



## **Season 2 Episode 8 – Watermelon Production**

**May 24, 2023**

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.

Olivia Fuller

All right, we're back as your host, Olivia Fuller, and your co-host, Jacob Kelly. Today we have Dr. Chip East with us, and we're going to talk about watermelon production. It's one of our favorite crops here in the Southeast, and especially here in Alabama. We have the watermelon queens. We have all these state fairs surrounding watermelons and that feel like how we know it's summertime here. So but how do they grow? What's the production like with watermelons? We're going to get into that a little bit today. But welcome Chip.

Chip East

Good to be here, Olivia and Jacob.

Olivia Fuller

So where do you start when you're growing watermelons? What do we want to do first?

Chip East

Several things you may think about. One I would want a plant in new ground if possible. I'd like to make sure I was planting somewhere where watermelons have grown in the past. But watermelons are in the cockpit family, and that's some of your vine in crops, some squash and cucumber and cantaloupe, and they can kill you. The same diseases of watermelon.

Chip East

So it's nice to not follow another co-occur crop. And it's also nice if even for five years not to grow watermelons or sometimes other cracker bits in that location. So finding a location can be a chore sometimes a challenge. And we might think about what varieties we're going to plant because our certain column cultivars, but types of melons that might be more we can say disease resistant, but sometimes they're disease tolerant and we might want to be thinking about that a few months or I don't know, weeks anyway before planning time just to order our seeds and get the ones we want. And I would recommend ones that have the most disease resistance possible because diseases is a problem with melons.

Jacob Kelly

So you'd say disease is probably the most limiting factor in growing melons, or is there something else?

Chip East

Disease would be how gnarliest. It takes space, it takes labor. I mean, that's within the crop. But when I think of melons, I really disease is something I've really got to check on during the grow and see.

Olivia Fuller

You mentioned the crop rotation being a great way to mitigate that, but are there other ways that large scale farmers could utilize that maybe don't have the space to rotate properly?

Chip East

Planning on black plastic could be an option, or it could be white plastic. Pineau for plant later in the summer might want to change, but that could get fruit off the ground. And that could be good. We can graft

watermelons, and that's just taken as a root stock of a melon that's tolerant to a certain soil borne disease and pearling.

Chip East

The sign or the the desirable melon we're after onto that root stock and it'll heal. There's a process there and you can buy plants already grafted or farmers can graft their own lot several of them do and plant in these areas. But even if I did graft in I would still love for it to be a few years between these diseases can harbor live off in this on this dead vine from the last year and the year before supply on that don't just leave a field set and when that crop is done I want it plowed up and something else in the different vegetable family planted there clover crops could be planted there wouldn't have to

Chip East

be a vegetable but just something I want this matter that's lay off the vines in order to rot as fast as it can.

Jacob Kelly

How early should we be planting watermelons because we're trying to get them out before the 4th of July.

Chip East

Right. That's a good question. We are. And you always fatten the the growers that are further south and you can get it to market faster than you. So wherever you are, there's it's it's not think about. So I mentioned if you do on black plastic that so it's when the soul warms up and the black plastic will help the soul warm up faster so we can plant them earlier.

Chip East

And that's a big deal. It does cost money, but you hopefully would get that only return instead of planting seeds, which we certainly can. That's done a lot we can to speed up the process. We can plant transplants. Transplants cost money. I mean, it takes time to grow the transplant. It's sometimes not is I mean, they're easy to grow, but you need a protected area, a greenhouse maybe to grow a million because we're talking about planting seeds a month or so before you'd plant them in the field.

Chip East

So you got to heat a place and have a protected area to do that.

Olivia Fuller

So speaking of seeds, seedless or seeded, feel like that's a big debate here in the southeast. What's the option that people should look into for taste? Maybe the hardiness coming into factor?

Chip East

It just depends on your market. Seeded melons are much cheaper to grow. So if your clientele doesn't matter, if it's seeded or not, then seeded may be a good option for you the last 20 years or more. More and more acreage have went in to see less melons.

Olivia Fuller

And those tend to be smaller. Right. Or is that just the varieties that I'm seeing.

Chip East

Might just be the variety scales are several different that you can get it's large that seedless but it is common to the icebox type to be or personal melons people call them they seedless.

Olivia Fuller

I do like those those seem sweeter. I don't know if it's just because they're cuter but they seem like they can taste sweeter.

Jacob Kelly

And you're losing space when you do see seedless watermelons because you have to have a pollen as are a plant there to provide pollen for the crop you want to grow, right?

Chip East

That's exactly right. The the seedless melons don't produce viable pollen so we have to plant a seeded melon in the field. Okay. Make sure you're in. It's like a third like two thirds could be seedless, a third could be seeded and it's interesting, you can play in all different ways, but bees lot to work down the row. So instead of plant in two rows, a seedless and one row is seeded into bees, don't let go down the road.

Chip East

That's not helping a lot. So this is you got to keep up with a little confusion or you got to think when you're playing. But you down there when we're planting, we need to do down the same row to seedless one seeded two seedless ones down a row. And the bees are worked down that road better.

Olivia Fuller

And that's so interesting because I do see a lot of farmers calling and saying that their plants aren't getting pollinated because this is a crop that's growing in the hottest part of the summer. The pollinators aren't flying quite as far. They're not maybe even as active during that time and the heat of the day. So I see, like a lot of farmers not getting the pollination they need.

Chip East

And we need, it's kind of recommended to have about a half of bees to the acre. Well, if you only got two acres, that's easily done. But what if you had the same day 1898? You know.

Olivia Fuller

You almost need those little pollinator habitats mixed in throughout.

Chip East

Managing your pollinators would be more and more important to you. That's a big deal. That's money that you're not getting just through pollination and they make and make sure you're your pollinator plant is a different run pattern than the seed less or you can't tell them apart needs to be different color or something. The watermelon companies or seed companies or recommend certain pollinators for whatever variety you have.

Chip East

And they're a companion plant to go where you don't even harvest them. It's just full of seeds and taste terrible. But they produce a lot of pollen. In that case, you're I like planting something you can eat a third or something you can eat that pollinates the seedless, but they make these companion melons. Then all they do is produce pollen it's not an edible fruit.

Chip East

They make a fruit which just not edible fruit, but they produce a lot of pollen. And they're you can certainly tell them apart, too. They're not the same shape. And all with some of the other melons.

Jacob Kelly

One time I was asked to work a farmer's market for a grower, and he knew which watermelon was seedless and which one had seeds. And he was telling by the shape their own pattern was the same. But when I got out there, sell them, I'm like, which one is which? And so I spent some time having to cut some open and learn right there on the spot.

Jacob Kelly

I probably sold a couple of seeded watermelons seedless. It can get quite confusing if they've got the same round pattern round patterns.

Chip East

My favorite thing to determine the difference, but yeah, that can be elongated or round, but still, I like the round pattern better.

Jacob Kelly

What kind of spacing requirements? These things. I mean, I've seen some vines that are like 20, 30 feet long and then some of them maybe only get, you know, five or six feet, eight feet long. You know, what are the general spacing requirements for our different watermelons?

Chip East

It depends on what size melon you're going for. Some people want that county fair trophy winner and blue ribbon, I don't know how many hundred pounds.

Jacob Kelly

Championship watermelon.

Chip East

Yeah. One, it's the variety or cultivar you plant it needs to be. You don't want to plant one of the icebox ones and give it all the fertilizer and water and in March it and sing to it and all that it's never going to be that hundreds of pound big melons. So you need to plant a variety that it's going to get big in the first place that's number one.

Chip East

And yes the fertility we keep all that up give it space to grow and on larger melons it's 24 to 30 square feet per plant. Now we could even go beyond that larger. And if you're growing melons year after year and you want them a certain size, you can manipulate that a little bit and you know, give them 20 square feet instead of 24 for instance.

Chip East

And if you got, if you want a 10 pound melon in your seeds or a 15 pound melon, there's things we can do to try to get them to the size won't because it's the taste or color pattern or whatever reason.

Olivia Fuller

And singing to them is not one of them.

Chip East

Singing to them is not.

Olivia Fuller

Alabama AG Credit is a proud sponsor of the Farming Basics podcast. Buying property isn't the same as buying in town. If you're in the market to purchase your own piece of paradise, or need an operating line for your farm, you have our friends at Alabama. I credit a call as the local experts and rural real estate financing.

Olivia Fuller

They can help you with everything from homes and lands to tractors and crops, because sometimes natural resources need financial resources. And while some lenders don't get it, they do. Learn more by visiting Alabama at [Credit.com](http://Credit.com).

Chip East

On the icebox melons. They can be 13 or 14 square feet per plant. And it's common like on the larger melons to have six foot rows with plant space 42 to 60 inches apart down the row. But that can vary depending on what we're looking for.

Olivia Fuller

Okay. So you've babied them up to this point. What about harvest. So you get to the fun part.

Chip East

How do you know when they're ready? Well, you can always when the color you start eating them you'll know you're about. Yeah. We can cut into them and, and see but I like to look in the seed package or tell you days to maturity but those are all relative. I mean you don't know that thing blooms, they don't all bloom the same day so they're not all going to mature the same day.

Chip East

And also I like to look at the tendril closest to the melon, the tendrils, the little curly. What would happen if it was growing up something the vine attached itself to a fence or something that curly tendril, when that tendril starts to wilt and would start cutting into some. And if you grow the same cultivar year after year, you'll be able to look and say that injury to that injury to that injury.

Chip East



If you grow the same one. But sometimes it's when the second tendril starts to wheel it just depends on the melon. But when you grow the same one year after year, you'll learn. But I look at the team or you can look under the melon and the color. But if you again, if you grow the same one, you can do that.

Chip East

But I look at the tendril and then there's nothing wrong with cutting one or two open.

Olivia Fuller

And on the consumer side, too, I like to tell people that are buying them to look at the yellow belly to make sure, because sometimes people think that that's a sign of something wrong, a disease or something.

Chip East

That's all the consumer can do. You're leaving a lip to that farmer that to know exactly when to harvest those melons, right?

Jacob Kelly

So you shouldn't use a piece of pine straw that points a certain direction to tell you when they're ripe I've seen this and it didn't work, but people are using it.

Chip East

I've heard of things like that before. But no, that's not all I would do. I would look at the tendril. Okay.

Jacob Kelly

That's good. I'm glad we got that cleared up. So no pine straw guys. I know I might have told you that, but no, I'm just kidding. The tendrils is the way to go.

Olivia Fuller

So you're ready to harvest. You know that they're ready. What goes into watermelon harvesting, like on a large scale? Is there any tips you have? Is it labor intensive?

Chip East

A lot of people. What I said, you rose might be six feet apart, and that varies, but let's just say they're six feet apart and we plant a lot of people will skip a row every so often in their field and they'll drive their equipment down their skill row.

Olivia Fuller

Just to make life.

Chip East

Easier, spread out in the field and in harvest. And you'll come back to that same field and you won't harvest everything the same day. They don't all mature at the same time. And the more you walk in the field and you step on vines, it's hard. But I like the spacing spread out. We didn't talk pesticides, but that also helps in spring, and I won't have that skip.

Chip East

It just depends on your equipment. I hate to say how many rows you'd have and then skip a row layers on harvesting. It helps on spraying pesticides when needed. There are several foliar diseases and watermelons get, and it sure helps to be able to treat those diseases.

Jacob Kelly

Yeah, it can be tough to spray like weed control, for instance. You know how do you manage weed control? Are you able to get out there and do a quick burn down and put out a pre emergent before the vine start? You know, coming off the plastic? Or what are your limitations on weed control?

Chip East

Some things I would think about is do burn down before we make the beds. If, if it's plastic after what plastic surgery can help, but we do pre-merger herbicide between the rows and sometimes under the plastic is well,

just it just depends. But at least between the rows really helps and we can do there's some post-market options we have especially for grass control between the rows that really helps as the season goes on.

Chip East

There's just you're limited on how close to harvest. But we would be using these way early in the year when you're close to harvest. Usually we don't do any we're treated for disease, but we're not worried a lot about the weeds. We should have already handled that earlier in the season.

Jacob Kelly

You can plan a cover crop that are stay low until your vines hopefully get out and shade out. All the competition or.

Chip East

Cover crops should be is an excellent way of managing your your weeds as well. It prevents those other seeds from even being produced if you have a good cover crop the season or the before planning the melons.

Jacob Kelly

So if you have a weed though you would rather have grasses than broadleaf weeds.

Chip East

Grasses are easier to kill with post-merger herbicides and melons, right? Yeah.

Olivia Fuller

See, farmers save a lot of money on cover crops. Well, thank you. That was very helpful. One more opinion based question before we go. Do you have a favorite watermelon?

Chip East

There's a lot of melons I like. I've always wanted to do a blind taste test on watermelons because a lot of people are. And I don't want to disagree with anybody if you like a red when you like a red when I'm not, I don't care but I wish we could blindfold people and let them eat some yellow melted watermelons as well.

Chip East

And see, one of my favorite ones was developed here in Auburn by Joe Norton. And it's a golden producer. And that's a good melon. It's a round melon. It's but it's a good yellow one. And I would highly recommend that if you can get the seeds.

Olivia Fuller

But that's kind of what you said for the tomatoes, too. I think we both agreed we like the yellow tomatoes. I wonder if there's something that sweeter innately about the yellow flesh.

Chip East

We've done to make the taste test. And it's a lot of fun, but a bit common. Don't have experiment station there anymore, but back when they had it, they did a watermelon taste test and you golden producer was in that taste test. But there was a lot people that everybody don't like the same thing. So whenever you've been eaten forever, if you like it, that's fine.

Chip East

But how do you know that your favorite without trying different things?

Jacob Kelly

Right.

Chip East

And so I recommend are several different watermelons that are good but whatever you mean, grow and continue to grow that. But I would look at some more disease resistance because I know that's an issue every year.

Jacob Kelly

I do like the yellow watermelons. I've never had one until I got into this position and one of my growers had yellow watermelons and he was like, You need to try it. And I was like, I don't know, it ain't red.

Chip East

My home county has a yellow made it watermelon festival.

Jacob Kelly

Really? Yeah. The yellow ones are good. Now don't, don't go to sleep. And on the yellow watermelons all right.

Olivia Fuller

I have one more thing before we get out of here. How do you make a seedless watermelon?

Chip East

Watermelons have 22 chromosomes and we call those deploys. It's just seeded watermelons. Well, in a lab setting or the seedlings or seeds can be sprayed with a chemical that increases the chromosomes. It'll, it'll stop cell division as all it does. And they have 44 chromosomes. Well those were produced seedless melons. Well they don't come up good. The germination rates are bad.

Chip East

You do not want to go plant these directly in a field. You're going to want to plant these in a greenhouse, grow the transplants and then plant the transplant saith transplants in the field they don't produce good pollen at all. So they've got to be pollinated by, we call them a deployed by their 22 chromosome one. So you'll have these tetra ploys.

Chip East

That's what we call them. When I have those 44 chromosomes, we plant those, they're pollinated by diploid the result of that melon is we call them triple Lloyd's and it's seedless, it won't have seeds in it. So we call these Lord

melons are the and it's not GMO or anything, it's just natural plant breeding but it is a chemical used to stop that old division and that's why they're so expensive because some it's, it's there's just a lot of labor and time separating these out and keeping them separate.

Chip East

I mean it's and then somebody why seedless melons has somebody you have to grow the transplants we can't just plant them in the field so that's why I say the smell and cost more money the farmer has a lump the seeds are expensive a lot more expensive than a diploid irregular seeded one. So the seeds are high. You have to do the transplants well that increases the cost greatly.

Chip East

And that's why they cost more in the long run. But you don't have to spit a seed out either. So you're getting some in the acreage of seedless when greatly in the last 20 years.

Jacob Kelly

You can charge more for those.

Chip East

Seedlings, you charge more for them. You got more in them too.

Olivia Fuller

Yeah. Well, thanks for explaining all of this to us, Chip.

Chip East

Thank you.

Speaker 1

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

