



UMPQUA VALLEY Hort News

Horticultural Newsletter for The Umpqua Valley

November & December 2009

Oregon State
UNIVERSITY

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Service
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*Layout, Design,
& Distribution*
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Family & Community
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Extension Sea Grant
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Department of Agriculture,
and Douglas county
cooperating. The Extension
Service offers its programs
and materials equally to all
people.

Please note: The contents of this newsletter are provided for educational purposes, and are not intended to be taken as strict recommendations for treatment of any orchard pest or condition. ALWAYS READ THE MATERIAL LABEL PRIOR TO APPLICATION.

2009 Calendar of Coming Events

Nov 2,9,16,23 Exploring the Small Farm Dream. OSU Small Farm agent Melissa Matthewson will lead this class over four Mondays in November. The class will be held at Umpqua CDC at 605 Kane St in Roseburg from 6-9pm. For more information call 440-4669.

November 4 Safety and Stewardship Seminar. The Oregon Agricultural Chemicals and Fertilizers Association seminar will be held at the Holiday Inn in Springfield. The seminar will provide 8 Oregon pesticide credits to those taking the all day event from 8am-5pm. For more information call 503-370-7024 or visit the website at www.oacfa.com

November 4 Monthly meeting of the Umpqua Valley Winegrowers Association. The November meeting will be held at Brandborg Winery in Elkton at 6pm. The meeting is open to all winery and vineyard industry people.

November 7 Winter Dreams Summer Gardens. Jackson County Master Gardeners bring you the 11th annual gardening symposium. The symposium will be held in Medford this year at the RCC/SOU Higher Education Center. For more information and class descriptions call 541-776-7371.

November 17 Douglas County Master Gardener Registration Day for the January 2010 program. Registration will be held in the OSU Church Annex near the DC Courthouse from 11:30am until 12:30pm. Come and sign up for the 2010 class and get your questions answered about the program before the program begins. If you would like to register before November 17, call 672-4461 for details or print forms at <http://extension.oregonstate.edu/douglas/sites/default/files/mg2010.pdf> and mail in your paid registration.

December 10 Pesticide Training Class at the OSU Extension Office. We will start the pesticide training with two hours (8am-10am) about new insect pests that have the potential to be major problems in Western Oregon. We will continue the training from 10:30am until 12:30pm at the county maintenance shop on Rifle Range Rd. The second session will discuss proper storage of pesticides and other agricultural chemicals. The two sections will be credited separately for those not wanting to attend both. 2 credits for each session are expected.

Spotted Wing Drosophila, Identified in Wine Grapes

The following article is about a new fruit fly pest that has been found in Western Oregon, California, and Washington this year. The fly has potential to be a major pest to a number of crops. Currently OSU entomologists Vaughn Walton and Amy Dreves are working with the Oregon Department of Agriculture and USDA to assess this pest.

By Peg Herring, 541-737-9180

Sources: Amy J. Dreves, 541-737-5576, Amy.Dreves@oregonstate.edu; Vaughn Walton, 541-737-3485, waltonv@hort.oregonstate.edu

CORVALLIS, Ore. A newly recognized pest in Oregon continues to concern fruit growers and researchers with the recent discovery of a Spotted Wing Drosophila fly in a sample of Willamette Valley wine grapes.

Since the tiny fly, *Drosophila suzukii*, was first confirmed in Oregon less than two months ago, there have been an increasing number of reports of its occurrence in a variety of fresh fruits, including blueberries, peaches, raspberries, strawberries, blackberries, plums, and now grapes, according to Amy Dreves, a research entomologist at Oregon State University.

"This is an insect that, up to last year, had never been seen in the continental United States," Dreves said. "Now, suddenly, it is showing up in lots of places."

Losses to fruit crops have been significant in some places this year, according to OSU entomologist Vaughn Walton, who is working with Dreves and others on strategies to combat this invasive fruit fly. California lost about one-third of its cherry crop from Davis to Modesto. Willamette Valley peach growers were hit hard, especially in the late season, with losses up to 80 percent in some orchards. Crop losses up to 20 percent were seen in Oregon raspberries.

In early October, two blueberry fields were sampled, and one showed no damage at all while another had approximately 20 percent infestation (sampled and dissected approximately 400 berries at each site). "We have frozen samples from an infected blueberry field," Walton explained. "The berries were picked at different times, and we can dissect them to help determine times of the first infestations this season in Benton County."

New reports of its occurrence have been confirmed almost every week since OSU researchers first identified the fly in a sample of Oregon blueberries in August.

Dreves and Walton are now reporting that adult Spotted Wing Drosophila had emerged from wine grapes that had been collected in the northern Willamette Valley two weeks earlier. Also confirmed by the Oregon Department of Agriculture were flies emerging from infested red table grapes collected from the Willamette Valley.

At this stage, growers have not seen noticeable damage to harvested grapes, Dreves said, and the harvest of grapes is nearly complete in the Willamette Valley without signs of Spotted Winged Drosophila impact.

Dreves and Walton are part of a team of researchers from OSU, U.S. Department of Agriculture, and Oregon Department of Agriculture working to uncover the extent of infestation and to test methods for controlling its spread.

Their work is one part science, one part Extension, and one part detective work.

Native to Japan and parts of Southeast Asia, *D. suzukii* had been introduced into Hawaii in the 1980s and was first confirmed in Florida and California last year. Since August 2009, the fly has been reported throughout California, from Vancouver, Wash., to Abbotsford in British Columbia, and in 12 counties in Oregon.

"That's because we're looking for it now and this year's environmental conditions were right," said Dreves. Because the *Drosophila* fly larvae are small, shapeless and pale, Dreves and her colleague, OSU entomologist Vaughn Walton, culture suspicious larvae from sampled fruit to confirm the identity of the insect in adulthood.

Other research partners, in recent reports, suspect the fly has been found on pears in Oregon, Dreves said. What might be good news for Oregon is that *D. suzukii*, at least in Japan, only lays eggs in apples that are already damaged; apples seem not to be a primary host.

The Spotted Wing Drosophila is a close relative of the so-called "fruit or vinegar fly" associated with overripe bananas. That fly, *Drosophila melanogaster*, feeds on spoiled and rotting fruit and is the star attraction in high school biology classes when students learn about genetics and mutations. The Spotted Wing Drosophila fly, in contrast, infests fresh fruit, which presents a significant economic threat to fruit growers.

Discovery of the Spotted Wing Drosophila in wild Himalayan blackberries has the researchers worried. Despite the efforts growers will put toward cleaning their orchards of all left-over fruit, these feral areas could offer a refuge for overwintering populations of flies, according to Dreves. "We just don't know."

Spotted Wing Drosophila. . . continued

There's a lot that researchers don't know about this new invader, but they are learning fast. Dreves is scouring the scientific literature, going back to Japanese monographs from the 1930s to learn everything that is known about *D. suzukii*.

"In Japan, these flies are reported to reproduce up to 13 times in one season," she said, which suggests that the population could explode toward the end of the season, as seems to have happened this year.

According to reports, these flies thrive in cooler areas and are most active at temperatures of 68 degrees. Activity, longevity and egg-laying are said to decrease at temperatures above 86 degrees, although infestations have been found in warm parts of California and Florida.

Much of western Oregon's growing season would seem to favor conditions favored by these flies, which means that most of Oregon's berry crops could be at-risk during the growing season, according to Dreves. And because Oregon has a variety of crops that ripen at different times during the season, the Spotted Wing Drosophila fly could move from one crop to another as the season progresses, and populations could build up to high numbers in many crops.

On the other hand, the fly might be gone by next season, Walton said, pointing out the uncertainty associated with a new invasive species.

Planning for the worst, the OSU team is working with colleagues in the USDA Agricultural

Research Service and ODA to develop management plans for this new pest in Oregon. They are sampling fruits at farmers' markets and receiving samples from growers and OSU Extension agents in the field to map the extent of the infestation. And they are testing baits to monitor population levels this fall. In small areas, it may be a possibility to lure flies away from vulnerable fruit by setting up traps.

For now, Dreves said, two principles are at the heart of controlling the fly regardless of crop. First, reduce the fly's breeding sites by immediately removing and disposing of the source infested fruit. And monitor for the presence of adult flies before they lay eggs.

Signs of possible infestation include:

Spotted Drosophila flies with a pale black spot at the leading edge of the wing (only the male flies of this species have this marking).

Small puncture wound on hanging fruit, where female drilled in to lay her eggs.

Soft fruit on plant, starting at puncture scar. Secondary decay can establish at this point.

Small pale maggots in intact fruit on the plant.

For more information on identification, contact: the Oregon Department of Agriculture, Plant Division, 635 Capitol St. NE, Salem Oregon 97301-2532, telephone 503-986-4636, or call the Oregon Invasive Species Hotline: 1-866-INVADER (1-866-468-2337).

Download the new publication on this pest at:

<http://ir.library.oregonstate.edu/jspui/bitstream/1957/13090/1/em8991.pdf>

Information on Late Blight for Potato

Phytophthora infestans is the fungus like organism that causes Late Blight disease. This organism overwinters in the soil and in old tubers in cull piles or on volunteer plants that come up after harvest in fields. This disease is a difficult one to control. Recent work has shown that when fighting this disease more than almost any other, cultural controls are critically important.

Fall is a good time to implement the suggested cultural controls that will help fight Late Blight. The first suggested control is to throw away any seed pieces from a field that had a Late Blight infection in 2009. You may not see any damage at this time on tubers, but later this winter the tubers will begin to rot if spores are present and they will spread the disease to your new field. If you have a field that had tomatoes or potatoes with an infection you should plow under old plants materials and tubers. You should also rotate any tomato or potato fields

next year to a new field, one that has never had the Late Blight disease. Next year you should rogue the old fields to control any volunteer plants that come up. Spores from volunteer plants in old fields can be spread by wind and rain to new fields.

When you get ready to plant your new fields next year buy certified pathogen free seed. When planting potatoes it is a good idea to hill up or ridge your rows so when spores wash from the foliage they are less likely to fall into cracks in the soil and infect the tubers. When irrigating next year, make sure you do not keep the foliage wet for six hours or more. To minimize tuber infection when harvesting a field with Late Blight disease, wait 14 days after a plant dies before digging. This can be done by waiting for a killing frost or by using a contact herbicide that is registered for this use. Do not dig tubers in a field that is excessively wet. If you follow these cultural practices you can minimize the potential for Late Blight disease.

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