

INSECT PEST NEW TO WYOMING

By Scott Schell

Spotted wing drosophila (SWD), *Drosophila suzukii* – a species of insects sometimes called fruit flies – was identified in Goshen County in August.

The University of Wyoming Cooperative Agricultural Pest Survey is checking other sites around the state to confirm the presence of this new pest from Asia.

The long-established fruit fly species, also known as vinegar flies, we have in Wyoming are considered just nuisance pests by fruit growers because they prefer overripe or physically damaged fruit for oviposition (depositing eggs). Unlike the nuisance species, SWD deposit eggs into intact, soft-fleshed fruit, and the feeding damage and rapid growth of maggots soon renders the fruit unmarketable. The infested fruit appears to “melt” as the tiny maggots initially feed and grow. This pest often attacks raspberries, strawberries, grapes, and occasionally cherries and larger fruited crops.

How to Identify

The adult male SWD has spots on its wings that help identification and are visible to the naked eye. The female SWD have diagnostic saw-toothed ovipositors for inserting eggs into fruit, but it requires magnification to see this feature. The SWD can deposit eggs into most soft fruit plant species, and they can utilize unripe, ripe, and damaged fruit.

The spread of SWD around the nation has been remarkable for its speed. SWD was first documented in the United States in 2008. The insect is a weak flier, so it has been



spread via people unwittingly carrying fruit containing the pest around the country. It was found in Utah in 2010, in Fort Collins, Colorado, in 2012 and has now been found, and confirmed by Colorado State University, in samples from Brush, Colorado, this year.

Use Integrated Pest Management

The establishment of SWD means that Wyoming fruit growers will need to include Integrated Pest Management (IPM) for this pest in their plans. Our typically harsh winters may be an ally because the SWD originates from a milder climate in Asia, and they do not tolerate extreme cold well. They can survive the winter in protected environments, such as greenhouses, but it was observed that SWD populations are severely reduced over the winter in the northern states they have invaded.

Wyoming berry farms and gardens, isolated by distance and our harsh climate, may want to institute a strict quarantine policy on fruit brought on their premises as the first step in an IPM plan. The second



Spotting wing drosophila eggs (top) and maggots (above) in strawberry fruit. Photographs by Hanna Burrack/NCSU/BugWood.com

step should be monitoring for the presence of the SWD as fruit just begins to form with simple baited cup traps near fruit producing plants. Instructions for trap construction and bait suggestions are available on many university extension websites. Follow good sanitation practices that include the removal and complete destruction of unharvested fruit to prevent the buildup of SWD populations. The SWD has a broad host range and little is known about the possibility of

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selecting resistant fruit varieties.

Home gardeners should beat the SWD to the fruit by rapidly harvesting fruit as it ripens.

What About Next Season?

If monitoring shows the presence of SWD next season, active control measures can be taken, but the exact labeling of the numerous available insecticides for all of the various susceptible crops precludes listing them here. As of this date, SWD has not shown resistance to common organic and synthetic insecticides labeled for use on the crops they attack. Use IPM, and if you have to include treatment with an insecticide,

either organic or synthetic, do not use the same insecticidal modes of action twice in a row. The rapid reproduction rate of SWD could lead to selection for insecticide resistance in a very short time. Cold storage of lightly infested fruit at or below 35° F for 96 hours has been shown to kill all stages of SWD found in fruit. An excellent, detailed fact sheet has been developed by our friends at Utah State University <http://extension.usu.edu/files/publications/publication/ENT-140-10.pdf>

As we develop additional materials on control of this pest, we will post them on the



barnyardsandbackyards.com main page and on our Insects page.

To submit specimens for identification in Wyoming, please contact me, the assistant extension entomologist, at (307) 766-2508, or sschell@uwyo.edu. I can tell you how to ship soft fruits so the pest can be identified.

*Any unwanted insect species daring to wander into Wyoming will soon be in the crosshairs of **Scott Schell**, University of Wyoming Extension assistant entomologist. He can be reached at (307) 766-2508 or at sschell@uwyo.edu.*

Why Should I Be Concerned About Noxious Weeds?

- Noxious weeds threaten our natural resources in Wyoming.
- Noxious weeds reduce forage for domestic animals AND wildlife.
- Many noxious species are harmful/fatal to horses and other livestock.
- Noxious weed infestations reduce our recreational opportunities.
- Noxious weed infestations can reduce the economic value of land.
- Noxious weeds are spread by many human activities.
- Most new noxious weed infestations are preventable.

What can your local Weed and Pest district do for you?

- Noxious weed identification
- On site noxious weed consultations
- Technical advice and pesticide recommendations
- Cost share programs if available-weeds/pests
- Management plans (weed/pasture/land)
- Educational opportunities for all ages



Find all the facts about noxious weeds in Wyoming. Visit the Wyoming Weed and Pest Council website for contact information of your local Weed and Pest Control District.

www.wyoweed.org

*Help protect Wyoming's natural resources –
stop the spread of noxious weeds!*