Spotted Wing Drosophila (9/2017)

Here is some information on Spotted Wing Drosophila, a relatively new insect pest that attacks ripe fruit, especially in late summer and fall. Raspberries and blueberries are especially susceptible. This year SWD came earlier and the populations have been higher in many locations than in past years.

1) Are infested fruit edible?

I have not read of any known food safety risk from consuming SWD larvae or eggs. Common sense dictates that if fruit are actually 'spoiling/rotting' they should not be consumed. Slightly soft but not rotting fruit that are frozen or cooked promptly should be fine to consume. That said, I would err on the side of caution and NOT donate infested fruit to at-risk populations. SWD is a rather new pest in the U.S. and I don't think that food safety risks have been fully evaluated.

2) How can I manage SWD next year?

In short, prune plants heavily to open up the canopy and pick ripe fruit promptly and refrigerate or freeze. Try to remove drops/culls from the planting. Covering with insect netting with mesh smaller than 1 mm square can exclude the flies but must be applied before fruit ripens.

3) Here is some detailed information sent to commercial growers earlier this summer:

Crop management for SWD:

Strawberries: Harvest strawberries frequently and thoroughly and renovate (or at least mow) promptly as soon as harvest is done. The impact of early onset of SWD activity on strawberries is unclear but there is potential for rapid build-up on fruit left behind prior to renovation. This can pose a risk for nearby raspberries and blueberries.

Raspberries: Manage canopy environment: keep rows narrow at the base (18") and thin canes to allow 6" between canes if possible to allow for good air circulation and light penetration.

Blueberries: eliminate branches below knee high (on mature bushes) that cast shade on the ground and open the upper canopy to allow for good air circulation and light penetration. If spraying, this will improve penetration and efficacy, too. In other berry crops, maintain an open canopy as much as possible.

Monitor with traps to know what is happening before susceptible fruit begins to color. New, improved trap commercial trap designs and lures are available. Scentry and Trecé traps use soapy water drowning solution rather than the cider vinegar or yeast/sugar solution used previously and are easier to work with. Traps set in field edges typically yield first trap captures of the season. These traps can later be moved into production fields to monitor in-field populations and spray program efficacy. See: http://www.greatlakesipm.com/TRECE%20SPOTTED%20WING%20DROSOPHILA.html

Harvest frequently (daily if possible) and thoroughly and avoid letting fruit fall to the ground. Train harvesters and/or PYO customers to pick cull fruit into a separate container (with some incentive) to reduce cull fruit left in the field.

Test ripe fruit for infestation: do a salt flotation test to determine how many SWD larval are present. See: https://u.osu.edu/pestmanagement/files/2015/05/SWD-salttesthandout_reduceFileSize-10mk2gw.pdf

Refrigerate fruit as quickly as possible; storing at 32-33˚F can arrest the development of egg/larvae that may be present.

If spraying, use a tight schedule (5-7 days) once crop is ripening and SWD have been confirmed at or near the crop. Spraying in the evening may increase residual efficacy because some materials degrade more quickly in sunlight. SWD may also be more active in the evening especially when the weather is very hot.

Add Nu Film P at 4-16 oz per 100 gal with all materials to improve insecticide efficacy. If it rains after you spray a material, re-apply if the label allows.

Here is the current list of insecticides labeled for small fruit for SWD, courtesy of Mary Concklin at UConn Extension. Always read the label to be sure of rates and restrictions.
http://ag.umass.edu/sites/ag.umass.edu/files/news/pdf/insecticides_for_small_fruits_for_swd_2017.pdf

Organic growers: Entrust (spinosad) is the most (only?) effective insecticide. It needs to be rotated with another material per the label, and is limited to 3 applications. Some growers have had success alternating Entrust and Pyganic on a 5-7 day basis, spraying in the evening to reduce photodegradation.

Consider insect netting on smaller plantings. This must have < 1mm mesh, be applied before ripe fruit are present, and edges must be sealed. ProTekNet 80 or 25 are available from several local suppliers (80 is much more durable.) https://www.berryprotectionsolutions.com/
http://www.brookdalefruitfarm.com/irrigation/BIC%202017-1sm.pdf

Detailed information on SWD identification, biology, monitoring and management is at:

https://extension.umass.edu/fruitadvisor/spotted-wing-drosophila

http://www.ipm.msu.edu/invasive_species/spotted_wing_drosophila/factsheets

Feel free to contact me with questions or concerns.
Vern Grubinger
University of Vermont Extension
802-257-7967 x303