



The Ohio State University Extension Vegetable Crops

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Downy Mildew on Watermelons & Zucchini - *Sally Miller, Ohio State University Department of Plant Pathology*

Downy mildew was confirmed August 22, 2013 on watermelons from Medina County, OH. It is safe to say at this point that downy mildew is widespread in vine crops and growers throughout the state should be out scouting for the disease, especially in cucumbers. Susceptibility to downy mildew is as follows: cucumber>melon (cantaloupe, honeydew)>pumpkin>watermelon>squash. Squash is the only vine crop for which downy mildew has not been confirmed somewhere in Ohio (which doesn't mean it isn't out there). Fungicides need to be applied early - especially for cucumbers. It is not possible to stay ahead of this disease if fungicides are not applied in a timely manner.

Downy mildew was also confirmed on zucchini in Holmes County on August 27, 2013. The disease has now been reported on all types of vine crops. Scout all vine crops for the disease and follow recommended fungicide programs. Consult the Midwest Veg Production Guide or previous articles in VegNet.

Please see previous VegNet listserv updates for fungicide recommendations. I am continuing to Tweet new outbreaks (by crop and county) of downy

mildew and tomato/potato late blight as they are confirmed (@OhioVeggieDoc).

This has been a tough summer for many Ohio Vegetable growers and gardeners. We'll all be glad for October!



Downy mildew on watermelon. Lower left – close-up of lesions on top of leaf – note small necrotic spots with chlorotic halos. Lower right – close-up of lesions on underside of leaf. Note small necrotic lesions surrounded by thin green ring and chlorosis.

Insect update – *Celeste Welty, Dept. of Entomology*

Corn earworm, also known as tomato fruitworm, has been active at some Ohio farms in the past week, but at lower levels than usual for late August. The number of corn earworm moths caught in pheromone traps for the past week was: 0 and 0 in Meigs county, 14 and 0 in Clark County, 2.5 in Franklin County, 0 and 1 in Wayne County, 0 in Summit County, 0 in Medina County, and 4 in Sandusky County. Trap reports for corn earworm are posted online:

<http://mytraps.com/share/?key=6199532529016863756> .

The spray schedule needed to control corn earworm on silking sweet corn while temperatures are high (>80F) is every 3 days if traps catch 7-91 moths per week, or every 4 days if traps catch 3.5-7 moths per week, or every 5 days if traps catch 1.4-3.5 moths per week. In recent years, control of corn earworm by pyrethroid insecticides has varied from successful to unsuccessful, due to the development of resistance in the earworm population. Much of the population of corn earworm in Ohio each year is made up of migratory moths that blow up from the southern USA. We think that the reason that efficacy of pyrethroids for corn earworm control varies from year to year is that the earworm population that arrives in Ohio originates at different locations each year, and some of the southern locations have highly resistant moths while other locations have only slightly resistant moths. Control by pyrethroids is generally good when the corn earworm population is low, and generally poor when the corn earworm population is high. If there is a large increase in corn earworm pressure in the next few weeks, then alternatives to pyrethroids for late sweet corn are the relatively new products Coragen, Radiant, and Belt, or the old product Lannate.

European corn borer is continuing to emerge for the third week as detected by blacklight and pheromone traps. This pest is a concern to pepper and sweet corn growers. Sweet corn being sprayed on a schedule for corn earworm will also be protected from European corn borer. At farms where there is no detection of corn earworm and thus no need for earworm control, sweet corn should be sprayed for second generation European corn borer every 5 days. Peppers can be protected from European corn borer by insecticide applied every 7 days during the time that this pest is active. Orthene provides excellent control, but is allowed in only two applications; pyrethroids such as Mustang Max can be used after Orthene.

Other late-summer pests that are less abundant than usual so far this year are fall armyworm and beet armyworm. Fall armyworm moths are being detected in Clark County but not in Franklin County; this can be a serious pest in tomatoes and peppers as well as in sweet corn. A few beet armyworm moths were detected in pheromone traps in early summer in Sandusky County, but none there recently, or in Franklin or Clark Counties.

The brown marmorated stink bug is abundant in sweet corn, peaches, and apples in Franklin County, and we are hearing scattered reports of it showing up in various crops around Ohio but at low density.

Berry Crops Being Hit Hard By Spotted Wing Drosophila – *Celeste Welty, Dept. of Entomology, Jim Jasinski, OSU Extension IPM Program*

Many Ohio growers are finding small white maggots just before harvest in raspberries, blackberries, blueberries, strawberries, and peaches. These larvae are from a new pest, the spotted wing drosophila (SWD). To date there are no reports of this pest in vegetable crops such as tomatoes which are a potential host. Although we have had reports of this pest in Ohio since early July, there have been many more reports of it being found in the past 2 weeks, in all parts of Ohio. Berry crops are often grown without any insecticides, so this pest has taken many growers by surprise. The positive news is that most growers who have started a weekly spray program are successfully getting this pest under control. A table of allowed insecticides on each crop is posted: http://bugs.osu.edu/welty/pdf/SWD_Ohio_handoutV9.pdf. We are working on an updated version of that handout that will be posted on August 29th at http://bugs.osu.edu/welty/pdf/SWD_Ohio_handout.pdf. The most common products being used are Delegate, Brigade, Mustang Max, Entrust, and Malathion.

Not sure if you have SWD? Pick 75 healthy berries and place into a plastic quart container or plastic bag. Mix up two cups warm water with two tablespoons of salt. Add the salt water to the berries and wait for about 5 minutes. Look closely at the berries, if you have SWD, tiny white maggots (1mm-5mm) will have wriggled out of the fruit and be floating in the container around the berries.

Southern Ohio Vegetable Crop Update - *Brad Bergfeld, OSU Extension & South Centers*

Things have gone from being bad to being REAL BAD for many southern Ohio vegetable farms. As if the flooding rains, cooler than normal temperatures, poor fruit set in vine crops and harvest gaps being experienced with sweet corn, cucumbers, summer squash, beans, melons and zucchini due to wet field

conditions was not bad enough, the past 2 weeks have caught many growers off guard with the onset of Downy Mildew disease in all vine crops, late blight disease in tomato and potato and spotted winged Drosophila causing severe economic losses in blackberry, fall raspberry, summer bearing strawberries and grape and cherry tomatoes. The good thing is demand and prices for all produce is VERY strong with higher than normal prices being reported at area produce auctions. The vegetable crop supply for the upcoming Labor Day weekend at this time is uncertain especially for vine crops including melons and watermelon. Tomato supply is becoming tighter as well due to many fields being lost to an assortment of diseases the past month.

The last field plantings of radish, turnip, mustard, broccoli, kale and lettuce will be finishing up in the next 10 days. High tunnel plantings of fall and winter crops such as carrots, greens, lettuce etc. continues high tunnels. Sweet corn harvest continues with harvest gaps being experienced due to rainy conditions at planting 75 days ago. Harvest of beans continues with very high demand especially for half runner beans which still are running around \$50 to \$60 dollars a bushel wholesale at area produce auctions. Harvest of sweet onions, potatoes, summer squash, basil, cucumbers, pickles, zucchini and cabbage continues. Blackberry harvest is almost done and many growers have abandoned the last 2 weeks of harvest due to high populations of spotted wing Drosophila and the quality issues this pest is causing post-harvest. With the recent heavy rains weed control has been a top priority in late planted crops with continued cultivation and hand hoeing. With the poor crop yields harvest labor is leaving the area for areas such as Michigan that have more harvest and more work available. Cultivation and side dressing of Nitrogen continues on late planted crops where nitrogen has been lost due to recent heavy rain events.

Ask Us ??

Do you have a pest management or production issue that you would like addressed in future VegNet issues? If so let us know. Email your suggestion to Jim Jasinski, jasinski.4@osu.edu.

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