

# Fruit Pest Advisory

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

Spring 2015 Issue 1

## Protect Yourself

### Early Spring?—Tony McCammon

**Blossoms are already open**, watch forecasts closely. Beware of the forecasted cold temperatures for much of Southwestern Idaho the next few weeks. See Table on critical temperatures for flower and bud damage. Orchardists use heaters if available, or turn on wind machines. Another idea is to cover the buds and blossoms with water, forming an ice layer. Remember that water freezes at 32 degrees F, and a permanent, uninterrupted layer of ice throughout the frost period will insulate those flowers and buds. The ice must remain until the daytime air temperatures rise above freezing. If High winds are expected using water is not advisable as the weight of limbs could result in breakage. The last freeze will occur 2 out of 10 years after May 4 at a temperature of 28 degrees or less in Payette County, May 6<sup>th</sup> in Emmett and Parma, May 13<sup>th</sup> in Weiser, April 27<sup>th</sup> in Caldwell and Western Magic Valley, May 14<sup>th</sup> in Eastern Magic Valley. May 6<sup>th</sup> in Twin Falls.



King bloom ready to open, Twin Falls, ID 4/7/15

**Insect Trapping**, Its time to hang you traps for trapping codling moth to determine biofix. For Large acreage hang mating disruption dispensers at full bloom in Apples.

**Fire Blight** infects during the blooming period of apple and pear. Purchasing your antibiotic products and watching weather patterns will help you protect against this disease when the temperatures climb.

### Degree Day "No biofix" (4/7/15)

Station (Elev.)	°Days	1% Hatch
<b>Southwest</b>		
Parma (2309)	177	10-May
Boise (2719)	224	6-May
Nampa (2713)	156	13-May
Fruitland (2360)	165	12-May
<b>Southern</b>		
Mt. Home (2992)	168	11-May
Hagerman (3197)	162	15-May
Twin Falls (3921)	152	25-May
Rupert (4154)	129	28-May
Magic Res. (4315)	104	4-June
<b>Eastern</b>		
Pocatello (4605)	177	21-May
Idaho Falls (4709)	97	3-June
Rexburg (4870)	79	10-Jun

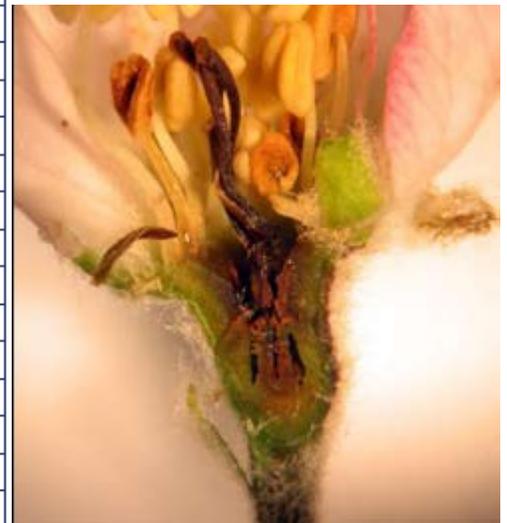
### Look out for:

- Aphids will be emerging look for them on new foliage and on the underside of leaves.
- Watch for powdery mildew lesions on apple, cherry, and peach leaves.
- Look at apricot and peach leaves for purple spots. Coryneum blight infection now means a spray at petal fall and shuck split.
- Peach Leaf Curl might show up this week due to the cool wet weather. If you had problems last year protect peaches new tips with a fungicide.

	Stage of Development	10% Kill (°F)	90% Kill (°F)
<b>Apple</b>	Silver tip	15	2
	Green tip	18	10
	½-inch green	23	15
	Tight cluster	27	21
	First pink	28	24
	First bloom	28	25
	Petal fall	28	25
<b>Peaches</b>	Swollen bud	18	1
	½-inch green	25	15
	Pink	26	21
	Bloom	27	24
	Petal fall	28	25
<b>Pears</b>	Swollen bud	15	0
	Bud burst	20	6
	Green cluster	24	15
	White bud	25	19
	Bloom	28	24
	Petal fall	28	24
<b>Sweet Cherries</b>	Swollen bud	17	5
	Bud burst	25	14
	Tight Cluster	26	17
	White bud	27	24
	Bloom	28	25
	Petal fall	28	25
<b>Tart Cherries</b>	Swollen bud	15	0
	Bud burst	26	22
	Tight cluster	26	24
	White bud	28	24
	Bloom	28	24
	Petal fall	28	24
<b>Apricots</b>	Swollen bud	15	---
	Calyx red	20	0
	First white	24	14
	First bloom	25	19
	Full bloom	27	22
	Post bloom	27	24

**Frost damage:**

On April 3 Southern and southwestern Idaho had temperatures dip between 20 to 25 degrees. In some areas, this probably killed many flowers of our fruit bearing trees. Particularly the *Prunus* family of trees. The damage will depend on the lowest temperature and length of time of exposure, as well as the stage of the blossom. This table is from Utah State University and can also be found in the 2015 Intermountain Tree Fruit Guide with more pictures (see page 4). Use this table to determine your bloom loss and then test your flowers for ovary damage. Remember that we usually thin our trees to 10-70%, so small losses due to frost damage should not affect your bottom line.



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WSU Decision Aid System

## Washington State dealing with Little Cherry Disease

Little cherry disease (LCD) is caused by one or more of three pathogens and all are known to occur in Washington State: **Little cherry virus 1** (LChV1), **Little cherry virus 2** (LChV2), or **Western X phytoplasma** (WX). Trees with LCD produce cherries of small size and poor color and flavor making the fruit unmarketable. Little cherry disease became a statewide problem in 2010 and has since resulted in unpicked limbs/trees, tree removal, and even orchard removal.

### How does it spread?

**Little Cherry Virus 2** is spread from tree to tree by the apple mealybug (*Phenacoccus aceris* (Signoret)), and the grape mealybug (*Pseudococcus maritimus* (Ehrhorn)). Both mealybug species can be found in sweet cherry orchards in North Central Washington, and their presence has been verified in LChV2 infected orchards. However, the natural rate of mealybug movement between trees, and hence their role in the epidemiology of this disease is poorly understood. The virus is also readily transmitted by all types of grafting.

**Little Cherry Virus 1** can be spread by propagation. The insect vector is not known. Some species of ornamental or wild flowering cherries can be symptomless carriers of the disease.

**Western X phytoplasma** is primarily spread by a



Infected Lapin Cherry

leafhopper, and can occur in sweet and sour cherries, peaches, and nectarines.

**It has not been demonstrated** that any of the LCD causing pathogens are spread by pollen, seed, in the soil, or via pruning tools.

### Management

Identifying the disease is difficult without an expensive molecular analysis. Trees can look completely fine but host the disease that insects are slowly spreading to other trees. Controlling mealybug and leafhoppers will slow the spread of LCD. Using oils multiple times through the dormant and crawler stages can have some affect on the populations. Dormant oil sprays with Lorsban showed best control and Diazinon during crawler stages were most effective. For home and organic orchardists, Neem oil and beneficial insects (Encyrtid wasp) can be applied often to reduce the spread.

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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.

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**Mites:** Want to see what is happening up close on your tree. There is a whole tiny ecosystem on every leaf. WSU takes us up close with this video on the life of a Mite. Learn more about fruit mites and characteristics that set them apart. <http://youtu.be/TOjLhjAVZHg>

Mite	Crop	Overwintering	Description
European Red	All fruit	Egg	Red with Large Bristles on back
McDaniel	Pome fruit	Female	Greenish or yellowish with large spot on each side
Twospotted	All fruit	Female	Light green with large black spot on each side
Yellow	Pome	Female	Pale yellow to white with dark marking on each side
Apple rust	Apple	Female	Very Small Yellowish Brown, Tapered body
Prunus rust	Stone fruit	Female	Pale yellow at fist, turning tan
Blister	Pome	Female	Very small, white to light red, wedged shape, found inside blisters.