

# Detecting SWD in Fruit Production (1)

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## SUMMARY KEYWORDS

traps, fruit, insecticide, spotted wing drosophila, joe, eggs, field, raspberries, lay, fruit flies, females, harvest, problem, apple cider vinegar, lures, publication, crops, week, cup, outreach

## SPEAKERS

Christa Hartsook, Joe Hannan

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- C** Christa Hartsook 00:15  
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 Joe Hannon, commercial horticulture specialist for Iowa State University Extension and Outreach on Spotted Wing Drosophila on horticultural crops around the state of Iowa. I'm Christa Hartsook, small farms program coordinator. And we hope you enjoy the show. Joe, welcome. It's great to have you back
- J** Joe Hannan 00:49  
Hi Christa. Thanks for having me back today.
- C** Christa Hartsook 00:51  
Perfect today Joe, we are talking about a pest. Can you tell everybody what the Spotted Wing Drosophila is?
- J** Joe Hannan 00:58  
Yeah, the Spotted Wing Drosophila or as we commonly just refer to it as SWD is a small fruit fly that's very similar to the other fruit flies that you see when you leave produce on your counter just a little bit too long.
- C** Christa Hartsook 01:15  
Okay, so that's a pretty common problem. You know, we all have fruit flies from produce in the summer. Why is SWD such a problem for farmers?

J Joe Hannan 01:25

Well, the female SWD actually has a S-O repositior Or a serrated knife along her ovipositor which allows her to cut into that on ripened fruit allowing her to lay eggs so typical fruit fly needs to lay eggs and rotting fruit that's very very soft. With a knife appendage on this female spotted wing drosophila she can actually cut into the fruit and laying her eggs there. So that means you've got larva going in your fruit right as you're trying to harvest it and take it to market

C Christa Hartsook 02:06

could understand why that would be a problem. Joe, are there specific crops that SWD prefers?

J Joe Hannan 02:13

Yeah, SWD really prefers being scanned, soft fruit. So we think the cherries, the raspberries, blackberries, the grapes, they really like those crops. We've also seen them in strawberries, we see them in blueberries, we've seen them in aronia. They couldn't lay eggs in a very thin skin tomato even now have cherries, raspberries, blackberries, thats probably the primary crops you'll find them in.

C Christa Hartsook 02:42

Okay. Obviously, we should watch for SWD. How do we know if we have a problem?

J Joe Hannan 02:47

Well, you should set out traps and Luers to monitor the adults coming into your field or into your garden. Generally put the traps out about four weeks prior to your first harvest. That's when fruit is us becoming susceptible to egg laying. And put the traps really around the outer perimeter of your field. What we're finding is the spotted wing drophila is not necessarily spending its whole lifecycle in your field or in your garden is going in and out of that area.

C Christa Hartsook 03:22

Joe, what am I looking for then in a trap? How would I identify an SWD?

J Joe Hannan 03:28

So you're looking for a small fly that has a spot on the outside back corner of the wing and this is the male, the females they do not have any spots on them. So they're very tricky, to identify. But the males with the males are there, the females are there, they're generally there about a

50/50 ratio.

C

Christa Hartsook 03:53

Where can I find traps Joe? Or is there a way that I could make my own even on my farm?

J

Joe Hannan 03:57

Yeah, you can go to Great Lakes IPM to purchase traps and lures. But really, you can make your own traps. It's very, very simple. Get a 12 to 16 ounce plastic cup with a lid and punch five to six pencil holes around the upper two thirds of the cup. Those holes that you punched, those are where the adults are going to fly into the trap at then on. Once you get those holes punched into the cup, then you need to fill up with about one to two ounces of apple cider vinegar. And so we want the real apple cider vinegar and not the apple flavored vinegar. Put that into the cup so you have this a little bit of that vinegar on the bottom of the cup. And then you should get a lure as well. And you can hang the lure from the cup or you can just drop it into or you gonna hang the lure from the lid or just drop it into the cup. Some people add a little bit of dish soap to that apple cider vinegar. I prefer to hanging yellow sticky cards capture adults, I think it's easier to see them. So lures again you get, you can purchase the lures and the cups from Great Lakes IPM the lure should last you for the lifecycle of the crop. So if you have raspberries, you only need one lure per trap throughout the season of raspberries that those those lures should last for four or five weeks. The sticky cards, you probably want to replace those every week, just they do get kind of gross with a lot of other insects that come come in to the trap. Again, check the trap about once a week. Again, look for those male fruit flies with the wings or the spots on the back outside corners of the wings.

C

Christa Hartsook 05:50

Let's say you know, we do see some SWD. Those spots on those wings in our trap. You know, does one even one signify that we've got a problem in our field? Or how do we know when we have a true problem.

J

Joe Hannan 06:03

So in commercial horticulture, if you have one in your trap, you probably have several in your field and you need to think about doing a pesticide application or take other management actions. If it's a home garden and you have one or two in the trap. No, you're probably fine. As long as you're okay with eating a few eggs and a few worms and your fruit, the worms are not going to harm you at all the eggs are not going to harm you. Really what it's gonna do is cause the fruit to decay a little bit faster. But if you get the fruit picked and get it in the fridge that will help slow down their lifespan. If you do have SWD in the traps, we generally recommend picking frequently so that you're keeping the field cleaned up. And this means picking the marketable ones for the marketable fruit as well as the unmarketable fruit and getting that out there because that is a place for females to lay their eggs. And to get everything out of the field, get the good stuff out the field, the bad stuff out the field, the bad stuff you need to dispose of either by burying it 6,8,12 inches on the ground, or putting in the fruit into some sort

of bag and leaving it out in the sun so that you bake it. Basically you just want to make sure that you kill any any eggs and any larvae that's in that fruit so that they're not hatching and coming back out into your garden or, or into your fruit. If you're going to you know, if you're at home and you want to process the fruit for jams jellies, freeze it, putting the fruit in the into the freezer will kill the larvae instantly. And then finally, you get into where you would have to implement a spray program. And this gets kind of tricky because you have fruit ripening, right as you're also needing to harvest. So you have to be very careful with what insecticides that you're putting down so that you're putting down an insecticide and you're still staying within that pre harvest interval, or PHI. So when you're looking at and insecticide, you want something that is both effective, and you want something that has a short time between application and harvest. Some of those options that would be good for insecticide applications would be antrust which is a organic approved Mustang Max, delegate, malafeian Grand eeagle so there are several different options that are both effective and have a short window of harvest.

**C** Christa Hartsook 08:38

Okay, that sounds great. Joe, I would imagine you're taking a lot of calls right now on SWD. Is it seem more widespread this year?

**J** Joe Hannan 08:48

Yeah. SWD is pretty much across the state. You know every year is a little bit different. Some years it is very early in the season. I've seen it in first of June and other years I haven't seen it really be a problem until mid to late July. This year seems for the most part to be showing up mid to late July but it is out there now it is laying eggs. Again, if you have any falll raspberries, blackberries, strawberries, you do want to get that trap out and be watching for him.

**C** Christa Hartsook 09:24

So do we have some resources from ISU Extension and Outreach that could help folks for some more information?

**J** Joe Hannan 09:30

Yeah, we do have a publication. Thank you for plugging my publication. Managing spotted wing drosophila and commercial fruit production. It's located on the extension publication store. And it gives you pictures of what the male and females spotted wing drosophila looks like. It gives you pictures and directions on how to make the traps set them up in your field where to put them in your field. Talk a little bit about sanitation again, keeping the Fruit harvested frequently, and it gives very specific details on what insecticides can be used. And when they can be used and on what crops it can be used for. It's a very good resource. A couple of things that aren't in that publication, though, is grand eagles, a new product that's available, and that we're now recommending adding a spray adjuvant to the tank mix in order to help extend the longevity of those insecticide treatments.

**C** Christa Hartsook 10:27

Okay, that sounds great. Joe, is there anything else we really need to cover today and talking about SWD?

**J** Joe Hannan 10:34

Yeah, we should also make sure that if you do an insecticide treatment, that you go and reset your traps and SWD keep monitoring your traps. If you have just a light infestation of SWD one insecticide treatment might be good and be able to keep you everything under control for a week or a couple of weeks. Whereas if you have a very heavy infestation, to the point where you're catching multiple flies in a trap per day, it might take a couple of follow up applications to really get everything under control to go back and look at those traps and see what's happening and see if you need to make additional applications. That's a great point.

**C** Christa Hartsook 11:13

That's a great point thanks so much, Joe. Appreciate it. Yeah, no problem. All right. Well, thanks for being on today.

**J** Joe Hannan 11:19

Yeah, thanks, Krista for having me. It's always a pleasure jumping on and talking to you. Appreciate it.

**C** Christa Hartsook 11:23

Joe. Take care.

**J** Joe Hannan 11:24

All right. Bye, Krista.