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SPOTTED WING DROSOPHILA (*Drosophila suzukii*)



Although there are native species of fruit or vinegar flies in North America, the spotted wing drosophila (SWD) is a relatively new introduction that damages certain fruit crops throughout the country. The SWD was first detected in 2008 in the western United States and it has since rapidly spread eastward. Based upon a survey conducted in fall 2011, the SWD occurs throughout Connecticut, being collected in 86 towns. Fruit crops that may be at risk in Connecticut include raspberry and blackberry, *Rubus*; blueberry, *Vaccinium*; strawberry, *Fragaria*; *Prunus* species such as cherry, nectarine, peach and plum; and grape, *Vitis*.

A tiny, 2-3 mm long fly of Asian origin, SWD is distinguished from native fruit flies by the two black dots on the wings of the male, as well as the female's serrated egg-laying apparatus or ovipositor. This feature allows her to lay eggs in intact fruit just

before harvest. Most other fruit fly species are unable to infest fruit unless they are damaged or overripe. Eggs hatch into maggots, which feed on the inside of the fruit for 5-7 days. As the maggots or larvae grow and feed, the infested fruits will collapse and soften. Larvae pupate inside the collapsed fruit or on the ground; the pupal period lasts 4 - 5 days in warm weather. When adult flies emerge, they begin mating and egg-laying almost immediately, so several generations may take place during a single growing season. The adult overwinters, sometimes flying on cool fall days.

Connecticut has already experienced significant losses in fall-bearing red raspberries and strawberries in 2011 due to SWD. One key to control of this pest is early detection. Traps, baited with apple cider vinegar and a drop of soap or detergent, are good monitoring devices. These traps can be made with inexpensive materials such as closed plastic deli containers or soda bottles with holes drilled along the top of the sides. Near harvest they can be hung near ripening fruit. Trapped flies can be identified, and if SWD is present, management should begin immediately in order to protect undamaged fruit. Currently, scientists are working on the most effective management methods for SWD in Connecticut.



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Larva inside a blueberry



Males have black spots on their wings.



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Spotted wing drosophila mature puparium.



Rich Cowles

Females have saw-like ovipositors that allows them to lay eggs in intact fruit.