



## **Season 1 Episode 1 – Cover Crops**

**July 11, 2022**

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:

Today, I'm here with Jacob Kelly, a regional extension agent in commercial horticulture. And we're going to talk about cover crops. Cover crops can serve many functions on a farm. One aspect that's often overlooked is adding flowering plants to your cover crop cocktail. It can keep bees and things visiting your crops year round.

Jacob Kelly:

That's right, Olivia. So cover crops are not just beneficial for insects, but they're beneficial for the soil in a number of ways. We can reduce soil compaction with some of these crops, we can increase our soil organic matter, we can control erosion and that's a big one on a lot of these farms. And there's also some weed control as well as nematode control. And they're also scavengers. They can scavenge nitrogen, potassium, and phosphorous from the soil and bring it up to where our crops need to use them. I wasn't always on the cover crop bandwagon I've learned that it was something we should be doing, but not many people do.

Olivia Fuller:

But the few farmers that we've seen it really has paid off on their farm. We've we've gone out to see huge improvements.

Jacob Kelly:

That's right. And so I've got a couple of growers down in Southwest Alabama that introduced me to cover cropping and they showed me the magnificent benefits that just using a few cover crops can do just for your soil. And then this year we discovered the benefits of bringing in beneficial insects. So I've got some growers that have been using cover crops for a couple of years now. And we notice that when we put our insect traps out there to catch these moths, we're catching an abundance of moths. So many you can't even count them all on the trap. And then we're going out in the field and scouting, and we're not finding very many larva.

We'll find some eggs, the eggs will hatch, but the number of larva that are out there in the field are very minimal. And that's, I think partially due to the number of beneficial insects we're bringing in. The parasitic wasp and paper wasp, honeybees and ladybugs, and things like that we're bringing in that will destroy any of these unwanted insects before we have to intervene with any insecticides. So it's a really good program and process to watch unfold as the year goes on.

Olivia Fuller:

Yeah. And when you're choosing your cover crop, it'll vary by location and your purpose, but you can do different crops within one mixture. So there's a lot of seed companies now creating mixtures that are Southeast specific and some of them don't flower, but they like you were saying help with the nitrogen. But within that, you'll still have a few things that do provide nectar and pollen, making them attractive to bees. So they're coming there, they're nesting and they're going to visit your crops, your cash crops in the spring.

Jacob Kelly:

That's right. So you can plant these things anywhere. There's always a spot on your farm where you can find a location to plant a cover crop, whether that be on the sides of your fields, on the margins where you're not doing too much work, that's always a great location to grow cover crops for ground nesting bees and things like that. You don't have to till these areas, you can just go through and mow and sow is what they call it. So we we'll plant our cover crop and we may till the first time to establish this cover crop.

And then we come back through every time we want to replant, we sow our seed and clover is a really good candidate for this, but we can also use different sunflowers and things like that. We sow our seeds, we come back through with a bush hog or mower, mow that grass or old clover or old stand down and our new crop will come up within that. And that keeps an area for these ground nesting bees to be left undisturbed so that they can provide all the benefits as far as pollination and parasitism towards our unwanted insects.

Olivia Fuller:

Well, and not only is it helping save the bees and that's great and wonderful because having the bees on your farm can increase your yields, but a lot of companies are now requiring that farmer's plant for pollinators. So if you're selling wholesale, some wholesale buyers are requiring that you have certain certifications, certain labels that say you're planting for pollinators. And this I think is an easy way to do that, using cover crops that have other benefits that really help your soil, help your farm all around, increase your yields. I think that's a really

fantastic way to go about that. But you want to make sure that they're flowering at different times. That's one of the strengths of having that and having different plants in that cocktail. So you could do buckwheat, sunn hemp, sunflowers, partridge pea, these are a lot of cover crops that are loved by different beneficial insects and they have different bloom times as well.

Jacob Kelly:

Right, right, and so the longer the bloom time, the more benefit we can see towards our beneficial insects and in an orchard setting, it might be difficult for you to decide which cover crop to use, because you don't want to plant them between the rows, because you're always out there either spraying or mowing or doing what you do. And in my experience, I've got my experience from a kiwi orchard and we grew several different types of clover between the rows of kiwi. We kept our kiwi strip sprayed within the row and then between the rows we grew these clover and we would let them get to that flowering stage. And they flowered right before the kiwi would start to flower. So as soon as we started seeing the popcorn stage of kiwi fruit, that's right before the flowers start opening, we'd go through and mow all that clover down.

And that way that could facilitate any kind of maintenance we had to do as far as flowering. A lot of it's hand pollinated so you got to walk through there a lot and you don't want to walk through knee high clover. So we would mow it all down, go through there, do our pollination. And we could get on any sprays after pollination because we'd already mowed all the flowers away from the clover.

Olivia Fuller:

So, so you're not killing the bees at that point.

Jacob Kelly:

Right, we're not killing any bees that are trying to pollinate this clover, because the flowers just simply are there. They've gone to the next field over, they've gone to the margins where we planted our wildflowers and things like that. They're utilizing other outlets for their nectar source at that time. And then from there we might only use the margins, but at least we're giving them that benefit early in the year, we're getting them where we want them to be, which is near our kiwi flowers. And that was a huge benefit because kiwi are so hard to pollinate. Another thing to consider when we're trying to match up pollinators with flowers, kiwi fruit are pollinated by bumblebees and honey bees and also our native bees. Honey bees are not the end all be all. When we've got a commercial blueberry orchard for instance, blueberry flowers are long and tubular. So we need to be with a long tongue.

Honey bees have a very short tongue. And so what happens when you have honey bees in the blueberry, orchard is they cut slits in the sides of your flowers and suck out nectar that way. They're cheating us, they're cheating us on our flowers and our pollination. So for good pollination in a blueberry orchard, we want to facilitate those ground nesting bees, those larger mason bees and bumblebees with long tongues bumblebees are going to get in there, they're rough.

Olivia Fuller:

Yeah, they're way messier when they're pollinating.

Jacob Kelly:

For sure. Yeah. And they got the buzz pollination. So they get down in there. They split that flower wide open and they get to the parts that we need for our benefit as far as pollination goes for blueberry crops. So that's just another thing to think about when we're planting for pollinators in a blueberry setting, I might want to plant Austrian winter peas. Why? Because peas have that long tubular flower and that's going to attract those bumblebees and native bees that we want, the long tongued bees. In a vegetable setting we might not have the same flower set up. We might want more variety of pollinators. So we're going to try to plant a variety of plants that can bring in pollinators.

Olivia Fuller:

So what you're saying is we might plant a variety of different things among the fringes of these fields, but within the rows, what do you suggest?

Jacob Kelly:

So within the rows, it can be tricky and it depends on how much you utilize these row middles and things like that. But good candidates for in the rows are going to be short growing stuff like subterranean clover are perennial peanut. These are great candidates because they're low growing. They suppress a lot of weeds, but they also flower. And so they're not only bringing in the benefit of suppressing weeds, creating nitrogen or fixing nitrogen into the soil. But they're also bringing in the pollinators that you need for your pumpkin crop, your squash crop, your tomatoes, whatever it may be. We're planting all this stuff to bring in pollinators. And Olivia's got a great program that she has started and that we're launching this year about pollinators and planting for pollinators, anything you want to know about pollinators. So can you tell us more about how that program works and how it's going to impact farmers and what they'll learn from that program?

Olivia Fuller:

Yeah, so it came about by a request from somebody in the wholesale buying industry. Walmart came out with a new regulation requiring that the farmers that they're purchasing from have a certification, like I mentioned earlier, whether it be the Bee Better Certification through the Xerces Society or there's a multitude of others you can choose from, but it kind of left a lot of farmers in the dark on how to meet these regulations.

Jacob Kelly:

Right, what do we do?

Olivia Fuller:

Yeah, I mean the program came about to explain a lot of the things that you and I talked about today to the farmers, but maybe more hands on in the field. So it's just called the Pollinator Program and we'll go around and

it's a statewide initiative right now. We did our pilot program in 2021. So this year we're going to expand that and really help farmers learn how to do the things that we talked about today. So if you have a question about this, because we see the trickle down effect beginning. So Walmart made the first statement and we see other industries stepping in as consumers get more and more concerned about what they're buying and how that affects the climate change.

So we're seeing a lot of people care and farmers care because they have to now, but this program is hopefully there to help them understand how to put these things in place, how to plant for pollinators and do the cover crops. And all of the things that will help them meet these regulations and improve their crop yields at the same time.

Jacob Kelly:

Right. They're going to get better quality fruits and vegetables. They're going to have more fruits and vegetables and their customers are going to be happier because of all of these things being implemented.

Olivia Fuller:

And maybe even be able to sell at a higher price kind of like we saw happen with the organic certification.

Jacob Kelly:

For sure, they will see a return in revenue.

Olivia Fuller:

All right. Well that was Jacob Kelly. Thank you so much for driving all the way from Mobile to do this today.

Jacob Kelly:

Oh, I'm happy to spread the cover cropping word. I am ecstatic about the new year teaching all these farmers about pollinators and cover cropping and showing them results that I saw this past year. Thanks for having me, Olivia. I really enjoyed it.

Speaker 1:

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