

## News/What to Watch For:

- Both codling moth and peach twig borer third generation egg hatches beginning soon in warmer locations of northern Utah
- Spider mites continue to be active where ever predatory mites have not kept them in check
- Now is the time to collect leaves for nutritional analysis by the USU Analytical Lab for precise spring applications
- If 4-6 hr rains occur during peach ripening stage, may need to apply fungicide to prevent coryneum infection
- Codling moth and peach twig borer spray timings, pages 4&5
- Spray materials, page 6

## Announcement

### Surround available for home use

Surround (kaolin clay) is now available in smaller quantities (5 and 10 lb), sold as “Surround at Home Crop Protectant”. Surround is an organic product that can be used as a repellent (does not kill insects) to control pests such as leafhopper and pear psylla, and to suppress mites, codling moth, and many other pests. It can also prevent sunscald.

It works by forming a dry, white barrier film on the fruit. It is used at a rate of 3 cups product to 1 gallon of water and sprayed to thoroughly cover the tree. It lasts 7-14 days until plant growth ceases, and then 14-21 days. It can be mixed with other pesticides.

## Insect and Disease Activity

### APPLES/PEARS

#### Codling Moth

Third generation egg hatch is underway in all areas of northern Utah, ranging from 2% in colder counties to about 20% in all other counties down to Utah County. We are still trapping codling moth, though numbers are low in many areas. The recommended time to stop treatments is September 15, when eggs will have stopped hatching due to cooler weather and shorter days. You might consider one last treatment to maintain protection for these last 3 weeks.

Insecticides effective for codling moth in commercial orchards and recommended near harvest include Assail (7 d PHI), Imidan (7 d PHI), Intrepid (14 d PHI), and codling moth granulosis virus (see label).

#### White Apple Leafhopper



White apple leafhopper summer generation nymphs are continuing to build in numbers. As they mature to adults, activity will peak in mid September, around the start of apple harvest. This is when the leafhopper is considered a true pest as they fly into the face and eyes of pickers.

Normally control should target first generation nymphs, but if necessary, treatments for the second generation will also work. Waiting until they are adults decreases the effectiveness of your insecticide of choice.

#### Apple- and Pearleaf Blister Mites and Rust Mites

Blister mites and rust mites are microscopic mites in the group called eriophyid mites. Eriophyid mites are mostly a problem on backyard trees rather than in large, commercial orchards. Feeding by blister mites causes blisters to form on leaves that are barely visible in spring, and by late summer, appear as raised, brown necrotic (dead) spots. Feeding by most rust mites looks very similar to spider mite injury (with the exception of peach silver mite, which causes a silvery sheen to the leaves.)

## Insect and Disease Information, continued from previous page



Apple leaf blister mite



Peach silver mite



Rust mite on apple

These mites overwinter in the host trees' bud scales. In spring, females feed on developing leaves and blister mites lay their eggs within the blisters. The mites feed within the blisters for protection, but are able to move from one to another. There are several generations over the summer. Before leaf fall, eriophyid mites migrate to buds for the winter.

The best treatment timing is in early fall, before leaf drop, as mites are migrating to leaf buds.

### Pear Psylla



Pear psylla adults become active early in spring, with several generations throughout the growing season. If present, it is most noticeable by July and August. Nymphs live and feed within a protective, honeydew "bubble" on the undersides of leaves. Their feeding causes necrotic (dead) lesions on the leaves, and high populations can cause loss of vigor as well as unsightly sooty mold growing on the honeydew that drips onto the fruit.

Pear psylla can be managed in spring or fall with horticultural oil or sulfur. A fall application should be applied just after harvest when the weather has cooled.

## STONE FRUITS

### Peach Twig Borer

Egg hatch of 3rd generation larvae is progressing quickly: 30-50% of all eggs have hatched in Salt Lake, Weber, Davis, and Box Elder Counties, while 5-20% have hatched in Utah County. Many peaches have been harvested, but the remaining peaches still need protection up to September 15.

Be sure to consider the pre harvest intervals of insecticides (required interval between last application and picking fruit) when applying late season insecticides.

### Boxelder Bugs



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We have had reports of large aggregations of boxelder bugs in the Box Elder and Davis county fruit growing areas on peach, apple, and pear. 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), or for day-of sprays, there are many options containing pyrethrin (Pyganic E.C., Pyronyl, Pyrellin E.C., Pyrola, Pyrenone Crop Spray; PHI: 0).

**Greater Peachtree Borer**

Keep the lower 12-18" of trunks and exposed roots of peach, nectarine, and apricot trees protected against this pest through September. Most products provide about 3 weeks of protection.

**Spider Mites**

Spider mites are still actively feeding, but the shorter 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 migrate to sheltered



areas on the lower trunks or on debris and groundcover near trunks starting in September.

If spider mite densities are high, a late season treatment may be helpful, but it is uncommon to need to treat for spider mites after mid-August.

**Examples of Peach Maladies Seen During Harvest**

During harvest, you will see many types of injury on peaches. Some can be explained while others (mostly caused by environmental factors) are more difficult to discern. Some of the examples below are the more common types of damage that can be found on ripening peach and nectarine fruit.



late season coryneum infections



earwig feeding followed by rot



bird injury

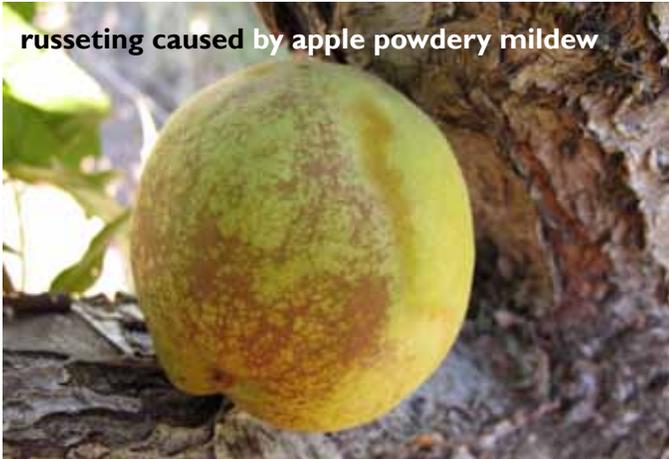


earwig feeding

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## Spray Timing - Peach Twig Borer

### Peach Twig Borer, Second and Third Generations

Keep fruit protected until September 15.

County	Location	Start of Third Gen. Egg Hatch
Box Elder	Perry	August 19
	Tremonton	August 30
Cache	River Heights	September 3
	Smithfield	September 3
Carbon	Price	September 4
Davis	Kaysville	August 20
Iron	Cedar City	August 29
Salt Lake	All Regions	August 11
Tooele	Tooele	August 11 - 15
Uintah	Vernal	August 23
Utah	Alpine	August 31 - September 6
	American Fork	August 25
	Genola	August 23
	Lincoln Point	August 24
	Orem	August 23
	Payson	August 25 - 30
	Santaquin	August 24 - 28
Weber	Pleasant View	August 18

## Spray Materials - Commercial Applicators

Please look up spray material options in the **2012 Utah-Colorado Tree Fruit Production Guide**. If you do not have a copy and would like one, contact [marion.murray@usu.edu](mailto:marion.murray@usu.edu). You may also access spray options at the guide's companion website at [intermountainfruit.org](http://intermountainfruit.org).

## Spray Materials - Residential Applicators

Note that these treatments are only recommended if you know you have the particular pest in your trees. We recommend learning about specific pests, and scouting your trees at least once/week. Products are listed by *Conventional* (usually broad-spectrum pesticides that are effective, but harmful to beneficial insects), or *Soft/Organic* (not as effective, but safer for the environment and humans). Products are listed in order of efficacy.

Target Pest	Host	Chemical	Example Brands	Comments
Both codling moth  AND  peach twig borer (except Cyd-X)	apple, pear	<i>Conventional</i> carbaryl acetamiprid malathion  <i>Soft/organic</i> hort. oil (1%) spinosad  codling moth virus	Sevin, Bonide Fruit Tree Spray, etc. Ortho Max Flower, Fruit, and Veg., Malathion  Many products Green Light, Gardens Alive Bull's Eye, Monterey Cyd-X	<b>acetamiprid:</b> every 14 days <b>carbaryl:</b> every 14 - 21 days <b>malathion:</b> every 7 days  <b>hort. oil (codling moth only):</b> lasts 5-7 days for killing eggs; use at beginning of each generation; apply at 1% rate only when temperatures are below 80 F; follow up with a different product <b>spinosad:</b> every 7 days <b>codling moth virus (codling moth only)</b> can only be purchased online
Coryneum blight	peach, apricot	captan	Captan	use as a preventive before a rain

**Precautionary Statement:** Utah State University Extension and its employees are not responsible for the use, misuse, or damage caused by application or misapplication of products or information mentioned in this document. All pesticides are labeled with ingredients, instructions, and risks. The pesticide applicator is legally responsible for proper use. USU makes no endorsement of the products listed herein.

### Tree Fruit IPM Advisory

is published weekly by Utah State University Extension

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