

# Tree Fruit Pest Advisory

University of Idaho, U.S. Department of Agriculture, and Idaho counties cooperating.

Spring 2011 Issue 3

## Protect Yourself

**Codling Moth (CM)** trapping has been reported in a few orchards. My traps in Fruitland had a few moths on the 14th. Traps in Payette and Wieser also had moths this morning which could have been from this weekend as well. Biofix models state the 12th or 13th was Biofix for most locations. In general, we reached Biofix. Models from WSU have not used biofix as an indicator for spray timing since 2008. For more reading on Biofix and temperature models see Utah State University publication [Degree Days](#). For more information on CM Sprays see page 2.

**Leafroller (LR)** overwinter as larvae. They emerge in the spring when the tree breaks dormancy, First feeding on buds then leaves. Monitoring LR feeding is the best method of detection. It is possible to detect feeding injury as

early as the pink stage of flower development, but it is better to delay monitoring until the petal fall period; just prior to determining the need for a control treatment. For more information on LR see page 2.

**San Jose Scale (SJS)** can be treated annually before bloom when buds are beginning to open and good spray coverage of the tree can be achieved. If infestations become heavy, particularly on older, large trees, the insects may get under bark scales or on top of high leaders where they are difficult to target. Targeting them after bloom is achieved by using CM Degree days and applying a cover spray at 600 DD, usually with the second cover spray of CM. See the article on SJS on page 3.

**Fire Blight** infections were likely on Saturday even more likely if you had any hail as part of the thunderstorms. Hopefully you put cover on otherwise this weekend and early next week start looking for tips turning black on your apple and pear trees and cut them out.

**Coryneum Blight** infections are starting to be noticeable on peaches and apricots. Small round purplish or tan holes can be seen on leaves this time of year. The center will detach eventually with warmer weather producing the shot hole look. Our cool, wet weather has increased this diseases likelihood to spread. At shuck split use Bravo (home), Abound, Captan, Ziram, or Pristine. Keep in mind that copper sprays in the Fall are the most effective control.

### Degree Day "No biofix" (5/16/11) Look out for:

| Station/Elev.     | CM/PTB | 1% Hatch |
|-------------------|--------|----------|
| Boise(2716)       | 230    | 2-Jun    |
| Caldwell(2418)    | 225    | 30-May   |
| Emmett(2390)      | 181    | 3-Jun    |
| Mt. Home(3002)    | 198    | 3-Jun    |
| Nampa(2635)       | 189    | 3-Jun    |
| Ontario OR(2188)  | 214    | 1-Jun    |
| Parma(2290)       | 217    | 1-Jun    |
| Paye/Weis(2126)   | 184    | 2-Jun    |
| Walla Walla(1407) | 233    | 31-May   |

- Look for growing populations of aphids in your trees. Applications of 1% oil can be applied at anytime during the growing season to knock down population growth.
- Codling moth, San Jose scale, Woolly apple aphid, and Western flower thrips are examples of pests that may also need to be controlled in the petal fall period.

## Codling Moth Spray Options:

Adapted from Marion Murray

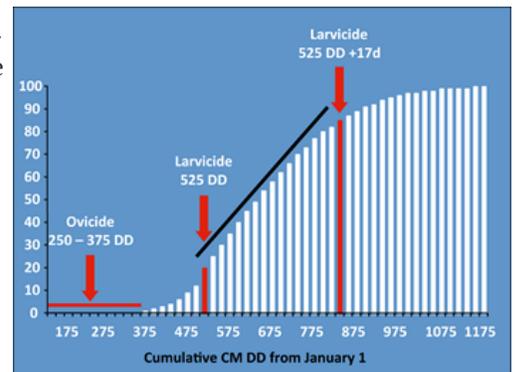
When codling moth adults emerge from pupation, they mate and females lay up to 70 eggs on fruit or on foliage near fruit. Depending on temperature, eggs hatch in approximately in 6-20 days, and larvae bore into the fruit, feeding mainly on the seeds. South-western Idaho has 3 to 4 generations of Codling moth each year.

The table above shows three options for the first spray of the first generation.

|                     | Date to Start Sprays                        |  |              |
|---------------------|---|--|--------------|
|                     | Option A (Home)                             | Option B (commercial)                                | Option C     |
| Caldwell/Sunnyslope | Oil on May 23 and 28 first spray on June 7  | Ovicide between May 20 and 23 first spray on June 7  | May 30, 2011 |
| Parma/Fruitland     | Oil on May 24 and 29 first spray on June 10 | Ovicide Between May 21 and 24 first spray on June 10 | June 1, 2011 |
| Weiser/Payette      | Oil on May 25 and 30 First Spray on June 10 | Ovicide between May 23 and 26 First Spray on June 10 | June 2, 2011 |

**Option A** and **B** is a recommendation out of Washington State University. It is a little more complicated, but may result in a slight cost savings and possibly improved control. We usually recommend to start sprays at egg hatch (**Option C**, 220 degree days after biofix), targeting the newly hatched larvae before they enter the fruit. But with Option A and B, you are killing the eggs by applying horticultural oil (1% rate) or a product with ovicidal activity against codling moth eggs (**Esteem, Intrepid, Rimon, or Altacor**) Ideally, applications are on four to five days before they hatch (at 425 degree days). Then, the first traditional insecticide spray would be applied about 7-12 days later (at 525 degree days). The later application of the traditional insecticide is close to the timing of "peak egg hatch" where almost 70% of the eggs hatch in a 1-2 week window of time. Good residue (insecticide) coverage is important at this timing.

By applying an ovicide prior to the onset of the egg-hatch period and delaying the larvicide application to 525 DD the most active larvicide residues coincide with the most active egg-hatch period. In this strategy the ovicide kills eggs that would have hatched in the period starting at 425 DD allowing growers an opportunity to delay the first larvicide application until 525 DD, which is the beginning of the period of peak egg-hatch activity.



After the first insecticide spray has been applied, continue to apply your chosen material(s) at the interval provided on the label.

**Obliquebanded Leafroller (OBLR)** have displaced the **Pandemis Leafroller (PLR)** in most apple growing areas. OBLR emerges from overwintering sites later in the spring than PLR and has a more spread out summer generation, which results in different timing for treatments. OBLR are more prolific and tend to be harder to kill with pesticides. **PLR** larvae have a light green to tan head capsule. **OBLR** larvae have a brown to black head capsule. There are several insecticides that will control overwintering leafroller larvae when applied in the petal fall period.

**Bacillus thuringiensis (Bt)** should be applied when daily high temperatures are expected to be **65 degrees or more for three consecutive days**. Two or three applications of Bt products may be required to achieve acceptable control of leafroller.

**Esteem, Intrepid, Rimon, Delegate, and Altacor** can be very efficient tools when used in the petal period because they are effective against both codling moth (CM) and LR. These insecticides work as ovicides, killing CM eggs that are being laid in the orchard at this time, and also control of feeding LR larvae. *Overwintering LR larvae and CM eggs overlap in the period between 250 and 375 CM DD past January 1.*

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**WashingtonCounty**



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WSU Decision Aid System

## San Jose Scale

Excerpt from Unruh, T. 2010 WSU

San Jose scale is most destructive on apple and pear, but it can be a serious pest of sweet cherry, peach, prune and other tree fruits. It also attacks nut trees, berry bushes and many kinds of shade trees and ornamental shrubs. Infestations in backyard or wild trees can spread to nearby orchards.

The best approach to orchard protection is to prevent scales from becoming established. This can be done by treating the orchard annually before bloom when buds are beginning to open and good spray coverage of the tree can be achieved. If infestations become heavy, particularly on older, large trees, the insects may get under bark scales or on top of high leaders where they are difficult to target. Additional sprays, possibly by hand gun, may be needed for a few years to reduce populations. Summer sprays directed at the crawler stage help protect fruit but usually do not control infestations. For this reason, they are a supplement to the early season spray, not a substitute.



San Jose Scale infestation

A degree day model is helpful for timing crawler sprays in June. The lower and upper developmental thresholds of San Jose scale are 51°F and 90°F. A degree day look-up table based on these thresholds is available. The model should be started at first male scale capture in a pheromone trap (the biofix). Because male scale flight is difficult to monitor accurately in commercial orchards, the regionally established

wetted, infection is possible. You may choose to apply antibiotic within 24 hours before or after the infection (wetting) event.

**Extreme:** Outbreak may occur if blossoms are wetted, no matter the blight history of your orchard. Apply antibiotic within 24 hours before or after the wetting event.

Trees that had infections last year are more prone to infection this year and should increase risk levels accordingly. Remember a wet event must take place for the blight to occur. Even a dew that last more than two hours during 65 to 70 de-

biofix for codling moth is often used to start the San Jose scale model, as the flight of both insects commonly begins on the same day. If neither biofix is available, start the model at full bloom of Red Delicious. Apply sprays aimed at crawlers between 400 and 450 degree days after biofix. This timing is usually close to the second cover spray for codling moth. The degree day table shows the relationship between degree days and the emergence of male scale and crawlers. It is important to examine young trees not receiving a full spray program. Control of infestations in the early stages will not only protect tree vigor but will prevent them from spreading to other trees in the orchard.

WSU trials using delayed-dormant and bloom timings of Esteem resulted in season-long control of San Jose scale while applications in late May to early June (beginning of crawler emergence) were less effective.

If you missed the earlier applications, apply Esteem, Provado, Movento, Assail, malathion, or carbaryl 10 days after full petal fall.

## Fire Blight

Tony McCammon

May 13-15 were perfect days for Fire blight infection. WSU's Cougarblight model uses these indicators to measure risk of infection in an orchard.

**Low:** low risk of infection, only treat areas adjacent to active cankers if a wetting event occurs

**Caution:** Wetting at this point is not likely to lead to infection, except within a few yards of an actively oozing canker.

**High:** If unprotected flowers are

gree weather can cause an outbreak. Trees are susceptible in the spring when they have open blossoms. But trees with damage caused by hail are susceptible anytime. Therefore have antibiotics on hand to prevent infection. Products include:

Copper, bactericides, and biological products are effective in their control. Bordeaux, Kocide, Streptomycin(Agri-Mycin), BlightBan, and Serenade(*Bacillus*) should be used if temperatures and weather are suggesting a possible infection. Remember

Prevention is Everything!

# WashingtonCounty

## Wilbur-Ellis Company Scouting Report:

It looks like biofix was May 12 for all three locations; namely, Ontario/Fruitland, Parma, and Caldwell/Sunnyslope.

My best forecast for 100 degree days is next Monday May 23. DuPont, suggests applications of Altacor be finished by 200 degree days for the early first spray. Altacor, Intrepid, Rimon, and Delegate work well to smother eggs laid on trees and fruit. These pre-hatch sprays can be started at 100 degree days to delay your first post hatch cover spray.

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ALWAYS read and follow the instructions printed on the pesticide label. The pesticide recommendations in this UI publication do not substitute for instructions on the label. Pesticide laws and labels change frequently and may have changed since this publication was written. Some pesticides may have been withdrawn or had certain uses prohibited. Use pesticides with care. Do not use a pesticide unless the specific plant, animal, or other application site is specifically listed on the label. Store pesticides in their original containers and keep them out of the reach of children, pets, and livestock.

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