Hello, and welcome to the small farms podcast, a production of the small farms program at Iowa State University Extension and Outreach. Our podcast covers the opportunities and challenges associated with rural life.

In this episode, I visit with Suzanne Slack assistant professor of horticulture with Iowa State University specializing in perennial fruit crops. Brandon Carpenter, agricultural specialists with the Iowa State horticulture Research Station and Liv Meyer, a graduate student in the Department of Horticulture here at ISU. Today we are continuing the beginning fruit farm series with Bramble pruning. I'm Olivia Hanlon small farms extension specialist and we hope you enjoy the show. Welcome, everyone. We're glad to have you joining us today.

Hi, we're happy to be here.

All right. Well, like I said, we are talking Bramble pruning here, Suzanne, so I will let you take it away.

Thanks. So brambles, whenever we say brambles for fruit production, we're talking about blackberries and raspberries. So there's a couple of other things, I think, that are considered brambles, but we're focusing on blackberries and raspberries today. And you can have black
Liv Meyer  01:41
With primocane, we're usually talking about harvesting fruit from one year old wood. And then after that, during the fall, you'll harvest or harvest everything and then take everything out and let it regrow. With floricanes, you're actually harvesting from two year old wood. And so you'll let it come up and then harvest after you get two year old growth on that wood. So I've just heard it referred to like summer fruiting and fall fruiting. But I don't know if that's a good way to differentiate those two, I think I prefer one year old wood versus two year old wood. But if anybody had anything to add to that,

02:17
when I was in school, we were taught that the primocane is the first shoot that comes from the ground. So the only permanent structure is the root system and the crown of the plant, and then it'll send up shoots the first year, it's prime McCain, and then if the shoot stays a second year, or a second growing season, rather, it's then a florican. If it produces fruit on the first year, its primocane, but there's always primocanes out there. So even in a florican planting, there will be primocanw because there they just won't fruit they'll just be growing that vegetatively

Suzanne Slack  02:51
Yeah, I think this is a definition where people get really confused because we're saying one and two years, but it's kind of like the first year what so the word that came out that year. So we sometimes refer to as first leaf and second leaf. So the first year it had its leaf is the first leaf, and the second year, it had its leaf as a second leaf. It just gets a little in the woods, sometimes I feel like because some people might think so that first year is year zero. And if that next overwintering, but it's the primocanes do not need an overwintering period to make fruit so that they'll pop up and make fruit. Whereas the floricanes needs and overwintering of that to make fruit. So it's a little in the woods. Sometimes I feel like whenever we're talking years in terms, so that's basically it. If you have a cultivar that's a primocane cultivar. It does not make fruit on any wood that is left over the winter, it only makes fruit on that first leaf wood. And then a florican cultivar is the opposite. It needs that overwintering period with the cane out through the winter to make fruit. So because of that, you're going to prune them very differently. If you prune a primocane crop like a florican crop, or vice versa, then you'll never get any fruit. The other thing that I hear a lot, especially for beginning bramble farmers, especially raspberry is the florican will actually die whenever it's done. So raspberries typically don't have permanent branches off the ground. They're constantly renewing themselves. So other people call and say, Oh, my raspberry died. And it turned out that their florican had just reached the end of its life and died naturally. So that's something that the plant does without us. It's not a fungi. It's not a disease. It's supposed to do that. It's just a little freaky for people who are beginning and see like their crops have dead or doesn't wake up in the spring and they
think it's all bad. And it's not, it's just how the lifecycle of raspberries and blackberries work. So like Liv just mentioned, whenever we're pruning primocanes, we actually want to take everything out because we only want primocanes but floricanes don't actually help us. There's no benefit to the plants leaving the primocane another year, like a florican but doesn't need that photosynthetic output, there's no reason to have it. So typically what we do is we just remove all the old canes. So after your fruits done, some people will go in and prune that August. Like as soon as the crops done, they'll go in and cut everything out. I think it's probably better to wait till spring because you might get a couple of shoots coming up that year, then guess what they overwinter, then there's no fruit. So then you have your raspberry crown, putting energy into wood that has no fruit capabilities. So, especially in Iowa, if you prune too early, we will get some shoot growth. So let's talk about how we would remove the canes for primocanes.

Brandon Carpenter 05:40

When we had plantings here at the farm, I think we spoke about this a little bit in the trellising section, we had a trellis that was easy to remove for the primocane. So the florican, you might put on a more permanent kind of trellis system. But on the primocane, we would just put, basically, T posts in the ground drive them in, you know, wrapped flying around to kind of keep the canes all pulled in like a basket a little bit. And you would just make that opening as wide as your row is, you know, or however, you know, however wide your matted row of raspberries are. And we would pull that out, I believe we usually did it in the spring. And I'm not sure if that was because you know it just easier to time it that way, or what we would usually do it when you started being able to go back out and work in the spring. But before everything broke dormancy, so the ground was still frozen, and we would just mow it with a mower on the primocane and mow everything because your new woods are going to come up and you're gonna get fruit from it. The florican are a little more complicated, takes a little more knowledge on how to prune those. And we did those dormant as well. I believe there's a trellis system, I forget what it's called. But it's like a y-brace system, or rotating cross arm I think is what they call it actually. And I think on those, they might prune those floricanes out sooner. So they can lay the primocanes over onto the Y arm that they want to overwinter it on. And so they might be doing that late fall maybe just as the plants are going dormant, so you don't get that extra growth. But we would do that in the spring as well, basically on the floricanes. And what we did on those is you can kind of tell the floricanes die and you know, they look dried out and winter killed and you can tell there's been fruit on them often, you know, there's kind of remnants of the is it the receptacle on them?

Suzanne Slack 07:30

That receptacles on raspberries.

07:32

Yeah, and so there'll be like dried remains of that sometimes and the calyx leaves sometimes. So you can see what's already fruited, the wood that's already had fruit on it, it's also got a lot more laterals than the primocane does or that first year's cane does. And so you would prune those out, first off, and then if you had too many of the canes, you would thin those out. And
our rule of thumb was basically about four inches, you wanted all of them to have about four, four to five inches of their own, which works out to maybe three, three to five plants per foot, again, depends on how wide your row is. And it's a judgment call. You know, it's like a lot of things in horticulture, there's a science to it. And there's a lot of just, you figure out what works best for you and your system. And then we would just prune those floricanes out. If we had any dead wood on the primocane. Sometimes you get dye back, the last part of the plant to grow the summer before is often not hardened off as well. And so if you had dead ends on it or anything like that, we'd prune those out, back to good live wood. And that was pretty much our pruning for florican systems.

Suzanne Slack 08:37
Yeah, if you're nervous about telling which ones died to me can go on this fall, like whenever they start dying and pull them out then like the ones previous year, I've seen some people do that I've seen that recommended. So it just depends on your confidence on identifying the dead ones. Sometimes it just takes a couple of years of practice. So whenever we plant them, they're planted at three feet apart typically. So they'll fill in those space. So basically, for us brain plants is a little different than some of our other fruit crops. The Crown's just getting bigger and bigger, and it just keeps putting sheets out. I'm sure if you've never grown raspberries or blackberries, you've seen the wild blackberries, raspberries in the woods, they kind of turn into these giant messes. So that three feet spacing helps keep them a little bit more further apart. But then the older your plants get, like what Brandon was just saying sometimes it's hard to keep that three to five canes per foot because they'll just keep growing out and out.

Brandon Carpenter 09:32
Have you ever heard of anybody tilling the rows to narrow them back up if they've been in or do they generally not last that long do you tend to rotate out of it before it gets that wide?

Suzanne Slack 09:43
No, they can last that long. So I think a lot of people will go through until they're like do something to cut it. The problem with raspberries is they're super easy to propagate themselves. So you have to do it at a certain time and then you have to make sure you kill the runners that you've cut up or else let us make the roots and then you'll have even more vigorous planted inside your tractor rows. I think a lot of people do renewal plantings with raspberries, they have a lot of disease issues. So it's not like they have a lot of blights. And you know, we're cutting so hard on fungi will get in there eventually. I think the average life for raspberry planting is about 10 years.

Brandon Carpenter 10:18
Okay.

Suzanne Slack 10:18
Before they start to like have yield declines, and that's with the traditional ones I'm not sure about the rotating arm trellis, how long they last, but if you get 10 good years out of them, I think it's pretty good. We didn't talk about this in depth that so if you aren't sure if you have a black raspberry or Blackberry what Brandon just said so a Blackberry when you harvest it, it takes the receptacle with it they kind of look like little cones, but raspberries hollow so if the whole all of the droplets come off and you don't have an Ender hollow and there's no like little white thing inside and then it's a raspberry for anyone who found a patch on their property and wasn't sure and they're black. So whenever we talk thorns, is there a difference for pruning cultivars with or without thorns that you guys have seen?

I've never seen thornless raspberries you know the the raspberries don't have terribly rough thorns. They're kind of little prickles. Is that right? Yeah, prickles, and they're not terribly bad to deal with, you know, they're, they're rough on your hands. You want to wear gloves, but they're not going to put holes in you so much. The blackberries have thorns and they can be pretty wicked when you're out there picking they scratch yah pretty good. And but they also have thornless blackberries or so I've heard they're not terribly hardy, the thornless type aren't terribly hardy to Iowa. So we had some, I don't think we ever got much production off of them. They would pretty much winter, the floricanes would die back every year. And that's another thing. I don't know that we ever had a primocane blackberry out here either. I think the blackberries almost always or florican. But I could be wrong on that. maybe there's new stuff out.

I think there's some new cultivars that are thornless primocanes, especially from the breeding program in Arkansas. Some of those, the problem with them for Iowa is they're not cold hardy at all. They do great in Arkansas, and Missouri, we can grow them in high tunnels. There's a couple of people doing that are trying to do that. I think we're still trying to figure out exactly like what their cold tolerance threshold is, or if there's things you can do to overwinter them better. But for some reason, the thornless blackberries just don't do as well here outside. I've seen some people try to cover them with straw, even not very much you can do Primark freedom, primocane, blackberry plant things that's like the poster child from their breeding program down there. But I've had some people try it out here. And it does okay in high tunnels, and people really liked it for their high tunnels. But it won't survive in the field very well, especially in Northern Iowa, maybe in the southern area, you could get something out of it, but it'll die all the way back to the crown if it's too cold. So not putting a plug in for Arkansas breeding program. But there are some out there and most of the stuff that comes out of that breeding programs really good. So what about differences between yellow and red raspberries versus the black and purple ones for the floricanes. So for instance, red and yellow raspberries are typically for floricanes,, they typically are like the fall bearing ones. So you want to go out and do some renewal pruning in the spring to try to increase lateral numbers, so you get more fruit the next year. But for black and raspberry, pretty much by mid July, they're done. So we want to go out and start doing some narrowing or even some shoot tip removal to see if we can get some on primocanes. This was on the primocanes I should have mentioned. So remember, for florican, fruiting brambles, they root on the wood that overwinters one year. So we're gonna go out and do some tipping to try to get some more branching. If that makes sense. So
then you have more fruit. So for the ones that bloom earlier and have fruit earlier in the summer, basically, soon as they come out, you want to go tip about those primocanes then for the ones that come out later, you want to do it around mid July. And one thing that I always found interesting was they call it similar to strawberries. So they have everbearing and June bearing working cultivars, but the everbearing are really fall bearing they don't really have a big crop in their early season. They're kind of similar to strawberries and sometimes the strawberries people can like call everbearing and day neutral the same thing, but they're not. So for instance, we don't really grow any everbearing strawberry cultivars anymore they may be more things that you thought of in your grandma's yard. Yeah they're really tasty but they're seasonality isn't what we need for our markets. So something to think about.

14:42

So on the spring versus the fall bearing raspberries those are on Primocane only because the floricanes, are they always June bearing them.

Suzanne Slack 14:51

Nope there's some floricanes, there are some that are in August too. So it just depends on the culture of our honestly. So like for instance Some of the yellow raspberries are fall only, which is great if your market is to like make a cyclone. But I've seen a lot of people, especially farmers markets, or direct marketing make like little blends. So you can blend like red and yellow raspberries together and make like a cyclone mix and sell it in the fall. And it's really popular for like tailgating and football parties. You can also do it with like black raspberries and yellow raspberries for Iowa. So we're lucky that our raspberries match our team's colors in the state. So worked out great for us. Actually, the first time I saw it was at Purdue because their colors are black and gold. So I saw someone mixing black and gold raspberries. So I thought that was a really clever idea for marketing, which we're not talking about. We're talking about pruning, but something else to think about when you're looking at all these different types of colors. So I think the only other thing to talk about is when he would do summer tipping. So we briefly mentioned when he would do some heading cuts, especially whenever time floricans, but really you want to make sure that your primocanes reach whatever trellising system you're at. So that's how far back to prune. So you want to make sure that they get at least a couple of inches above your wire your board, whatever you're using as your trellis. So you can tie them up, and then you head them after that. So you really only want like four or five inches above that. Otherwise, brambles are brambles. If it was up to them, they'd form their nice arcs, they get all tangled together, so you don't want to let them go. So whatever that is, it just depends on your call to bar how high your trellis is. So there's no rule of thumb for that, but definitely watch them. And as soon as they're reaching whatever permanent trellising system you're using for your floricanes, you forgot to mention, how do you tell a florican apart from a primocane.

16:40

my guess is by whether it's got fruit on it or not, if you have a florican producing raspberry or Blackberry, but they also tend to be a little thicker and a little little more laterals on them than the primocanes at least up until the end of the season. And then it's easier in the end of the
season to tell them, because the floricanes that produce fruit will be senescing back and the primocanes will look good and fresh and nice. So I guess maybe I want to change my answer to it depends on what time of year.

Suzanne Slack  17:11
Yeah, that's one way. The other way is primocanes have five leaflets. And floricanes have three. They have compound leaves. So they have either three nodes if they're a floricate and then primocanes have five. So I think that's the easiest way to tell them apart is the leaf number because some cultivars might be thicker, thinner. But yeah, if you've been out there for a while, you should know which ones are which. But in case you stumbled upon a bramble patch in your backyard or on your property, or inherited a farm, and it had one in a greenhouse, it was half decayed. Saw that this year, because it takes a lot to kill, especially raspberries growing. raspberries, they don't like dying. Some people have figured this out from trying to clear their woods of them. But this is the same thing. So whenever we said 10 years, we're talking about like high good production, they might live forever. They just won't make fruit very well or their yields will be really low.

Brandon Carpenter  18:05
I was still thinking about the pruning. I was still thinking about something else. I think I miss answered that question.

Suzanne Slack  18:10
Oh, no, you're right. I mean, it's the same thing like looking for remnants of fruit, especially in the winter. It's really hard to tell which ones which remnants of fruit is probably the best way. Well, I think that's it. That's the base system bramble training. I think it might be the easiest pruning of all the fruit crops. You either remove everything or you don't.

Know your Bramble know whether it's a florican or primocane.

Suzanne Slack  18:33
Yep, that's the secret. That's literally the secret.

So if I'm a grower, and I have no idea I just let's say I inherited a bramble patch in the house I just moved into is there a quick and easy way in the first year to figure out whether my brambles are florican or primocane?
probably just observe which ones make fruit? So if you see the ones with five leaflets making fruit, it's a primocane. If it's the ones making three leaflets having fruit, it's a florican. Honestly, if you inherited it, it's probably going to be an old florican patch. And you probably just want to start another raspberry patch because you're not gonna get a lot of fruit off of it. Or your fruit might be small. This is my personal opinion. I think the older cultivars taste better, but they're smaller. So like some of these new blackberry cultivars, they're as big as your hand with fruit are, which is huge, but I think they taste a little bit like Lacroix Blackberry. I don't think they taste like a Blackberry. They taste like someone rubbed a Blackberry on it, maybe

I've had some of those they're like packaged water with a hint of BlackBerry flavor.

Exactly. BlackBerry Lacroix. So if that's what you're into, they're really good. They're really pretty looking. But I feel like the taste isn't the same as some of the older cultivars. So, so I guess it just depends on what you want to do. Like a pick your own, the bigger ones are better because you make more money people are excited. But if you're selling to a farmers market or doing some wholesale, just working with figuring out which one your customers there like better. Alright, well thanks guys. I think that wraps up bramble pruning.

Thanks for having me.

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