

## News/What to Watch For:

Examine leaves for fresh powdery mildew lesions on apple

Aphids, such as green peach aphid, black cherry aphid, and rosy apple aphid, continue to build in numbers

Examine apple and peach leaves for shot hole infections (purplish lesions and holes in leaves)

New spray timing dates for codling moth (in some locations), page 4

## JUST THE BASICS

### APPLE

*Codling moth* treatment should begin in some areas. See info below.

If your trees are still in bloom, be aware of *fire blight*. See below.

Commercial growers may consider an Ultor application for *woolly apple aphid*.

### APRICOT

If you have problems with *aphids* or the disease *coryneum blight* (scabby lesions

on fruit), a spray may be warranted. See below.

### PEACH/NECTARINE

If you have problems with *aphids*, the disease *coryneum blight* (scabby lesions on fruit), or *thrips* on nectarine, a spray may be warranted. See below.

### PEAR

*Codling moth* treatment should begin in some areas. See table below.

If your trees are still in bloom, be aware of *fire blight*. See info below.

### PLUM

If you have problems with *aphids*, a spray may be warranted. See below.

## EXPANDED COVERAGE - Insect and Disease Information

**R:** there is information that applies to residential settings; **C:** there is information that applies to commercial orchards

### APPLE, PEAR

#### Codling Moth [R,C]

We caught moths in our monitoring traps in a few sites along the Wasatch Front. Using the date of first trap catch (biofix), we can use the codling moth model to determine the date at which egg hatch begins, which corresponds to when to start sprays.

Any areas not included on the table on page 4 will be covered next week. With the warming weather, we should have biofix in most areas by then.

When codling moth adults emerge in the spring, they mate, and females lay up to 70 eggs on fruit or on foliage near fruit. Depending on temperature, eggs hatch in approxi-



mately in 6-20 days, and larvae bore into the fruit, feeding mainly on the seeds. One to two more generations follow in northern Utah, and two-three in southern Utah.

## Insect and Disease Information, continued from previous page

The table on page 4 provides dates to start sprays. There are two management strategies included:

- Option A is cheaper and provides good control. With this option, you use horticultural oil (1%) as your first spray, and your regular insecticide as your second spray. The oil kills eggs that have been laid on fruit up to that point. Good coverage of the oil (to dripping) is very important.
- Option B is the traditional date to start your codling moth sprays—when eggs start hatching in the spring.

After your first insecticide spray has been applied, continue to apply your chosen material at the interval provided on the label (usually every 7-14 days), until the end of the first generation. We will provide the dates for end of first generation in a later advisory.

*Commercial treatment options (and days between sprays):*  
Assail (14), Altacor (14-21), Delegate (14), Imidan (14-21)

*Residential treatment options (and days between sprays):*  
Spectracide Triazicide (14), Ortho Max Flower, Fruit and Vegetable (10-14), Sevin (14), Bonide Fruit Tree Spray (14), Malathion (7), Monterey Spinosad (5-7)

### Fire Blight [R, C]



Fire blight is a bacterial disease of apples and pears (and some ornamental plants). New infections happen in spring, through the flowers. The bacteria can be spread by rain or by insects, including bees, moving from flower to flower. Fire blight is controlled by using an antibiotic spray on open flowers, only applied when there is a high risk for infection.

Starting May 11 and through May 15, the risk for fire blight infections for ALL areas of northern Utah, and Carbon and Iron Counties, is EXTREME. Again, this warning only applies if your apples/pears are still in bloom.



Existing fire blight infections will ooze in warm weather.



After an infection, symptoms will show up about 2 weeks later.



On new infections, look for darkened fruit pedicels, and droplets of bacterial ooze.

In addition, two or more hours of wetness (dew, irrigation) is required for infection to occur.

*Treatment* for areas **other** than Utah County is the antibiotic, streptomycin. There are several brands available. Streptomycin protects flowers up to 4 days.

Farms and backyards near farms in Utah County have fire blight bacteria that are resistant to streptomycin, so those areas need to use the alternate antibiotic, oxytetracycline. Oxytet lasts 3 days, and unfortunately, is not as effective as streptomycin, and not readily available in a homeowner formulation.

Most diligent backyard growers should not need to apply an antibiotic. Instead, monitor trees closely in the next several weeks after bloom. Look for new infections, and prune them out immediately (on a dry day). Cut 10" below visible infection, or cut the stem twice the length of the infection.

## Insect and Disease Information, continued from previous page

### Rosy Apple Aphid [R, C]



Rosy apple aphids are active now, and will build populations as the weather warms. Adults are all females, and give birth to live young. At this time of year, they are tucked away in curled leaves or at the base of blossom clusters. As they feed, their saliva causes the developing fruit to become distorted.

If you did not make a dormant oil application and know that this aphid is a problem in your trees, make an inspection for activity. Shake a limb over a cloth tray to look for dislodged, rosy-colored aphids, and look for damage (curled leaves) on at least 10 terminals per tree, especially toward the center of the tree. If you find one colony per tree, make an application at petal fall.

*Treatment options include:*

- residential: insecticidal soap (many brands) or horticultural oil (1%)
- commercial: Admire Pro (or generic), Beleaf, Assail, Ultor

### Woolly Apple Aphid [C]



Woolly apple aphids (WAA) have NOT been seen yet in commercial orchards. They typically show up in the canopy a few weeks after petal fall; this year, towards early June. However, growers that have had problems with WAA in the past, should strongly consider an application of Ultor (spirotetramat) at petal fall.

Research conducted by Diane Alston on severely infested apple trees showed that a single application of Ultor at petal fall provided excellent control. Ultor is a systemic, so it will control the aphids feeding in the canopy as well as on the roots.

When WAA populations increase to large colonies, they are very difficult to treat. Think about the fact that when you see a high population in the canopy, there is also a high population feeding on the roots, decreasing the vigor of the trees and the overall yield.

Scout for WAA starting in early June, particularly around the callus wounds of old pruning scars, branch crotches, other cracks and crevices, and on root suckers.

## STONE FRUIT

### Green Peach Aphid [R, C]

Green peach aphid colonies are forming now, and populations will continue to increase with warmer temperatures.

Early feeding on nectarines can cause scarring and gummosis of the fruit. Look for small, green insects on the new foliage and treat if necessary. Backyard growers can use insecticidal soap.



### Thrips [R]

Thrips are tiny insects whose feeding can result in deformed nectarine and plum fruits. Thrips feed on the developing fruit during flowering and soon afterward, damaging the fruit. As the fruit matures, scars form from the feeding wounds. To prevent injury, a treatment should be applied just after bloom.



*Treatment:* Use organic products containing spinosad for control. Treat at night or early in the morning because spinosad is harmful to bees when the product is wet (dry product does not affect bees).

## Insect and Disease Information, continued from previous page

### Coryneum Blight [R, C]

Coryneum blight, also known as shot hole, is a disease of most stone fruits. Apricots are most susceptible, with plums being least. The disease is caused by a fungus, and infects leaves, fruit, and small twigs. On twigs, it forms a gummy canker; on leaves, it develops as a small, round, spot that eventually drops out producing a "shothole" effect; on fruit, small reddish spots are marked with a gummy exudate.

Lesions were observed on apricot foliage this week. One of the optimal treatment timings is at shuck split stage, when the fruit would normally be very susceptible to infection.

The shot hole pathogen overwinters in buds and spreads from there to leaves and developing fruit. On the leaves, you will see small round holes that may be purplish or tan in color.



The center of the lesion will sometimes still be attached. Cool, wet weather and at least 6 hours of rainfall contributes to spread.

Treatment options:

- residential: Daconil (do not use after shuck split)
- commercial: Bravo (not after shuck split), Abound, Ziram, Pristine

## Spray Timing - Codling Moth

County	Location	Option A		Option B
		Apply oil	Apply first spray	Apply first spray
Box Elder	Perry	May 25	June 7	May 27
	Tremonton	no data yet	no data yet	no data yet
Cache, Carbon, Davis, Iron, Uintah, Wasatch	All locations	no data yet	no data yet	no data yet
Salt Lake	All locations	May 23	June 3	May 25
Tooele	Tooele	May 23	June 4	May 25
Utah	Alpine	no data yet	no data yet	no data yet
	American Fork	no data yet	no data yet	no data yet
	Genola	May 24	June 6	May 26
	Lincoln Point	no data yet	no data yet	no data yet
	Orem	May 20	May 31	May 22
	Payson	May 24	June 4	May 26
	Santaquin	May 25	June 6	May 27
Weber	Pleasant View	May 21	June 2	May 23

Choose either Option A or B when starting your codling moth sprays:

Option A uses horticultural oil (1%) as the first spray, followed by a regular insecticide at a later date. The oil kills eggs that have been laid on fruit up to that point. Good coverage of the oil (to dripping) is very important.

Option B is uses regular insecticide at the recommended date. Repeat at intervals until this advisory provides the end date for generation I.

**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

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