UNIVERSITY OF IDAHO **EXTENSION UPDATE**

Fruit Pest Advisory

University of Idaho, U.S. Department of Agriculture, and Idaho counties cooperating.
Spring 2014 Issue 1

Protect Yourselves

Fire Blight—Tony McCammon

April 19-21 were Warm, Windy, and Wet. Perfect days for Fire blight infection. The rest of this week suggests Extremely probable infection. WSU's Cougarblight model uses these following 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 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 degree 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!

Degree Day "No biofix" (4/29/14)

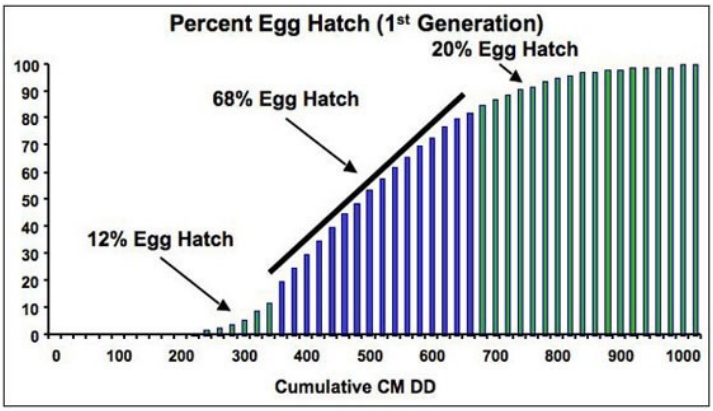
Station (Elev.)	°Days	1% Hatch
Southwest		
Parma (2309)	214	15-May
Weiser (2080)	202	18-May
Boise (2719)	215	14-May
Nampa (2713)	197	16-May
Fruitland (2362)	194	17-May
Southern		
Mt. Home (2992)	218	15-May
Hagerman (3197)	170	19-May
Twin Falls (3921)	141	25-May
Rupert (4154)	125	30-May
Shoshone (3950)	128	27-May
Eastern		
Pocatello (4605)	146	30-May
Idaho Falls (4709)	83	9-Jun
Rexburg (4870)	73	14-Jun

Look out for:

- Look around leaves for fresh powdery mildew lesions on apples
- Look for new colonies of aphids forming; Oil can be used on aphids at 1% rate anytime during the growing season.
- Cut out any signs of fire blight infection and watch forecasts that indicate good environments for the spread of it.
- Peach Leaf Curl may show up this spring because we will be more prone to cool wet weather as the possibility for a long spring increases.

WSU decision Aid System—Codling Moth Control

A new method of controlling codling moth has been developed at WSU where timing of the sprays is altered to take advantage of the slow start of egg laying. WSU experience with the codling moth (CM) degree-day model shows that first fruit injury is detected at 425 degree-days past January 1 (250 DD past biofix). The hatching of deposited eggs starts off slowly and in the first 10-15 days (100 DD) only about 12-15% of the total egg hatch occurs. The rate of egg hatch then becomes more rapid and in the 21 day period between 525-825 DD (350-650 DD after biofix) almost 70% of the eggs hatch. After this period of peak activity, the rate of egg hatch slows and the final 15-20% of the first generation egg hatch occurs over about a two-week period. A potential problem with a traditional larvicide application strategy is that the most active residues from the first application are in the orchard at a time when relatively little CM egg hatch is occurring. Applying an ovicide (Esteem, Intrepid, Rimon, or Altacor) prior to the onset of the egg-hatch period kills eggs that would begin hatching at 425 degree-days (250 DD after biofix). As a result growers can delay the first larvicide application until 525 degree-days (350 DD after biofix), which puts the most active residues at the beginning of the period of peak egg-hatch activity. This strategy also shortens the period of time that larval control is necessary. - See more at: http://das.wsu.edu/news/story/2014/04/28/New_CM_Control_Strategies#sthash.wmgOIGL7.dpuf



	Date to Start Sprays		
	Residential Plan A	Commercial Plan A	Original spray schedule 1% Egg hatch
Caldwell/ Sunnyslope/Parma	Oil on May 14 First spray on May 26	Ovicide on May 12 First spray on May 26	May 15
Weiser/Payette	Oil on May 16 First spray on May 28	Ovicide on May 13 First spray on May 28	May 17
Magic Valley (Twin Falls)	Oil on May 20 First Spray on June 10	Ovicide on May 18 First Spray on June 10	May 25
Eastern Idaho (Idaho Falls)	Oil on June 1 First Spray on June 20	Ovicide on May 30 First Spray on June 20	June 4

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WSU Pest Management Transition Project Newsletter

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Are Chemical Residues on our produce dangerous?

Tony McCammon

University of California published results in the Journal Of Toxicology refuting The Environmental working group (EWG) claims of "Dirty Dozen" fruits and Vegetables with the most pesticide residues.

"In June 2010, the EWG released its most recent "Dirty Dozen" list. Topping the list as the most contaminated commodity was celery, followed by peaches, strawberries, apples, blueberries, nectarines, bell peppers, spinach, cherries, kale, potatoes, and grapes."

Their claim was that "*consumers can lower their pesticide consumption by nearly four-fifths by avoiding conventionally grown varieties of the 12 most contaminated fruits and vegetables*"

Carl Winter and Josh Katz, University of California researches, said it was unclear how the EWG could make these claims. Specifically how they quantified consumer exposure to pesticide residues. Instead it seemed they used six separate indicators of contamination, "including (1) percentage of samples tested with detectable residues, (2) percentage of samples with two or more pesticides detected, (3) average number of pesticides found on a single sample, (4) average amount of all pesticides found, (5) maximum number of pesticides found on a single sample, and (6) total number of pesticides found on the commodity ."

Winter and Katz measured the lifetime mean daily exposures to pesticide residues in imported and domestic fruits and vegetables. Results were compared to chronic reference dose established by the EPA. They tested 2000 "dirty dozen" Fruits and vegetables for 120 residue files.

Interestingly, "Results demonstrate that the Reference dose values for each of the pesticides exceed the mean exposure estimates in all cases and that the reference dose were more than 1000 times higher than the exposure estimates in more than 90 percent of the comparisons."

They also concluded that, "For three commodities—blueberries, cherries, and kale—the reference dose was more than 30,000 times higher than the exposure estimates for all of the ten most frequently detected pesticides on those commodities.

They also responded to the EWG claim that Organic produce was less likely to have chemicals with these findings. "While conventional produce was between 2.9 and 4.8 times more likely to contain detectable pesticide residues than organic produce, samples of organic produce frequently contained residues." In fact, they indicated that 23 percent of organic food samples tested positive for pesticide residues.

To read all the results on this research you can visit:

http://www.hindawi.com/journals/jt/2011/589674/

Table 6: Exposure estimates of the ten most frequently detected pesticides on cherries.

Pesticide	Mean exposure (μg/kg/day)	Reference dose (μg/kg/day)	Ratio—reference dose to mean exposure
Azinphos-Methyl	0.0000485	5*	103000
Bifenthrin	0.0000169	15	888000
Boscalid	0.000357	218	611000
Carbaryl	0.000219	100	457000
Imidacloprid	0.0000956	57	596000
Myclobutanil	0.000131	30*	229000
Pyraclostrobin	0.000127	30	236000
Quinoxyfen	0.0000522	200*	3830000
Tebuconazole	0.000937	30	32000
Trifloxystrobin	0.0000915	100*	1090000

*Acceptable daily intake used.

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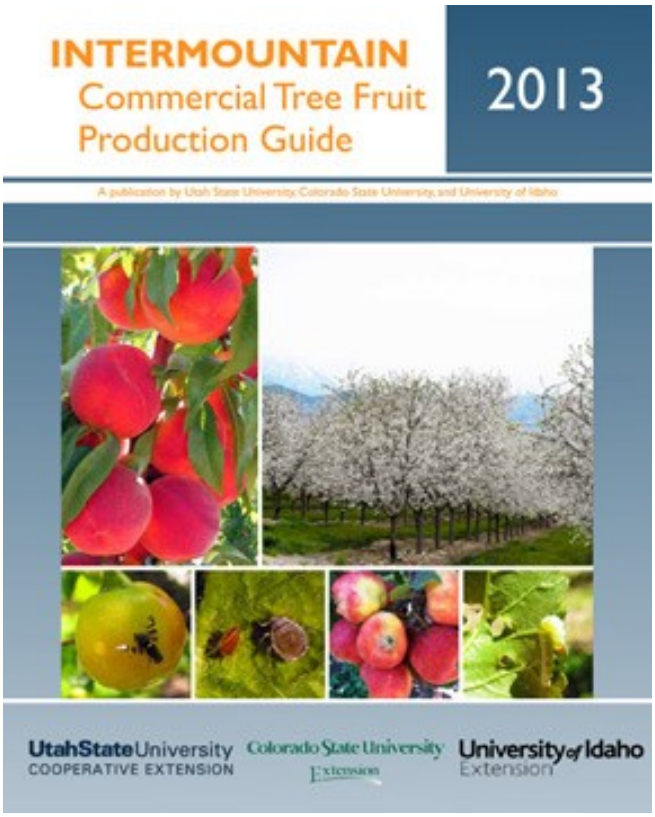
ALWAYS read and follow the instructions printed on the pesticide label. The pesticide recommendations in this UI publication do not substitute for instructions on the label. Pesticide laws and labels change frequently and may have changed since this publication was written. Some pesticides may have been 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.

Trade Names--To simplify information, trade names have been used. No endorsement of named products is intended nor is criticism implied of similar products not mentioned.



www.intermountainfruit.org

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