



# UMPQUA VALLEY Hort News

Horticultural Newsletter for The Umpqua Valley

June / July ~ 2019



Oregon State University  
Extension Service  
Douglas County

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bases apply to all programs.)

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.

## 2019 Calendar of Coming Events

- June 12 Strawberry Field Day at the North Willamette Research and Extension Center in Aurora.** The address is 15210 NE Miley Rd, Aurora. This field day is open to all and starts at 1pm and goes until 5pm. OSU Professor Bernadine Strik will be coordinating the research review covering all aspects of strawberry production.
- June 25 OSU Extension Enology Workshop at UCC-SOWI: Preventing Formation of Sulfur Off Odors During Winemaking Workshops.** This event will be led by Dr. James Osborne from OSU. This half day workshop will explore the many factors influencing sulfide production during winemaking and ways to reduce their formation. Dr James Osborne will discuss the latest research regarding this complex problem including recent OWB funded work conducted at OWRI. The program will be from 9am-1pm. <https://foodsci.oregonstate.edu/foodsci/fst-extension-training/preventing-formation-sulfur-odors-during-winemaking-workshops>
- July 11 OSU Extension Viticulture** will demonstrate Machine Canopy Management steps following fruit set. This outing will be held in the Salem area. The site will be advertised in the next few weeks.
- July 17 Blueberry Field Day at the North Willamette Research and Extension Center in Aurora.** The program will run from 1pm-5:30pm and is open to the public. The meeting will be hosted by OSU Professor Bernadine Strik. The topics to be discussed include pest management, fertilization, using drones with irrigation monitoring, weed management, mechanical harvest, and reviewing new varieties from British Columbia and the PNW.



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This publication will be made available in accessible formats upon request. Please call 541-672-4461 for information. If you have a physical disability that requires special considerations in order for you to attend an event, please notify the office at 541-672-4461 no later than 2 weeks prior to event date.

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## Biofix for Codling Moth Models in Spring of 2019 in Douglas County

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Biofix for our area with Codling moth was set this year around April 25. Following our weather data during the past month we encouraged the first cover spray to go on at 250 Degree Days which fell on May 24. With a few rain systems in the area at that time, putting on a cover spray the week of May 27 or as soon as possible after, will still have good results. The recent warm temperatures really brought out the codling moth numbers last week and early this week before our sprays. Our traps pre-application of controls had 15-25 moths caught on average over a 5 day period. The trap counts in the week after my spray, one trap had one moth during the week. All the other traps have not caught any moths. Having an accurate early season monitoring program goes a long way toward a successful codling moth program for apple or pear crops, especially if you keep monitoring your traps for the remainder of the summer.

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## Research from Michigan State University Looks at Improving Spotted Wing Drosophila Controls in Tart Cherry Crops by Pruning and Mowing

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Researchers at Michigan State University looked at ways to reduce the potential damage caused by SWD to the tart cherry crop through cultural practices. In earlier studies across the country researchers have shown that SWD do prefer mild temperatures and wet, humid air. As temperatures rise above 86F degrees and humidity falls below 20% SWD activity dramatically slows.

Typically tart cherry growers only prune their trees slightly every few years. As canopies get greater density the environment for the SWD is improved making damage from SWD more severe. In field tests where cherry tree structure was changed to be more open versus traditional tree density, and plots were mowed every two weeks to shorten permanent cover crops, damaged was reduced by 40% in unsprayed pruned test plots. In the field tests the SWD population counts were very dependent on temperature, humidity, and rainfall. Opening the tree canopies allowed the trees to dry more quickly after rains, warm up more quickly during the day to lessen the preferred cool temperature range for SWD and lower the humidity inside the tree canopy. Mowing the cover crop contributed to lowering the humidity in the orchard blocks too.

In our drier Oregon summer growing season there are still a few takeaways from this research that

might help reduce pressure in our local cherry orchards from SWD. Keep cherry trees pruned well to warm up quickly within the canopy. Keep cover crops mowed short to minimize additional humidity in the orchard block. When irrigating cherry orchards with sprinklers, keep the water out of the tree canopy, and shorten the irrigation cycles to allow for rapid drying. Preferably set up orchards with drip irrigation where possible. All of these cultural practices along with SWD trapping and timely spray controls when fruit starts to color will help to minimize crop losses.

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## Soil Tests Help Distinguish Between a Nutrient and Disease Issue

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During early spring plants are growing in cool damp soil which can make it difficult for them to uptake nutrients like nitrogen that have not been converted to an easily assimilated form. However, when plants are not looking good or making good growth, it is difficult to know if the problem might be cool soil temperatures, a lack of certain nutrients, or a disease.

The quickest and easiest way to be able to eliminate some potential problems is to keep track of the soil temperature with a soil thermometer. Most perennial crops like fruit trees, berry crops, and grapevines will get active when the soil temperature gets into the 55-60 degree range, but prefer soil temperatures in the 70's. Cool season vegetable crops like broccoli, garlic, onions, and cabbage will grow well in soils that are 50-55 degrees. In the cooler soils of spring it is not unusual to have some nutrient deficiencies due to the cool temps. As the soil temperature warms some nutrients will become more available as microbes convert those nutrients to useable forms.

If you have a field with apparent nutrient deficiencies it would be wise to get a soil nutrient test. Having a soil test about every 3 years is a good tool to help verify deficiency issues. Just knowing the pH of the soil in your crop fields will also help you know if some nutrients may be tied up in the soil. Very low pH soils will lock up phosphorus, calcium, and magnesium. While high pH soils can lock up phosphorus, manganese, boron, and zinc.

When trying to determine if a field has a disease or nutrient issue think about how widespread the issue is. Nutrient deficiencies tend to be more likely across a field while a disease tends to be more localized. If you are growing more than one type of crop in the affected field, a disease will be species specific while a nutrient issue can be troublesome to a variety of crops. Nutrient issues

tend to cause plants to have yellowed or patterned leaves while plant diseases would include soft rots and water soaked spots. When plant diseases cause dried or browned leaves, they tend to be more random in a field or in the canopy of perennial plants. While nutrient issues that cause yellowed, dried, or browning leaves would be more uniform across a field. If a plant has wilting leaves, this tends to be linked to a disease since the wilting is often caused by a clogged xylem within a plant, something that is not caused by a nutrient deficiency.

Good plant nutrition does more than just make a plant healthy and grow well, good plant health also contributes to a plants internal and external plant defense system. There is a growing amount of research that points to how cell walls are strengthened by nutrients such as calcium, boron, zinc, and silicon. When these nutrients are lacking, structures like bark on trees and vines are malformed or weak. Both potassium and manganese are also critical for releasing defensive chemicals that help plants fight off attacks from pests.

Soil nutrient tests will also help growers understand when there is an excess of a given nutrient being applied to the soil or foliage. Excess nutrients can make a host plant more attractive to insect populations. When excessive amounts of nitrogen are applied and taken up by plants, the plants become an attractive meal to many insects. This is pretty common with fruit trees, grapes, berries, and vegetable crops. The classic example with a variety of crops is how aphids will be drawn to feed on lush new growth.

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### **Organic Food Industry has Growth Problems from Overseas**

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Many consumers are under-educated about the various ways food products are grown and labeled. It can be very confusing to hear organizations mention terms like conventional, organic, sustainable, bio-dynamic and other labels. Over the past 5-10 years I have noticed how consumers refer to organically grown foods as pesticide free. One survey in England done by a pro-organic organization found that 95 percent of consumers said their top reason for buying organic was to avoid pesticides. The problem with this reasoning is that organic foods have a very specific list of pesticides that are allowable to use under the USDA Organic label. Since these products often are not as effective as conventional products, they are typically used more frequently.

Commercial organic food production has been increasing dramatically over the past ten years for a variety of reasons. The desire to eat healthier food, eat more locally produced food, and to lessen the impact of pesticides on farm land are probably some of the major reasons. Another reason organic production is increasing is the price being paid for organically produced foods is pulling in food from around the world. The USDA has reported as recently as 2017 that the top five imported foods in the organic industry by price are bananas, coffee, olive oil, and mangos. Price is bringing agricultural products from Mexico, Central America, South America, and the Mediterranean countries. China has now joined the big world of organic exporters to the U.S. with huge volumes of apple juice, garlic, and soybeans. Along with the dramatic increase in U.S imports of organically produced food products from overseas has also been a dramatic increase in food being rejected for unsafe additives, and poor labeling. Another trend that has continued over the past ten years is the persistence of non-organic pesticide residues. The pesticide residues being found on imported foods have been below allowable limits for conventional crops, but these are products not registered for organic use.

When doing food inspections overseas the USDA and FDA have very small crews and often works with agencies in the other countries to do most of the inspections and certifications through third party arrangements. In China this problem is compounded by lack of access and the different food labeling and safety standards local producers are accustomed to. Many food importers are having to rethink their organic food origination strategies due to the lack of acceptable documentation of how foods have been produced, stored, and treated.

This type of information coming from overseas should continue to support locally produced foods in the years ahead.



### **Weekly Pest Alerts for May through September 2019**

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Weekly Pest Alert Comments are updated each week by Steve Renquist with current trends in pests in orchards, vineyards, and nut trees.

Find these online on the Douglas County OSU Extension webpage:  
<https://extension.oregonstate.edu/douglas>  
 Scroll down to “Announcements” and Weekly Pest Alerts....2019”.

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To find local Extension information & news . . . Douglas County/OSU Extension Web Site:

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## **USDA Farm Service Agency Announces the Emergency Forest Restoration Program Signup Period for Douglas County**

The Douglas County USDA Farm Service Agency (FSA) has been approved to accept applications for the Emergency Forest Restoration Program (EFRP) to address 2018 drought and 2019 snow damages.

EFRP was established to assist Nonindustrial Private Forest (NIPF) Landowners to rehabilitate timber ground damaged by natural disasters. Practices available under the EFRP Signup include: removing debris and dead trees from timberland, replanting timber and road development located on NIPF lands that are deemed necessary by the Oregon Dept of Forestry (ODF). Common practices and land not eligible for EFRP include: planting of ornamental, nursery or Christmas trees; building roads not located on NIPF; and tree thinning for management purposes.

EFRP provides payments to eligible owners of NIPF land to enable the owners to carry out emergency measures to restore land damaged by a natural disaster. EFRP sign-up will begin on June 3, 2019, and end on August 1, 2019.

After applications are received, the ODF will provide technical assistance by evaluating the damage and developing a plan to restore the NIPF land. The local FSA County Committee will determine land eligibility and approve applications.

In order to meet eligibility requirements, NIPF land must have existing tree cover or had tree cover immediately before the natural disaster occurred and be sustainable for growing trees. The land must also be owned by any nonindustrial private individual, group, association, corporation or other private legal entity that has definitive decision-making authority over the land. The natural disaster must have resulted in damage that if untreated would impair or endanger the natural resources on the land and/or materially affect future use of the land.

Please contact the Douglas County FSA office at 541-673-6071 X2 for more information or visit <http://disaster.fsa.usda.gov>. The Douglas County FSA Office is located at 2593 NW Kline St., Roseburg, OR.

USDA is an equal opportunity provider, employer and lender. To file a complaint of discrimination, write: USDA, Office of the Assistant Secretary for Civil Rights, Office of Adjudication, 1400 Independence Ave., SW, Washington, DC 20250-9410 or call (866) 632-9992 (Toll free Customer Service), (800) 877-8339 (Local or Federal relay), (866) 377-8642 (Relay voice users).