

Preventing Spotted Wing Drosophila Damage

Damage

The Spotted Wing Drosophila (SWD) is an invasive vinegar fly which lays its eggs in immature and ripe fruit; thus its larvae may be present in otherwise marketable fruit. Raspberries, blackberries, and blueberries produced in mid-summer or later have been affected to the greatest extent, but SWD can also affect cherries, plums, peaches, and grapes or any other soft thin-skinned fruit.

SWD larvae feed within the fruits causing brown, sunken areas. It is possible these symptoms won't appear until after the crops are harvested. In addition to the damage caused directly by the larvae, the feeding makes the fruits susceptible to infestation by other insects, rot fungi, and bacteria.

Management

Monitoring

Monitoring should occur from fruit set until the end of harvest. This allows the home gardener to identify the start and end of fly activity, although the most critical time period to monitor is when fruit color first starts to develop until the crop is harvested. This is when the fruit are susceptible to infestation.

Adult SWD flies can be trapped using a plastic 32oz. Lidded cup with several 3/16"-3/8" holes around the upper side of the cup (bottom photo). Holes can be made using a drill or burned with a hot wire. The small holes allow access to SWD, but keep out larger flies and other insects.

Pour 1-inch of apple cider vinegar into the trap as bait. To help capture the flies, place a small yellow sticky card inside, hung from the lid with a wire. Yellow sticky cards can be purchased from Drummers. The traps will also work without the yellow sticky insert, but then a drop of unscented dish soap should be added to the vinegar to ensure flies remain trapped in the liquid. It's a little simpler to identify the flies on the yellow sticky paper when checking the trap. Traps should be hung in the fruit zone, in a shaded area of the canopy, using a wire attached to the top of the trap.

Cultural

Sanitation is important to reduce the local buildup of SWD populations. The best sanitation practice is to frequently harvest crops to ensure ripe fruits are not in gardens for extended periods of time. It is also important to remove and destroy any old fruit that remains on stems or that has fallen to the ground.

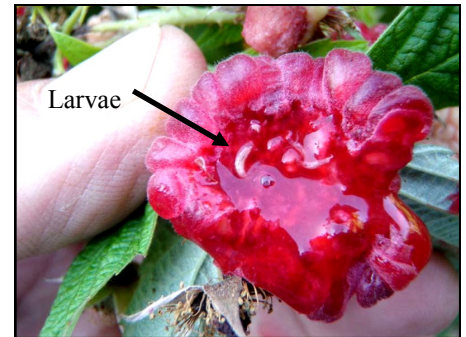
Chemical

It is important to remember that SWD females can start laying eggs one day after adult emergence. This makes it very important to monitor and detect whether SWD is present and when they first appear. The sooner the flies are discovered, then the quicker management decisions can be made. SWD will complete multiple, overlapping generations so there will be continuous activity once the flies become active. Effective insecticides are:

Common Name	Type	Residual*
pyrethrum	low-impact	short
spinosad	low-impact	medium
malathion	conventional/broad spectrum	short-medium
bifenthrin	conventional/broad spectrum	medium-long

*Long residual can persist as long as four weeks. Medium-long residual can persist as long as 10-14 days.

When spraying, to ensure best coverage, include a spreader/sticker surfactant to increase coverage.



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Sources: University of Minnesota,
Cornell University,
University of Massachusetts.