

News/What to Watch For:

To see examples of peach problems that may be detected at harvest, check a gallery of images in a Tree Fruit Advisory article from August 2012. [Click here](#) and then change the “Category” on the right drop down menu to 2012, and look for the August 27 edition.

Examples of apple maladies seen at harvest, page 3

New disease of cherry in California and Oregon, page 6

International Orchard Bee Association, General Meeting and Symposium, page 6

JUST THE BASICS: Current Treatments

APPLE & PEAR

- Continue protecting fruit from *codling moth* up until Sept. 15.

PEACH/NECTARINE

- Continue protecting fruit from *peach twig borer* up until Sept. 15.
- Continue protecting lower trunk from *greater peachtree borer* through early October.

Insect and Disease Information

 : information for residential settings

 : information for commercial orchards

APPLE & PEAR

Codling Moth

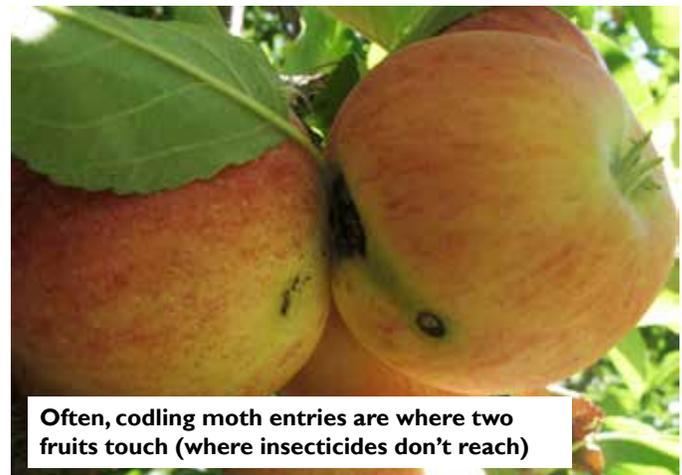


Hosts: apple, pear

The end of any possibility of codling moth egg hatch is upon us. The cooler nights and shorter day length starting in mid September create conditions that are not conducive to egg hatch and prevent any newly hatched larvae from surviving. In general, no insecticides for codling moth (or peach twig borer) are needed after September 15.

When you harvest your fruit, take some time to estimate the level of codling moth infestation. For most growers using conventional pesticides, the level of injury will range from 6% to 20%, and for growers using organic options, the injury level may be higher, up to 30%.

If you are finding that your fruit is more infested than you expected, look back at your treatment records, and address these factors:



Often, codling moth entries are where two fruits touch (where insecticides don't reach)

- **Spray dates:** Did your spray dates line up with the recommended dates, or were they earlier or later?
- **Insecticide rate:** Did you use the recommendation on the label?
- **Coverage:** Did the spray cover the tree (fruit) entirely?

Insect and Disease Information, continued from previous page

Codling moth, continued

- **Residual period:** Did you reapply the product as necessary, based on how long it lasts?
- **Insecticide mixing:** Was the product agitated properly or did it need to be buffered to a different pH?
- **Insecticide resistance:** Over the years, have you been using the same product, or have you been alternating products from one moth generation to the next to prevent resistance?
- **Mother Nature:** Did it rain after any key spray dates?

If you feel you were vigilant in your treatment efforts, I would be happy to discuss with you (via phone or email) a strategy for improved protection for 2015.

PEACH/NECTARINE

Brown Rot on Peach



Hosts: peach/nectarine, plum

We mentioned brown rot in the last Tree Fruit Advisory newsletter, but want to reiterate that any areas that have late peaches or nectarines and had brown rot diagnosed in the past should be watching for this disease. We have had several rain events that have been ideal for spread.

The most susceptible time period is 2 to 4 weeks before harvest, especially if any fruit has injury from insects or other tiny wounds.

On ripening fruit, symptoms first appear as a small spot that quickly enlarges (within 2 to 5 days) until the whole fruit is rotten. If conditions remain moist, a mass of light grey-brown spores will form on the fruit surface. Fruit that is left on the tree will shrivel and dry out. This mummified fruit will carry spores over the winter, increasing the risk of blossom infection the following spring.

See the August 19 edition for a list of possible fungicides by [clicking here](#).

Boxelder Bugs



Hosts: peach/nectarine, apple, pear

We have seen large aggregations of boxelder bugs in Box Elder and Utah counties. Adults prefer feeding on fruit that is just ready to harvest, which makes control difficult.

Only products with a very short pre-harvest interval can be used. Options include:

- Sevin (carbaryl, PHI: 3 days)
- Lannate (methomyl, PHI: 4 days)



- malathion (PHI: 7 days)
- pyrethrin (Pyganic E.C., Prentox Pyronyl Crop Spray, Pyrellin E.C., Pyrola, Fertilome Fruit Tree Spray, Natural Guard Neem Spray; PHI: 0), good for harvest-day coverage

Spider Mites



Hosts: all fruit trees



Spider mites are still actively feeding, but the shorter and cooler days are signaling them to slow down their reproduction. Soon, orange-colored adult females will develop to serve as the overwintering form. These females will then make a mass migration to sheltered areas on the lower trunks or in debris and groundcover near trunks, starting in a week or so.

If spider mite densities are high, a late season treatment of 1 to 1.5% horticultural oil may be helpful to prevent early senescence, but it is uncommon to need to treat for spider mites after August.

Insect and Disease Information, continued from previous page

APPLE MALADIES FOUND AT HARVEST  



Codling moth entry that introduced a fruit rot.



Earwig feeding. Note the black dot (excrement) inside the hole, which helps to identify earwig feeding.



Fire blight infections can happen later in the season, especially through wounds on fruit, resulting in a soft rot.



Powdery mildew causes lace-like russeting on fruit.



Birds are becoming more and more of a problem in orchards.



Apple scab is somewhat rare in Utah, causing black, circular, scabby lesions.

Insect and Disease Information, continued from previous page

Apple Maladies, continued



When rosy apple aphids feed on leaves and flowers during bloom, the resulting fruit becomes deformed and small.



Stink and lygus bugs puncture-type feeding results in deep pits whose symptom is known as "cat-facing."



San Jose scale bodies can be rubbed off of fruit for home consumption, but fruit is unacceptable for the retail market.



When Fuji and Gala apples expand rapidly toward harvest, the internal pressure may cause cracking at the stem end.



Some nutrient or pesticide sprays can puddle at the stem end, and causing russetting of the fruit skin.



Frost damage may sometimes show up as lesions on the calyx end, or as a ring around the fruit.

Insect and Disease Information, continued from previous page

Apple Maladies, continued



Lenticels within a sunburned area on fruit frequently become brown or black.



Lesions caused by bitter pit of apple are focused closer to the calyx end.



Hail damage can sometimes look like insect damage or a disorder.



Fruit cracking is common and its cause is not well-understood.



A dry rot may develop on the calyx end of fruit, mostly introduced by insect feeding.



Fruit can be protected from sunburn by applying the product, Surround, which creates a reflective white surface.

Production Information

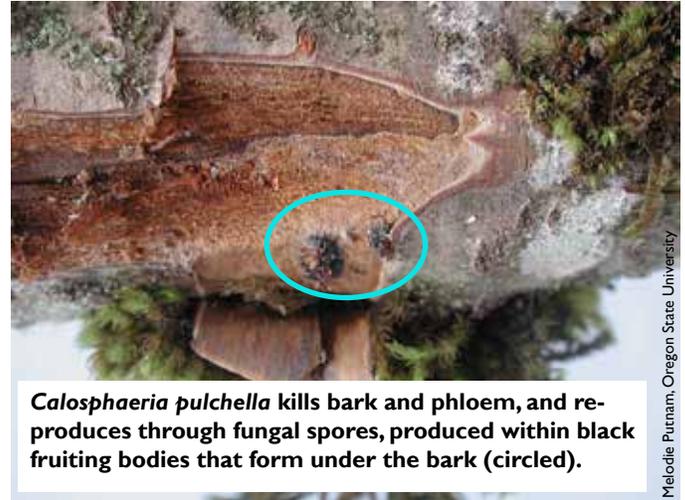
New Disease of Sweet Cherry

There are several plant pathogens that cause cankers on sweet cherry trees. (A canker is an area of bark and phloem that has been killed by a fungal or bacterial disease.) In Utah, two of the most common causes are a bacterium called *Pseudomonas syringae*, which causes bacterial canker, and a fungus called Cytospora.

A third pathogen was reported from cankers in young and old cherries in California in 2010. And in summer of 2014, it was identified on cherries in two locations in Oregon: an abandoned orchard in the Willamette Valley, and a 3-year old orchard in Umatilla County. The disease is caused by the fungus, *Calosphaeria pulchella*.

Calosphaeria pulchella causes limb dieback and wood decay via stem cankers. Like other canker-causing organisms, the fungus enters trees through small wounds or pruning cuts during rainy periods or sprinkler irrigation. All canker diseases are major threats to productivity of fruit trees by reducing tree health, yield, and longevity. They commonly develop in tree branches but can also affect tree trunks that are injured by winter sunscald. Affected areas restrict the flow of water and nutrients, essentially girdling the limb or trunk.

Research in California showed that late summer pruning practices combined with the use of sprinkler irrigation in sweet cherry orchards favored an outbreak of canker diseases, including those caused by *C. pulchella*. Much work



***Calosphaeria pulchella* kills bark and phloem, and reproduces through fungal spores, produced within black fruiting bodies that form under the bark (circled).**

Melodie Putnam, Oregon State University

remains to be done to characterize this new disease, and to determine the incidence, distribution, and aggressiveness of *C. pulchella* in sweet cherry growing regions. Dr. Doug Gubler at University of California-Davis is leading the investigation.

If you have seen dark-colored amber ooze from sweet cherry trees, it is most likely either bacterial canker or cytospora. If you are not sure that a pathogen is causing the gummosis, scrape the outer bark away. If the inner bark is tan to brown, it is dead, and was most likely killed by a pathogen.

While trees are dry (for approximately 1 week after pruning), take time this fall to prune out affected limbs to prevent further spread. Also, either paint young tree trunks white or use white tree wrap to prevent winter sunscald.

5th International Orchard Bee Association General Meeting & Symposium

September 25-27, 2014
Kaysville Utah Educational Center

FOOD, DRUGS, LOVE for bees:

- Mason Bees as Ideal Pollinators
- Pollination of Blueberries
- European Approach to Safeguarding Bees
- Pesticide Companies Focusing on Pollinators
- The BEEnergy Project

Registration is FREE, but required. [Click here](#) to register and view the full schedule.



The Orchard Bee Association is a non-profit organization of growers, professionals, and enthusiasts dedicated to enhancing the use of native and naturalized bees in orchards. Membership includes a quarterly newsletter, networking/support from professionals and peers, access to research reports, and more.

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[click here](#) for archived advisories