



Season 2 Episode 9 – Pecan Production

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Speaker 1

Welcome to the Farming Basics podcast with Olivia Fuller. We'll have sustainable farming tips from growers across the state and extension specialists at Auburn University.

Jacob Kelly

And we're back to the Farming Basics podcast. I'm one of your host, Jacob Kelly. And we're here to talk about the cotton production. We've got Dr. Chip East with us today. Again, thanks for joining us.

Chip East

Good to be here, Jacob.

Jacob Kelly

Phone calls about pecans. I get them a lot from homeowners. I get them a lot from my growers. Seems to be a popular commodity. Where do we start when we get into pecan production? What's number one?

Chip East

That's a good question. And I guess it depends on if we're thinking of planning a pecan orchard or if we already have an existing countries, what we need to think about. So I guess it depends on where you are in your in your stages of growth.

Jacob Kelly

Okay. Let's say we'll start with I inherited some family land. It used to be row crop land So that's going to play a role in the establishment. But it's vacant of, you know, any crops. Now there's no pecan trees present. Where am I going to start in that situation?

Chip East

And I would think about how I'm going to manage the trees that are planned. Okay. Am I doing this commercially? And I'm going to say, oh, no, it's off those trees, or I'm just looking for yard trees for family use. And it depends on the. That would tell me which cultivars or types of pecans I would be planting.

Chip East

Some of them, we call them low input pecan trees. I could name a few gafford and in Kansas and Adams five. Hamlin. Elliott. There's several that we can plant that are scab resistant. Scab is a bad disease. It makes black spots on the fungal disease, makes black spots on the leaf on the shirt that shook or turned black and fall off prematurely.

Chip East

If you live in the southeast, you've probably had yard trees. You've probably seen that. Well, we can get to space in in a minute. There's things we can do to help on that. But planting a scab resistant tree, if I was planting from scratch, nothing there and that would be something I would really think about is a scab resistant tree.

Chip East

Now, if you've already got trees with something else, but scab is a big problem. Aphids can be a problem. Pecan phylloxera is... we get a lot of calls about that in the spring. It makes little bumps on the leaves and on the stem, the receiving, the stem of the leaf. That's a big problem. And again, sprays can help that.

Chip East

But a homeowner can't spray so I don't ever recommend anything there. But the pecan farmer would. And they can manage scale and they can manage aphids and they can manage phylloxera. One of my favorites, I shouldn't say it's my favorite insect, but it, it's just interesting because as the twig gardeners, you know, they go out on a branch and they are sure they're lay eggs, but there are chew around that branch.

Chip East

You'll think somebody with a knife and eventually that branch you'll fall off and you think, what did this an insect did they listen to you? You need any branches that you have fallen from your trees. You need to pile them up and burn them pretty soon or throw them away in your trash. Don't just throw them to the edge of the yard or in the woods because insects can develop from there and in reinforced your trees.

Chip East

So get rid of those alliums as they fall. Get rid of the leaves on the ground as they fall. If you can. There's some things we can do there to manage trees. But the bottom line is when platinum are you going to spray? And when I say spray and manage the disease, sometimes it's ten times a year and a homeowner just don't have the equipment.

Chip East

The farmer has an air blast sprayer capable of spray, an 80 foot tall in the country and they will make pecans. So have green leaves on that plant. They won't have hopefully won't have scab and these other insects and they'll make a good crop, but it costs them time and money to manage these trees. So you either low input planning or high input planning and you can't change your mind once you plant, you got to redo the trees.

Chip East

If you want the low input trees or smaller nuts, they're medium to even small size bygones and hopefully they're scab resistant. A lot of these larger nuts are not scab resistant. And of course we need to manage for other insects as well. And we do that with pesticides. So it just depends on how you want to manage the tree as to which cultivars I would plan.

Jacob Kelly

Okay. So it's going to cost you more money in sprays if you do high and put larger up cons but if you do lower input, you might save some money on some fungicide applications and time maybe.

Chip East

Yeah, the low input, we're not going to spray at all. We're going to weed control around the tree. And if we could kill all the weeds and maybe a ten foot diameter around the tree, if we could mulch that area, if it's in the pasture somewhere, it could be old rotten hay or something like that. But if it's in your yard, you might mulch it with whatever you mulch or landscaped with him, maybe pine straw, pine bark or something like that.

Chip East

It can be an ornamental tree in the yard as well as a productive tree. So we can mulch the tree and we're going to irrigate the tree. The net lights are really filling out in August and September, and I know October's historically the driest month of the year, but September's usually pretty dry too. And during August and September, if you had a way to irrigate that trees in your yard, you probably do.

Chip East

If that tree is way off in the field somewhere, you might not can. But if you could irrigate that myrtle is really filling out in August and September. So if you could irrigate at those times a year, that would really help if you're not getting the rainfall. So then the other thing is we can talk about plant spacing in a minute, but if you already have the tree fertilization.

Jacob Kelly

So find here pecan orchard are maybe about some land that used to be a pecan orchard and want to revitalize that. That's going to be different from me starting from the beginning, right?

Chip East

Yeah. If you are to have trees planted, it all depends on this. Lot of times we'll plant trees and everybody's different on this. But a farmer might plant the trees 30 feet apart in a row and 40 feet between the rows after so many years when the crown start touching, they'll cut almost half the trees out. And you know, when you kill cows, how do you know which trees to cut?

Chip East

You don't just cut every other one. You've used coal and cows. You don't just get rid of every other one. If one is productive, you keep it. If one's not productive, you might have two trees in a row that you might keep, and then you might get rid of three trees in a row. That's not productive, but you kind of want to leave it where half sunlight hits the ground and half shade in the summertime. So it would be nice if it was every other tree, but it might not turn out to be that way again. If you're not going to call some of the trees, if you're not going to take out the trees, you might want to space them further out to start with and then be left with after you take half of them out. 60 by 80 might be a good space. And if I was a home producer, even 80 to 100 feet wouldn't be too far apart because I can't spray, you know, someone who can spray for disease might plant them closer together and they would.

Jacob Kelly

Right, yeah.

Chip East

Production per acre.

Jacob Kelly

Because if we played them closer together, the less air is going to be moving through there. That canopy is going to hold down humidity.

Chip East

More scab.

Jacob Kelly

More way more scab and we can tolerate some. But when they start getting on the nuts, that's cutting into our bottom line.

Chip East

A lot of people call nuts are turning black and falling off in the summertime. And that black is pecan scab. Yeah, there's another stink. Birds can cause problem. There's other insects, too. But that's it's very scary. If I could wave a magic wand and make one pecan problem go away, it would be scab.

Jacob Kelly

So that's the most limiting factor. And pecan production for sure.

Chip East

If I had trees already planted. And I know I needed to get rid of some of them, you know, how do I know which ones to get rid of? I'll tell you if you. So what I like to do is number all the trees one through Abraham mean every trees get a number. And it would be nice to talk about fertilization.

Chip East

You know, I said the weed control, the march, the irrigate and the fertilize and property we'll talk about fertilize and more later, but I'd love to manage them all for two to three years and then keep up with how much one production I got off of them and to wind of the tree, drop the leaves and this is something to think about I like to root around in the fall.

Chip East

I take pictures of countries, you know, I'll have two tree side-by-side one has leaves on it. No, first in November though. Then beside it don't Well they got to saying it's the varieties differ, but I mean they're in the same location. I got the same treatment, you know. Well, if a country loses its leaves before October one, your next year's crop is always going to be zero.

Chip East

So every day after October one, you're gaining pecans. So when does your tree lose its leaves? Well, I hope they keep their leaves through the middle of November and it'd be nice one, but the middle of November, I'd love for them to keep most of their leaves. So the trees that first of November and the end of October and even before and following a rainy year, they may lose their leaves earlier than that.

Chip East

So keep that in mind. I don't like to judge it after one year, but I'd fertilize them weed control, much like I said before, and then keep up with the ones it holds its leaves the longest and those are the ones I would want to cut if I got a field. And I know a lot of them's got to be cut and a lot of them stay.

Chip East

The ones that hold their leaves the longest are the ones I'd want to keep right?

Jacob Kelly

Because they're growing not only nuts for this year, but flowers for next year.

Chip East

They're growing.

Jacob Kelly

During that.

Chip East

Time. That's right. That's add nuts next year. The longer they hold their leaves, Right.

Jacob Kelly

So that's something they need those solar panels to get that energy going to be able to feed everything because they pecans are well known to be alternate bears. So they're going to produce really good crop one year. And then maybe the next year you might not get a crop. Are you going to have a lot less pecans on that tree?

Chip East

That is a good point. They are known to be alternate bears. If you have a heavy have a row, grow six or eight inches this year to make pecans next year. So if you got a heavy crop low this year, you're probably not getting a lot of new growth on your tree. So the next year's lot, well, the next year, that's a lot.

Chip East

You're probably are getting a lot of new growth on the trees of the next year would be heavy. Usually you don't have to heavy years in a row because when you have a heavy year, again, you're not getting the growth. However, you can have more than one last year in a row even if you have the new growth, if you have a lot of rain and this sounds crazy, but in a extra rainy year, production can be less even if you had a off year the year before that still don't ensure a heavy year that year.

Chip East

If you have a lot of rain, you're not going to make a heavy crop, right?

Jacob Kelly

Because they're stress, right? Because there's too much water or maybe too little scale and too much skip.

Chip East

Now the farmer can spray and that again, that's different. But the homeowner that you can have survival lost years in a row, but you won't have several heavy years in a row.

Jacob Kelly

You talked a little bit about low input pecans and then high input pecans, but pollination is critical to get nuts on that tree. And there's different types of cons. There's Type one and type two. Can you explain to us the difference between those two and how they work together to pollinate? And so you get nuts.

Chip East

The top one, the male part, the male part of pecan is called catechin that bloom. And it's like oak trees or had this little stringy look in the bloom in during the year, but the tiki trees will do that. And countries this is a carry no instances of the type of hickory their land on your windshield and everything.

Chip East

They produce a lot of pollen, but the female bloom is not receptive when the male bloom opens and this is interesting but one poor country has enough pollen in it to pollinate every other country in the world. If they were close enough. Well, obviously they're not and all, but they produce a lot of pollen. Well, there's top one.

Chip East

The male part blooms and a couple weeks later the females are in the top two. The females are given a couple of weeks later the pollen sheds. So you need a mixture of type one and type twos on the property near you. Doesn't have to be half and half because again, they produce a lot of pollen. You just if you've already got pecans that are producing nuts on your tree, if you only got one tree, I would say your neighbor or somebody has a pecan nearby that the wind is blowing the pollen to you.

Chip East

So it could be your neighbor's trees. It wouldn't have to be all on your property, but if there's no other countries around and again, these are wind pollinated, so we've got a tree line all the way around block and pollen. I'd want to be in the open. I would make sure I get a top one in top two.

Chip East

And when you go to the nursery, they tell you that on the tags and magazines, wherever you order from, it'll tell you type one and two. So you need something different. You can have four or five top ones and one top two or vice versa. But you need some different ones for that reason, right?

Jacob Kelly

You can't just rely on those native pollen trees out in the woods to pollinate your orchard, right? You got to participate in the parliament.

Chip East

I want it to be the same species. So I want it to be a on.

Olivia Fuller

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Jacob Kelly

What about weed control and Pecan Orchard? You know, growers out there, he's got to manage the weeds around the trees right? I mean, you can't just let the weeds grow around the base of the tree. In my area, southwest Alabama, lots of these pecan orchards are turning into neighborhoods. And so I get to see a lot of dilapidated pecan orchards.

And just about every single pecan tree in those old orchards has privet going or going around it. The grass is growing up the size of the trunk. It looks really bad, but those weeds are also pulling nutrients from that tree, correct?

Chip East

Yeah. And a lot of these trees, they may be a couple hundred years old, I mean, just to be about a hundred anyway. And a lot of people say, well, when I was younger, when I was a kid, this tree had pecans. Well, one, it was 50 years younger than sometimes it was managed and all. So I'll tell you some things we can do. And that's again the weed control was something a lot of pecan orchards may spray a 15 foot wide strip all under that row of trees. Then they've got a strip of grass between the rows. So we don't want erosion. So we got to leave strips of grass. So that's how they manage the homeowner might just spray a circle or manage a diameter of ten feet. It can be bigger under course. If we march it, that would be even better. And I know a lot of farmers are not going to march hundreds of acres of trees, but if you only got two or three, four or five or ten trees in the yard, those can be mulched pretty easily and get rid of the sweet gums and water oaks and grass of all can grow in around those trees, especially when you first plant them. A country will grow and it's over 70% faster if you manage those weeds. The first three or four years of its life, it grows so much faster. People always ask me, Well, how long is it going to take before HarperCollins? And all? My answer is, that depends on you. If you're not going to manage the weeds around this tree, it's going to take a while. But if you manage the weeds and course we need to irrigate and fertilize and and other things too, but wait, if I couldn't do the weed control up, don't worry about fertilizer either. You say you're fertilizing those weeds, so I would do the weed control first and then there's other things that go along with that as well, right?

Jacob Kelly

Because pecan growers, that's the long game. You know, you're looking at at the earliest, maybe six years when you can get your first crop of nuts and then at the latest, maybe 14 years or never, really. And so you've got to plan ahead and make these decisions during establishment that are going to impact you for the rest of your time grow.

Jacob Kelly

And these plants.

Chip East

Not only are we doing wheat and you're not making any nuts those first few years. So not only are we doing weed control in March and fertilized in water and we're shaping that tree too. So these branches, I mean, I want on a certain angle from the tree and spaced around the tree and the tree as it grows so that there not one branch is not directly over the top of another and it's just better air circulation.

Chip East

So we're trying in that tree as it grows. So we're doing work even though we're not getting any nuts. You're right. It's the loan. You got to think about the end. Not the beginning.

Jacob Kelly

Well, you touched on fertilizer a little bit. Is there a general rule of thumb or what are we doing with the countries?

Chip East

It's always recommended to one do saltiest. I wanna know with eight years and it talks, it'll tell you the force for some potassium in the soil of things. But I'm really interested in that so do sort is a farmer will do a leaf analysis on trees a soul test is going to tell you what's in the ground the leaf analysis will tell you what's in the tree.

Now we already know what the trees need we're just taking the difference of what they already got and we can add more but as a general rule. But I'd love to see that sort testing. No, I want it to be around seats. 6.2, 6.3 something like that that would make me happy. And I don't know without the soul test what the party is.

But as a general rule, and this is what a lot of homeowners would do, we would put this is how we calculate it, but it's for every year age of the tree, you put a pound of triple 13 per year, age of the tree, up to £25 per tree up to a 25 year old tree. So if it's 30 years old, it's still £25.

If it's two years old, it's only £2. Also, add a pound of 30 4000 fertilizer, nitrogen fertilizer for every year at £1 for every year, age of the tree up to £20 per tree. So if it's 20 years old, it's £20. If it's 50 years old it's still just 2010 years. Oh it's ten. And this can be found on our extension website, an Alabama Pecan Growers website too, so you don't have to write all this down.

So that's the nitrogen, that's the term planting. It's usually a 10th of a pound of zinc per year, age of the tree up to £2 per tree. So if it's a, if your trees are over 25 years old it's £25 trip 13 £20 of 30 400 £2 of zinc and then I don't know how much lime without the saltiest, but £50 of lime per thousand square feet is about equivalent to a tons per acre. So see what the salt to a stage in will go from there. You'll go from the base of the tree one and a half to two times the drip line. So it's not just out to where the branches come, we're one and a half or even twice the branch spread of that tree where the feeder roots are root hairs that's taken out. Nutrients are on the tops of the roots, so they're branched out underground but obviously they're further out to over the from the base of the tree almost about two times. The drip line is where we're fertilize now the time of year. I mean, there's a difference between mobile and heart for I mean as far as time. But so I'm going to say something that kind of depends on your spring and how it goes. And I think about the nitrogen leaches down through the source. The fast I don't want to fertilize until I have the green leaves are starting. So I'm going to say I want to fertilize and depends on where you are when people start planting gardens and it starts warming up and I would say April sometime I would fertilize and you can do all the fertilizer at one time.

Now, we could split the nitrogen fertilizer and do half the hour all the time, half the nitrogen in April and another the other half in June. We can divide it up even more if you have a heavy year, one year, a lot of times people will come back in August with a little more nitrogen during the heavy year because we know the next year might be a lot and we didn't get a lot of growth in the summer. So now we can divide it up and do some every month. But if we did it at least once a year, I'd be happy. But yeah, we can divide that up and do it two or even three times a year.

Jacob Kelly

And the soil test is critical. Like in my area, we've got a lot of phosphorus in our soils so you don't really need to put out phosphorus every year or ever, really. So it's critical to do that. Soil tests, so you're not wasting money on things you don't need.

Chip East

It doesn't do any good add the things you don't need. That's exactly right. And I can't tell by looking. I've got to see the.

Jacob Kelly

Saltiest, right? Yeah. And then back to the number of applications of fertilizer if you've got a sandy soil, you might not want to put it all out at once because it's just going to go "whoop."

Chip East

Absolutely. I love the idea of doing it along and along. It's more work on the applicator, whoever's putting it out, but that tree would appreciate it.

Jacob Kelly

Yeah, spoon feed them like you would a little baby or something like that or I don't know what else you spoon feed us in the plants because that's all I work with. But I'm glad you mentioned the association, so that goes for any commodity that you're involved in. If you're a grower and you're growing a commodity, it's always good to get LinkedIn with Pecan Growers Association or whatever, vegetable growers, whatever it is.

Jacob Kelly

So you can be around other people doing the same thing. As you, and we can network and we can talk with each other and we can learn.

Chip East

They all have educational components to these organizations and it might even be buy equipment together. I don't know, might save you money, but it'll definitely educate you. So I would highly recommend that our current specialist, he's retired now, but I learned a lot from him his name was Bill Golf. And this is what the secret to pecan production.

This is the secret to pecan production. Maintain healthy foliage to increase carbohydrate reserves. And he had the student you ever took his class, you'd have to say that word for word. Maintain healthy foliage to increase carbohydrate reserves. Well, that means is putting that in in plain, plainer talk, I guess. Keep the leaves on that tree green or healthy as possible.

And I would almost say Jacob here for growing roses if you'd name the plant. If I don't have good leaves on that plant, I'm not going to expect a whole lot of good fruit either, you see. So maintain healthy foliage. So what can we do to make the leaves of that tree healthy? Well, it's using fungicides when we need to. If you have the

ability to do that and and again are we control most irrigation thin and a mild if needed, just things that we talked about today.

Jacob Kelly

What are some things you do leading up to harvest and how are we going to harvest these nuts from these trees on a commercial level?

Chip East

Well, that's a good question to and I won't the ground clean and on a commercial level they they rank them all in a win row and they're they're picked up. You push it and it just picked them up and puts them in a container and that's quick. But the ground's got to be clean. And of course they've got to be dried you don't want a storm.

Chip East

Weigh it. And they can be frozen. They can be hauled out. There's places you can take them to clean them. I get this question a lot, and I know a lot of people have cattle, livestock, or whatever. But even if you don't have livestock, a dog or cat or something, don't just assume that nut is clean. A lot of people clean them before they crack them for the commercial they really don't want livestock even in the field.

Chip East

12 months before harvest, which almost means just never, never.

Jacob Kelly

Maybe on those alternate bearing years, but you're still going to have trees in the in the orchards that are bearing well, you know, not all of them are going to be on the same.

Chip East

Well a token grower on that heavy year if they're heavy they kind of assume the next year's going to be light. So a lot of them will go in there. They'll go shake the nuts. You know homeowners just wait till they fall and pick them up. Right. But the farmer will shake the tree and go in there and harvest the nuts.

Chip East

And what they'll do is shake some of the nuts out during the summer of a tree that's heavy, heavy year during the middle of the summer. And then they'll hopefully give the tree time to grow, get six or eight inches of growth to ensure the next year would be a heavy year. When the people that didn't shake the pecan prices would go up and down. So during that light year, you might be heavy and prices might be higher, but you risk there because you're shaking nuts out of a tree.

Jacob Kelly

I feel like I know even more about pecans now. Chip, I really appreciate you coming and breaking it down for us and so I know that everyone's going to appreciate it. We hope to have you back soon, any time.

Chip East

And just if you ever have any questions on that, you just contact your local extension office. They'll be glad to help you.

Speaker 1

This has been a production of Alabama extension at Auburn University.