

# Spotted Wing Drosophila (SWD) (*Drosophila suzukii* (Diptera: Drosophilidae):

UPDATE November 25, 2009

Prepared by: Tracy Hueppelsheuser, Entomologist, BC Ministry of Agriculture and Lands  
Telephone: 604-556-3001 / Email: [Tracy.Hueppelsheuser@gov.bc.ca](mailto:Tracy.Hueppelsheuser@gov.bc.ca)

## ***Where is SWD found?***

Spotted Wing Drosophila (SWD) was first identified in the western United States in late 2008. Since July 2009, it has been found in Florida, Oregon and Washington. It has been established in Hawaii since 1986. In September 2009, SWD was identified in the Fraser Valley area of British Columbia.

## ***Why is SWD a problem?***

SWD is a temperate fruit fly, native to Southeast Asia, and prefers temperatures of 20-30°C. It is known to infest thin-skinned fruit. Many fruit flies are present in late summer; most normally infest overripe, fallen, decaying fruit, so are not crop-limiting pests. However, SWD females lay eggs in sound fruit before it is ready for harvest with her saw-like ovipositor, which contaminates fruit with larvae, and causes it to become soft and unmarketable.

SWD over-winters as adult flies. In spring flies will become active, mate and lay eggs in suitable fruit. We expect 1-4 generations per year in BC, based on climate model predictions. It is possible that all berry crops from strawberries through to blueberries will be at risk of infestation.

## ***What has been done so far?***

A survey of the berry growing areas in the Fraser Valley in September and October indicated that all 7 regions surveyed had SWD. We surveyed using three methods: sweep netting, trapping using yeast, sugar and water as bait, and collecting prone fruit and rearing out any insects within. The hosts that supported SWD include: fall raspberries, blueberries, blackberries (wild and cultivated), and grapes. Maggots were also found in strawberry and kiwi, but these were not reared out to confirm species. We do not expect the United States to regulate this pest, as it is present in the major fruit growing regions. The Canadian Food Inspection Agency is reviewing this pest situation as well.

## ***What is planned for next year?***

The primary focus in 2010 is to develop surveillance and management plans. Key questions are: When is SWD first detected in the season, and in what crops. Management recommendations at this point include good harvest and sanitation practices, such as culling soft fruit, burying culls, keep processing areas and equipment free of old fruit. Adult flies are attracted to and feed on old fruit.

## **Useful links:**

- Regional Pest Alert, Submitted as OSU Extension Publication:  
[http://www.nwsmallfruits.org/alerts/2009-09-09\\_Regional\\_Pest\\_Alert-Spotted\\_Wing\\_Drosophila.pdf](http://www.nwsmallfruits.org/alerts/2009-09-09_Regional_Pest_Alert-Spotted_Wing_Drosophila.pdf)
- Florida Department of Agriculture and Consumer Services Pest Alert: Spotted Wing Drosophila,  
[http://www.fl-dpi.com/enpp/ento/drosophila\\_suzukii.html](http://www.fl-dpi.com/enpp/ento/drosophila_suzukii.html)
- University of California, UC IPM Online, A New Pest in California,  
<http://www.ipm.ucdavis.edu/EXOTIC/drosophila.html>



Male SWD:  
Note one dark spot on  
each wing.



Female SWD:  
Note no spots on wings.



Maggot (larvae) within soft fruit



Pupa:

Note the horned projections on head end.



Infested blueberries  
Pupae evident



Oviposition holes in blueberry,  
and softening of fruit

Photos: BC Ministry of  
Agriculture and Lands 2009