



THE OHIO STATE UNIVERSITY



Ohio's Fruit News! Mini-Newsletter

May 2017

Spotted Wing Drosophila...Coming soon to a field near you? By: Jim Jasinski and Celeste Welty

Spotted wing Drosophila (SWD) is a serious pest of raspberries, blackberries, blueberries, strawberries, grapes, and peaches. For the past five years, we have established a statewide monitoring network in 15-20 Ohio counties to look for this pest on grower's farms in an effort to help them manage it better. This network is typically established in the first week of June and runs through September, and consists of weekly trap checks and reporting.



Over the years we have gained some knowledge about the overwintering habits of this pest, which appear to be near wooded areas. This year we set out baited Scentry traps early at a few small fruit fields around the state to see if SWD are present in those locations. In Franklin County, one trap was in place in a small raspberry patch for the entire winter, and four additional traps were placed near the boundary between a wooded fencerow and the raspberries on May 11th. Likewise, traps were placed in the boundary between the woods and berry fields in Greene and Clinton Counties on May 10th. In Wayne County, traps were also placed near a strawberry field in mid-May. We have detected SWD adults at all four of these locations within the past week. In Franklin County, the traps in the berry patch had no SWD, but one trap in the distant treeline did have one male SWD on May 25th. Traps at Greene, Clinton, and Wayne locations found SWD adults on May 23rd. These catches are 3-4 weeks earlier than we have detected them in past seasons. The earlier finds are interesting but not surprising, because we were looking for these pests earlier in the season at a location where they are likely to overwinter, in combination with a mild winter in which high survival was likely.

What does finding SWD this early in the season mean for growers? We are still learning about this pest and how to interpret the nuances of early season detection and its effect on early season management. Strictly speaking, the threshold for this pest is one adult fly detected in the fruit planting, so if there is any ripe or ripening fruit on a farm, we recommend starting an insecticide treatment on a seven-day schedule through harvest. If growers cannot treat due to picking or harvesting considerations, we strongly recommend they conduct salt water tests on berries collected from several locations around their susceptible fields to verify no SWD larvae are found in the berries. If larvae are found, treatment should begin immediately through harvest. Insecticide options available to growers along with pre-harvest intervals, are shown on page 2 of a factsheet found at [this link](#).

All growers of these susceptible crops are encouraged to use a trap to detect the adult flies, and test ripening fruit for presence of larvae using a simple salt water test. A factsheet on how to conduct a saltwater test can be found here at [this link](#).

Tips for Plant Sample Collection and Submission

By: Melanie Ivey

The accuracy of the disease diagnosis is directly related to the quality of a plant sample submitted for diagnosis. The following are general guidelines for collecting and submitting a sample for disease diagnosis.

- Provide freshly collected specimens that represent the range of symptoms that you observe.
- Provide as much plant material as possible, including roots, top growth and fruit.
- Do not send dead plant material. Plants material that is already dead can't be diagnosed.
- Provide lots of information about the sample, such as plant variety, history of the problem, recent pesticide applications and the number of plants affected.
- When mailing samples:
 - For entire plant samples, bag (plastic) the roots and seal at the soil line with a twist tie or a rubber band. Do not cut the root ball off the above-ground plant parts. Cover the top plant growth with a second plastic bag.
 - For leaf or stem tissue, place the sample in a zip-seal bag as soon as it is collected. Do not use paper bags.
 - Separate fruit (i.e. berries, apples, peaches) samples from roots and top growth material. Place fruit in a zip-seal bag as soon as it is collected.
 - Mail sample in a sturdy container. Entire plant samples should be enclosed in boxes or other crush-proof packaging.
 - **Send samples by overnight delivery.** Samples should be mailed Monday through Wednesdays.

Sample submitted to laboratory in plastic bag this season



Sample with diseased and healthy tissue



**Send samples to: Fruit Pathology Laboratory
Dr. Melanie Lewis Ivey
1680 Madison Avenue
Wooster, OH
44691**

Insect Pest Update!

By: Celeste Welty



Rosy apple aphid on the underside of a curled apple leaf

Rosy apple aphid: A noticeable pest now in some orchards is the rosy apple aphid. This pest causes clusters of leaves to become strongly twisted, and fruit nearby are deformed and stunted. The best time to detect and control this pest was at the pink bud stage, but a spray in early summer can help prevent the infestation from spreading. Most of the insecticides commonly used for control of codling moth and plum curculio, such as Delegate, Altacor, and Avaunt, do not control the rosy apple aphid, so a separate product is needed for aphid control. Products that do a good job of aphid control are Assail (which also controls codling moth), Actara, Belay, Admire Pro, Beleaf, Sivanto, and Closer.

Codling moth: Eggs are likely to be hatching in most of Ohio this week. In Columbus, the degree-day model predicted egg hatch of codling moth to begin last week, on 5/18, which was an optimal time for the first insecticide application to target codling moth. A minimum of two sprays, 14 days apart, is needed for control. A third application is needed in orchards where moth flight is prolonged, which is common in Ohio orchards.

Lesser peachtree borer: Peach growers should be aware that the lesser peachtree borer is now active. Our pheromone trap in Columbus had first detection of this moth on 4/26 but increased catch last week. Management of this pest by insecticides has changed now that endosulfan (Thionex) is no longer registered for use on peaches. Chlorpyrifos (Lorsban) remains as an excellent control option, but it is nearly impossible to use for lesser peachtree borer because this pest is found on scaffold branches and Lorsban is not allowed to contact the fruit. If problems with lesser peachtree borer have been slight to moderate, it can be more practical to delay control until post-harvest to target the second generation of this pest in September. If problems from lesser peachtree borer are severe, then a foliar spray of a pyrethroid such as Asana, Pounce, Warrior, or Baythroid is the best option, applied when moths are active and laying eggs, which will be for the next few weeks.

Trap reports: Trap reports for common apple and peach pests are posted on a website [via this link](#). Note the tabs along the bottom of the page; there is one tab for each pest. Several Ohio sites are included in these trap reports: 6 orchards in Wayne, Medina, Holmes, and Tuscarawas Counties under the direction of Rory Lewandowski, Extension Educator in Wayne County, and his assistant Chris Smedley; 3 orchards in Huron, Richland, and Knox Counties, under the direction of Ted Gastier, Private Consultant; and one orchard in Franklin County under my direction. We welcome trap reports from anyone else; if you would like to contribute reports, please contact me.

Apples deformed by rosy apple aphid



Herbicide Drift 2017 – What are we looking at? By: Doug Doohan and Roger Downer

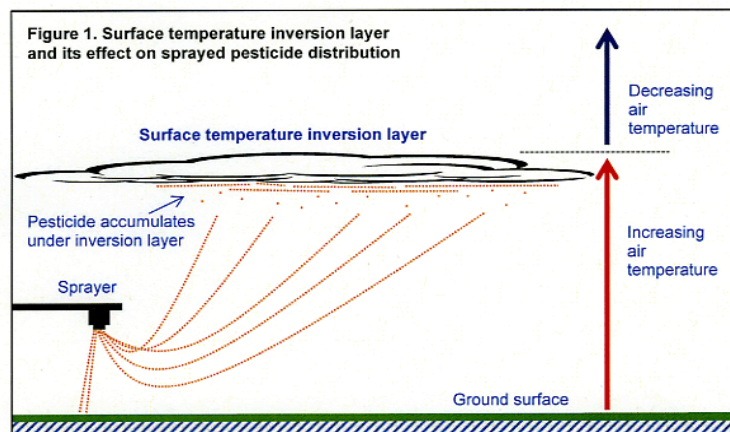
Nearly everyone reading this newsletter is aware of the tremendous problems following dicamba drift events in the southern US in 2016. The resulting crop damage and horrific outcomes you've read about took place because of illegal spraying of dicamba on Roundup Ready 2 Xtend soybeans. This year dicamba can be used legally on Xtend beans but only three brands are licensed for use; XtendiMax, FeXapan, and Engenia. The fact that all three are low volatility and low-drift formulations is not a reason for any complacency on the part of fruit and vegetable farmers – your crops are still very much at risk; the potential for fruit and vegetable crop damage has never been greater.

For several years now specialty crop growers and especially those with vineyards have been having issues with 2,4-D and glyphosate burn downs impacting vines, and in severe cases leading to blossom and/ or fruit abortion. In 2013, 57 out of 63 vineyards that were visited by retired extension viticulturist Dave Scurlock and I showed symptoms of 2,4-D damage. Keep in mind that 2,4-D or dicamba are generally more toxic to specialty crops than is glyphosate, and when drift is glyphosate + 2,4-D or dicamba, the impacts are invariably more detrimental than when either herbicide is the sole culprit.

Weather conditions are almost always a factor but not always in obvious ways. Wind speeds above 10 mph, and especially gusting winds can and do move small herbicide spray droplets from their intended site of application to plants growing in other fields, along roadsides and hedgerows, and home landscapes and gardens. However, drift is just as likely to occur as a result of applications take place under still conditions. That's because still air may mean an atmospheric inversion has taken place. During inversions, cold air is trapped under a layer of warmer air, preventing the updrafts that cause wind. Small spray droplets are trapped within the layer of cold air that hugs the surface of the ground and remain suspended, often within or just above a crop canopy. Keep in mind that *all nozzles produce some small droplets* falling into the 'drifter' category of less than 100 microns. These suspended spray droplets are subject to off-site movement. They will flow-down very slight slopes and follow meanders in the field in the same way as fog does early in the morning. When warming air temperatures at the ground surface start the process of mixing, these small droplets move in the mixing air, sometimes with catastrophic results.

All of this explains why nearly all modern herbicide labels indicate an acceptable wind speed range of 3-10 mph for application. This should be interpreted as meaning that application should not occur when there is less than 3 mph wind.

How does all of this help you as a fruit or vegetable farmer? For starters make sure you are not responsible for a drifting application. Just last week I completed an investigation where it was clear that the owner was applying glyphosate in such a way that he was responsible for much of his own problem. You might be surprised how often I see this. But secondly, use this information as you communicate to your neighbors and to the owners/operators of the commercial spray rigs in your community. Make sure they understand the value of your crop that they will be buying if drift happens, and help them to understand that simply using low-drift nozzles and formulations may not be enough. You are the only one who can protect your crop. Good relationships and good communications are the best tools you have. For more information check out our factsheet HYG 6105 *Reducing 2,4-D and dicamba drift risk to fruits, vegetables and landscape plants* found at <http://ohioline.osu.edu/factsheet/hyg-6105>.



In this illustration a layer of cold air close to the ground, perhaps several feet thick, is trapped below warmer air. A further gradient in air temperature exists within the inversion with the coldest air immediately above the soil surface. **Please use the following link to view the Image Source for full description.**

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