

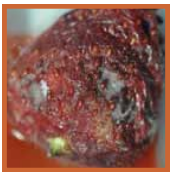
Signs that may indicate SWD infestation

Symptoms associated with SWD feeding damage

- Early mold, wrinkling, and softening seen on fruit not yet ripe
- Soft spots and collapse of berry structure
- Small holes created by larvae for breathing (breathing tubes are sometimes visible)
- Expulsion of berry sap from oviposition holes
- Dark spots on white grapes, light spots on dark grapes.
- Splitting of grapes or berries
- Larvae emerging from berries
- Pupae in or outside berries

Damage more likely due to aging

- Mold on overripe fruit
- General wrinkling and softening without specific soft spots
- Darkening of skin



3-4 days after egg laying the skin wrinkles and fruit softens. Scarring and collapse of berry may soon follow.



Dark area in light fruit



Light area in darker fruit



Infested berry where turgor pressure caused expulsion of liquid through oviposition hole



Collapsed berries with pupae on surface

Photos by: Emily Parent and Thomas Whitney, USDA ARS Horticultural Crops Research Unit, Corvallis, OR; Peter Shearer, Oregon State University Mid-Columbia Research and Extension Center; Mike Reitmayer, Daniel Dalton, and Vaughn Walton, Department of Horticulture, Oregon State University.



HOSTS

Spotted Wing Drosophila has a wide host range and has been found feeding on:

- Dogwood
- Strawberry
- Mulberry
- Chinese Bayberry
- Sweet Cherry
- Plum
- Peach
- Raspberry
- Evergreen Blackberry
- Marionberry
- Cranberry
- Wine grape

The following hard fruit may be attacked if the skin is already broken:

- Kiwi
- Persimmon
- Tomato
- Apple

Idaho State Department of Agriculture

2270 Old Penitentiary Road

Boise, Idaho 83712

Phone: 208-332-8620

Fax: 208-334-2283

www.agri.idaho.gov



SPOTTED WING DROSOPHILA



Photos by Martin Hauser
University of Michigan

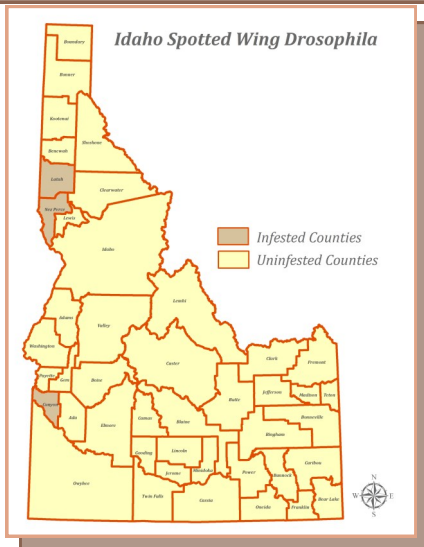
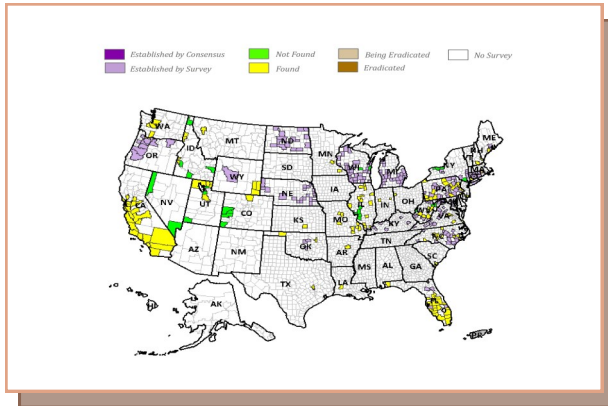
Drosophila suzukii

A new invasive insect recently found in Idaho having the potential to damage many fruit crops

INTRODUCTION

Spotted Wing Drosophila (SWD) is a small vinegar fly with the potential to damage many fruit crops. Originally from Asia, it was detected in California in 2008 and spread quickly through most of the United States. SWD was confirmed in Idaho in Canyon, Latah, and Nez Perce counties in 2012 and Payette county the following year.

SWD can be a pest of most berry crops, cherries, grapes and other tree fruits with a preference for softer-fleshed fruit.

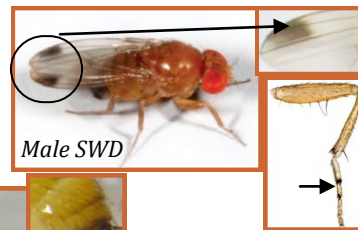


Identifying Spotted Wing Drosophila

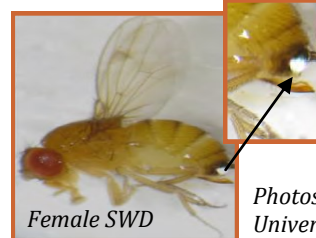
Adult SWD are small flies 2-3 mm long having rounded abdomens, that are light yellow or brown with dark unbroken bands across the abdominal segments. They also have red eyes. In general they appear very similar to many native vinegar fly species which feed on rotting or fermented fruit and vegetable matter.

A major distinguishing characteristic, however, is that the male SWD has one distinctive dot on each of its wings along the 1st vein. They also have two dark bands on each of the forelegs. Females are harder to identify, as they do not have wing spots. What separates female SWD from all others is the presence of a serrated ovipositor with “teeth” that can be used to cut through the skin of intact ripening fruit and allow the injection of eggs.

Common native vinegar flies without a serrated ovipositor can only lay eggs in damaged or overripe fruit, so are generally not considered pests. SWD, on the other hand, are capable of destroying produce before it is ripe and ready to be picked and can decimate perfectly healthy crops.



Male SWD



Female SWD

Photos by Martin Hauser
University of Michigan

Monitoring for SWD

It is very important to monitor for SWD activity in your susceptible fruit trees and berries.

Homemade traps can be fashioned using plastic cups and an apple cider vinegar bait. See the references below for instructions.

Check the traps weekly for small flies with dark spots at the tip of their wings. If present these are male SWD and will confirm that you have the pest.


You can use traps to monitor for flies, but it is also important to observe fruit regularly as it begins to ripen.

Monitoring may also help you time insecticide applications for greatest effect.

An infestation of SWD can increase quite rapidly if fruit is left untreated or unharvested. Each female is capable of laying up to 350 eggs and, under ideal conditions, a generation from egg to adult can occur in less than two weeks. If you do discover SWD in your garden, orchard, or vineyard it is important to destroy infested fruit immediately and consider possible treatment of the remaining crop.

REFERENCES

 Oregon State University
<http://www.spottedwing.org>

 Michigan State University
www.ipm.msu.edu/invasive_species/

 University of California
<http://www.ipm.ucdavis.edu>