



April 2, 2011

Originally published in the *Contra Costa Times*

Spotted Wing Drosophila—an Update

by Emma Connery, Contra Costa Master Gardener Program Coordinator

Is there anything new to control the maggots in my cherries?

SUMMARY

A relatively new pest, spotted wing drosophila attacks maturing cherries and other soft, fleshy fruits. Only limited research on treatments is available, with malathion currently viewed as the most effective control, but with highly undesirable environmental impacts. Hand-sorting the fruits may be the best approach for individual gardeners.

Q: I have not gotten a good crop of cherries in the past two years due to that new pest—the spotted wing drosophila—that leaves its maggots in my fruit. Is there any new information on how to manage this pest in the home garden?

A: The spotted wing drosophila (*Drosophila suzukii*) is a relatively new pest of cherries and other soft fleshy fruits (strawberries, raspberries, blackberries, blueberries, etc). Unlike other vinegar flies that attack rotting or fermenting fruit, the spotted wing attacks maturing fruit. The name spotted wing drosophila comes from the single black spot at the tip of each wing of the male adult. Don't think though that you will be able to identify this fly by those markings without magnification because these adults are small, really small. The female is able to penetrate the skin of the fruit to lay her eggs and this act creates a small depression ("sting") on the fruit surface. The eggs hatch and the maggots develop and

feed inside the fruit, causing the flesh of the fruit to turn brown and soft.

Limited Research:

Because this pest is so new to California, there has been limited research on treatments to manage it. The organophosphate insecticide malathion is known to kill spotted wing drosophila, but only if the tree can be completely covered with the spray. Complete coverage is often difficult, especially with larger backyard trees, because of limitations of available equipment. Application should be made as soon as the fruit just begins to turn from yellow to pink. This should be about 2 to 3 weeks before cherry or berry harvest as the spray must kill adults before they lay eggs.

Mitigate Negative Impacts:

Malathion is very toxic to bees and natural enemies of other pests in the garden, so care must be taken to keep the application on the tree and avoid drift and runoff. Improper application





“If only some fruit is infested, you can salvage part of the crop by harvesting immediately and sorting the fruit, removing any with a “sting” on the fruit’s surface.”

can also result in injury to the tree. Because of the potential negative impact of malathion in the garden, use it only where you are certain you will have a spotted wing infestation, either because you had a problem last year or from trapping and positively identifying insects this season as spotted wing.

Spinosad Is an Alternative:

An alternative to malathion with fewer negative environmental effects would be spinosad (Monterey Garden Insect Spray); however, it is not believed to be as effective against the fruit fly adults as malathion. To get satisfactory control two sprays may be required; the first applied as the fruit just begins to turn pink and the second applied 7 to 10 days later. As with malathion, all foliage and fruit on the tree must be covered with the spray. Partial coverage will not be effective. A compressed air sprayer will give more reliable coverage than a hose end sprayer.

Hand-Sorting and Disposal:

Since spotted wing drosophila attacks ripening fruit it is often not noticed in home garden situations until the fruit is being harvested. Sprays at this time will not protect the crop because maggots are already in the fruit. If only

some of the fruit are infested, you can salvage some of the crop by harvesting immediately and sorting the fruit, removing any with “stings” on the surface. It is recommended that all infested fruit be removed from the tree and picked up from the ground. It should then be placed in a sealed plastic bag and disposed of in the trash or buried. Do not put the infested fruit in your compost pile as it may not get hot enough to destroy the eggs and larvae still in the fruit.

For More Information:

You can obtain more information at the UC IPM web site:

<http://ipm.ucdavis.edu/EXOTIC/drosophila.html>.



Cherry with drosophila “sting” on the surface. Photo by Larry Strand, UC Integrated Pest Management.



CONTRA COSTA MASTER GARDENERS

UNIVERSITY OF CALIFORNIA COOPERATIVE EXTENSION

75 Santa Barbara Road, Pleasant Hill, CA 94523

HELP DESK: (925) 646-6586 or mgcontracosta@ucdavis.edu ♦ WEB: ccmg.ucdavis.edu