

# Invasive fruit fly found in North Carolina

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(PhysOrg.com) -- A potentially important invasive insect species - the fruit fly *Drosophila suzukii*, or spotted wing *Drosophila* (SWD) - winged its way to North and South Carolina this summer. The insect has the potential to cause up to 20 percent crop loss in host fruit.

So far, damage caused by the insect has been uneven.

Dr. Hannah Burrack, extension specialist and assistant professor of entomology, and colleagues found the first significant SWD larval infestation of fruit at the Upper Mountain Research Station in Ashe County, N.C., last month. Blackberry, raspberry and strawberry research plots were heavily infested, she found.

It was a different story at the Sandhills Research Station in Montgomery County, N.C., however. Some adult flies were trapped, but Burrack and her team found minimal larvae infestation of crops at the Jackson Springs, N.C., station. Burrack says the record-high temperatures may have prevented SWD from taking hold in the Sandhills.

SWD is bad news for small fruits; it feeds on blueberries, blackberries, raspberries, strawberries, grapes, peaches, pears, apples, cherries and other soft-skinned fruits, Burrack says.

SWD made its first appearance on the West Coast in 2008 and then appeared in Florida in 2009. Burrack implemented statewide programs to monitor and trap SWD this spring.

SWD is closely related to the fruit fly used as a type of "lab rat" in many academic studies - *Drosophila melanogaster* - but has some key differences that allow it to infest sound fruit, unlike all but one of the 1,500 other species of *Drosophila*. Most *Drosophila* feed on the micro-organisms that inhabit rotting fruit or plant tissue, and therefore are not typically crop pests, Burrack says.

Small fruit and tree fruit growers should carefully monitor their plantings for adult and larval presence, Burrack says. Growers should also monitor fruit for larval infestation. Large larvae will be visible in fruit, but small larvae may not.

"Larvae can most easily be detected via the 'fruit dunk' method," Burrack counsels. "Fruit are gently crushed and floated in sugar water. After several minutes, larvae float to the surface and can be counted. It is important to remember that many native *Drosophila* feed on rotting fruit. Observing infestation in relatively sound fruit and confirming adult presence minimizes the likelihood that you will confuse SWD with native relatives."

Sanitation is extremely important in managing SWD, Burrack adds. In areas where SWD is present, all ripe fruit should be removed from the field or plants should be treated with insecticide regularly, with the interval depending upon the material used. Unmarketable fruit should be destroyed or removed from the site.

Burrack adds that research from the West Coast shows many common insecticides are effective in combating SWD. She is currently preparing a document listing - by crop - the registered materials that are effective against SWD.

"Growers who have confirmed SWD should contact their county cooperative extension agent or myself for management recommendations," she says. "It is especially important to rotate insecticides used to treat SWD to minimize the likelihood of resistance development."

**More information:** Burrack maintains a blog with useful information on SWD and other small fruit crops. It's on the Web [here](#).

Provided by North Carolina State University

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