issue that I expected this year, and that's partially due to the fact that there are a number of people unemployed and are looking for work now and they are seasonal. So that hasn't been the problem. But we still have the problems with the blights, the cane blight, the orange rust, all the other typical variety or diseases that affect blackberries. They're still around. So we're we didn't escape them.

**[Cato]** That sounds about right. I know here we seem to kind of have like a little bit different, I don't know, environment for diseases. You know, our growers seem to mostly complain about anthracnose. Do you see that much on your farm? Anthracnose on blackberries specifically.

**[Lineberger]** Yeah, it's right there is not the problem that it once was when we had the thorny varieties. Oh that's right. this was more susceptible I think there and anthracnose and maybe it's because we've learned to do more after harvest spraying to eliminate part of the anthracnose, those fall anthracnose spores but it's not them is much of a problem with the later one of those varieties and it was when I was growing thorny varieties it's that for Shawnee and Shawnee seems to be I don't know anybody in your area still grow them, but it's the most disease resistant variety that I've ever grown. And there are still people who would like to play them that they can get the plants.

**[Cato]** Right. Yeah. Yeah. I think here in Arkansas, we're kind of, you know, on the edge of the southeastern production. And we don't get as bad as disease pressure as you do. And I think that you guys are a bit more conditioned to spraying regularly for things like cane blight or even botrytis during picking and then some of the other diseases and that most of those sprays seem to suppress anthracnose as well. And so ah, a lot of our growers just haven't done a good job of suppressing it. And then, you know, the inoculum is just high in those areas because Georgia growers tell us the same thing, you know, cane blight is their number one issue when just look in or phytophthora or something like that, but for controlling cane blight but probably also suppressing anthracnose.

**[Lineberger]** I think also I've learned in my many years ago on blackberries to go back to the old tried and true of sprays, the insecticides, the fungicides. I want away from Sulforix or lime sulfur. At one time people say, no, you really should try the other alternatives to those because lime sulfur was such a nasty product. Well, it is. But it is very effective. We do some lime sulfur applications, not only on blackberries, but on grapes in the fall after harvest to try to nip overwintering spores. And we found that they have been effective, especially on the Anthracnose. Anthracnose those can be carried over in the leaves and on the stems and all the clippings on the ground. So as much as you can do with insecticides and fungicides in the fall will help out in the spring I think.

**[Cato]** That's right. Yeah, I'd have to agree.

**[McWhirt]** All right, Ervin, let's switch gears and talk a little bit about muscadines. So muscadines are expanding in acreage in the southeast. What do you see as the future of this crop in the region?

**[Lineberger]** Well, I'm very bullish on muscadine grapes for various reasons, I think that the most impelling and the most important thing that's happening in muscadine grapes right now is the health benefits research in North Carolina. North Carolina Baptist hospitals associated with Wake Forest University received a \$20 million anonymous grant to do research on muscadine grapes for health benefits. And so with \$20 million, the School of Medicine was able to do some clinical research, clinical research with human beings on the muscadine extract that they were able to use. And they found some very positive curative, as well as preventive, results that are being published. I think when that information is filtered through all of the publications, you're gonna see the word muscadine come up as a brand that people will remember. I think that is the most important thing that's coming down the down the pipe. The other thing is the research is being done on seedlessness. Seedless hybrid of muscadine grapes will make the market spread more toward the north and the northwest and in fact all across the country, because they're easier to eat and people don't like to have to spit out seeds and hulls. So I think this seedless muscadine is going to be one that's going to be there with, um, with food vendors for, for food safety, not food safety, but health benefits as the two things that's going to pull muscadine grapes along. Not only that, but the breeders have come through with some really good fresh market varieties. Georgia, Arkansas, some of the other breeding programs are coming up with some varieties that are tasty. They taste good, they're easy to market. There's just a lot of things going for muscadine grapes this year, these years.

**[Cato]** So, you know, just kind of wrap up. We have a lot of other growers that listen or, you know, a number of our listeners happen to be growers and also extension people. So you know, a good question we always like to ask or plan to ask for growers is what advice do you have for farmers that are still in the early stages you know, building up their farm business? I know in our region and especially over there in North Carolina, in y'all's region, there's a lot of people, you know, excited to get into this business. And so I think it'd be some advice from you would be really helpful for a lot of people.

**[Lineberger]** Well, I think preparation is the watchword. Um, and that includes new, new cultivars. Um, I've tried to keep up with the newest things coming out from Arkansas with blackberries, and it certainly paid off. Um, in, in the area of muscadines. Um, there are new varieties also, but um, realistically, marketing is a key to both those commodities and there needs to be some dual-purpose marketing. For example, in

muscadines um, in the past in North Carolina, it was mainly you just grew wine grapes, Carlos and Noble. Um, but now you can grow dual-purpose muscadines can be sold fresh market. And if the fresh market doesn't pan out, then they could be sold for wine. Um, and I think Margaret Worthington has got some, some varieties coming along that might fit that bill. Um, on the other hand, preparation would mean trying to find some way to look at what's going to happen with labor because both of these crops require hand labor. Um, and if I had it to do over again, I would have made preparation to house H-2A workers. But I kept thinking and hearing and reading that the labor problem, the immigration problems were going to be solved. And then they ever have been. So the people who were able to get labor these days are the ones who have H-2A contracts, and that's in the way of preparation. But the markets have never been better. It's easy to sell these two commodities, especially, um, they are hot, as they say. Um, and if they're properly grown with good quality, then there's no problem selling them. And the prices are not great, but they're sustainable and they're good.

**[Cato]** Okay. And just to add in the same vein you talked about with diseases and pest management, pest management, you know, in your experience with growing these two crops, as have you always been very forward with prevention or whether there some growing pains there? I know that's one thing we have to kind of impart upon new growers a lot here is that, you know, there's a lot takes a lot of preparation, he said, for cultural controls, but also fungicides, fungicides and fungicides to really get that quality and number of fruit that you need to be successful. So is that always been your experience or –

**[Lineberger]** Yes, that's true. And it's not necessarily has to do with, uh, chemical sprays, um, of disease control, insect control, sanitation, um, all those things can be done with your pruning practices. Um, and just year-round, uh, cultural practices, um, you can't spray your way into a good crop. It has to be a balanced approach. Um, we've, learned every year we've tried some different ways, to prevent disease by, ours, our pruning practices. Um, and when we prune, you know, timing and so on and so forth, um, even the irrigation practices, um, it all has to fit together and, and you just can't get on the sprayer and solve all your problems.

**[Cato]** Right. Oh, yeah.

**[McWhirt]** Well, Ervin, we thank you so much for taking time out of your busy schedule. It's the end of July, so I know you're still busy with both of your crops, but we appreciate you taking the time out to share some of your knowledge with us.



**[Lineberger]** Well, thank you, Amanda. And thank you for all you're doing. And the people that Arkansas... we see you as leaders in both of these crops. And we look forward to many good things coming from Arkansas.

**[McWhirt]** Thanks so much, Ervin, and hope the rest of your season goes well.

**[Out – Cato]** Thanks for tuning into the Southern Fruitcast. Our episodes are hosted by PodBean and also can be accessed on the University of Arkansas Extension website at [uada.uaex.edu/southernfruitcast](http://uada.uaex.edu/southernfruitcast). Here you can see all of our episodes and provide us feedback to help shape future episodes of this podcast.

**[Out – McWhirt]** We'd again like to thank the Southern Region Small Fruit Consortium for funding this podcast. The consortium provides a large library of production and Integrated Pest Management resources at [smallfruits.org](http://smallfruits.org). We'll be back again soon with more updates on the Southeast small fruit industry and interviews with specialists, researchers, and farmers from across the region.