

News/What to Watch For:

- Codling moths were caught in many locations along the Wasatch Front, and we can now provide spray dates in the table below. We expect to know more details of remaining locations by next week.
- Fire blight risk is **EXTREME** today, and with threat of rain, an antibiotic is recommended.
- Continue to examine apple, peach, and cherry leaves for new colonies of aphids forming; oil can be used on aphids at 1% rate anytime during the growing season

Current Insect and Disease Activity

APPLES/PEARS

Codling Moth



With the hot weather we had over the past weekend, most areas along the Wasatch Front reported biofix (first moth trap captures). With the knowledge of first trap catch, we can now start to use the codling moth model to determine the date at which egg hatch begins, which corresponds to when to start sprays.

Most other areas of northern Utah may see first moth flight within the week, but the cooler weather and rain coming may prevent flight.

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 approximately 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.

The table below provides dates to start sprays. There are two management strategies included:

- **Option A** 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. With Option A, you use horticultural oil (1%) to kill eggs at the

date corresponding to the timing just before they start to hatch. Good coverage of the oil (to dripping) is very important.

Assuming the oil kills all the eggs, any new eggs that get laid will not start hatching for 6-20 days, so the actual first cover spray is then delayed to the date corresponding to when that egg hatch would begin (which will be provided in the next advisory). The later application of the traditional insecticide is close to the timing of "peak egg hatch", when about 50-75% of eggs hatch in a 1-2 week window of time.

- **Option B** is the traditional date to start your codling moth sprays--when eggs start hatching in the spring.

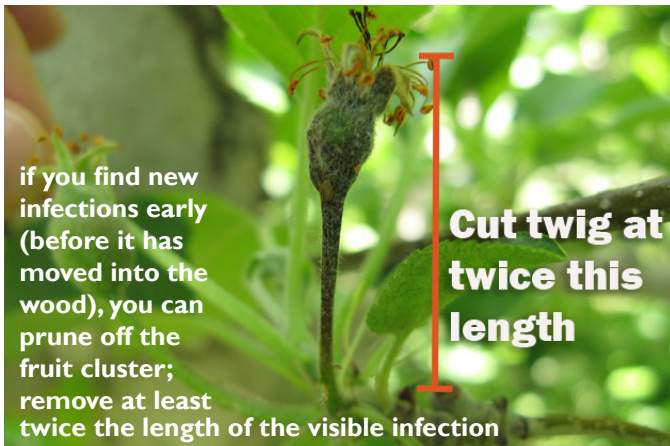
After the first insecticide spray has been applied, continue to apply your chosen material(s) at the interval provided on the label (usually every 7-14 days), until the end of the first generation. Then, you will start back up for second generation egg hatch.

Fire Blight



Apples are still in bloom, and fire blight should be on everyone's mind. Fire blight can be prevented by using antibiotics only during bloom.

Insect and Disease Information, continued from previous page



Due to the hot weather of the last several days, all locations in Utah are at **EXTREME** risk for fire blight infection. With rain coming today and tomorrow, an antibiotic should be applied asap where you have had fire blight problems in the past.

New infections, if they have happened, will show up within about 1-2 weeks. If you have the time and resources, one of your best defenses against fire blight is to prune out new infections in the very early stages.

If you have had powdery mildew in the past, consider treating at this time (Flint, Sovran for commercial growers; sulfur for residential growers).

A second application should be made at petal fall (Rally, Topguard, Procure, Vintage for commercial growers; sulfur for residential growers).

PEACHES/NECTARINES

Green Peach Aphid



A few peach growers have found that green peach aphids have really become a problem, and we have seen that they are already starting to curl the leaves. The weather conditions of the last two years have favored aphids, so it is not surprising that they might have built in numbers.

When the leaves start to curl, treatment with contact sprays (horticultural oil, insecticidal soap) is not as effective, unless you can get good coverage of all the upper and undersides of the leaves. The other option is to use a systemic (imidacloprid) where direct contact of the aphids is not as important. NOTE: do not use during bloom.

For commercial growers, that would be Admire Pro or any of the (many) generic options labeled for peach.

For residential growers, that would be Bayer Advanced Fruit, Citrus & Vegetable Insect Control. Note: The label states to stop use within 21 days of harvest, but because this product is a systemic, we recommend limiting its use to this time of year.

Coryneum Blight (Shot hole)



Shot hole lesions are starting to appear on leaves at this time. Shot hole (or coryneum blight) overwinters in buds and spreads from there to leaves and later in the season, to 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 contributes to spread.

At the shuck-split stage, you can use Bravo (chlorothalonil, Daconil for residential use), Abound, Captan, Ziram, or Pristine. Chlorothalonil should not be used after the shuck split stage. For residential growers, the only option during the growing season is Captan (it would be used if you continue to have infections at times when 4-6 hours of moisture occur).

And keep in mind that the most important treatment is an application of copper at 50% leaf drop in the fall.

Degree Day Accumulations and Insect Development

Upcoming Monitoring/Insect Activity

Pest (in order of appearance)	Host	Appearance/Management Action
Apple powdery mildew	apple	Look for small white lesions on new foliage
Codling moth	apple fruit	First flight approximately Red Delicious full bloom; egg-hatch approximately 2 weeks later
San Jose scale	apple mostly	Crawler emergence in mid spring. Treat in mid to late June
White apple leafhopper	apple	Look for nymph activity on the undersides of leaves
Green peach aphid	peach, nectarine	Look for colonies on peach and nectarine
Peach twig borer	peach, nectarine, apricot	Moths typically start flying in June; treatment is 1-2 weeks later
Black cherry aphid	cherry	Watch terminals for leaf-curling and feeding

Codling Moth - When to Spray

The table below shows two options for the **first spray** of the first generation.

- **Option A** may provide a slight cost savings, and can be repeated at the beginning of the second generation. It uses horticultural oil (1%) to kill eggs before they have started to hatch. The second spray will then be about 7-12 days later, and will coincide with the period when eggs would normally be rapidly hatching.
- **Option B** is the traditional date to start sprays--when the eggs start hatching.

Good residue (insecticide) coverage is important at this timing. After the first insecticide spray has been applied, continue to apply your chosen material(s) at the interval provided on the label.

County	Location	Option A		Option B - (Most commonly used)
		Apply Oil (200 DD)	Apply 1st cover (350 DD)	Traditional Start Date (220 DD) 1% egg hatch
Box Elder	Perry	May 11-12	date reported later	May 15-16
Cache	River Heights	not yet known	---	not yet known
	Smithfield	not yet known	---	not yet known
Davis	Kaysville	May 12-13	date reported later	May 15-16
Grand	Castle Valley	April 30	May 11	May 1
Iron	Cedar City	not yet known	---	not yet known
Salt Lake	All Regions	May 7/8	date reported later	May 9/10
Tooele	Tooele	May 16	date reported later	date reported later
Uintah	Vernal	May 17	date reported later	date reported later
Utah	American Fork	May 11-12	date reported later	May 14
	Genola	May 12-13	date reported later	May 15
	Goshen	May 11-12	date reported later	May 15-16
	Lincoln Point	May 14-15	date reported later	date reported later
	Lindon	May 9-10	date reported later	May 13
	Payson	May 16	date reported later	date reported later
	Santaquin-West	May 13	date reported later	May 16
West Mountain	May 14	date reported later	May 16	
Weber	Pleasant View	May 13-14	date reported later	May 16
Wasatch	Heber City	not yet known	---	not yet known

Spray Materials - Commercial Applicators

Spray materials for commercial applicators may be accessed from the Utah-Colorado Commercial Tree Fruit Production Guide companion website at the following links:

Apple, petal fall (aphids, powdery mildew)

Apple, fruit present (codling moth)

Peach, shuck split (aphids, peach twig borer mating disruption, coryneum blight, powdery mildew)

Spray Materials - Residential Applicators

Note that these treatments are only recommended if you know you have the particular pest in your trees.

If your trees are in bloom, we do not recommend applying any pesticides unless you are controlling fire blight with antibiotics. Although it is accepted to use "softer" materials such as Bt or spinosad during bloom, we still recommend either: waiting until the petal fall stage or apply at dawn or dusk when pollinators are not active.

Target Pest	Host	Chemical	Example Brands	Comments
Apple aphids	apple	carbaryl bifenthrin malathion neem oil permethrin	Bayer Advanced Ortho Bug-B-Gone Bonide, Malathion Green Light Lilly Miller	<ul style="list-style-type: none"> start with a single application bifenthrin: pears only permethrin: do not apply to apples after petal fall do not apply lime sulfur when temperature is over 75 degrees F
Powdery mildew	apple	bayleton lime sulfur propiconazole neem oil potassium bicarbonate	Bonide Lilly Miller Ferti-Lome Garden Safe Kaligreen	<ul style="list-style-type: none"> do not apply lime sulfur when temperature is over 75 degrees F
Fire blight	apple, pear	biological streptomycin oxytetracycline	Blightban, Bloomtime Ferti-Lome Mycoshield	<ul style="list-style-type: none"> Biologicals should be applied at 15-20% bloom and again at full bloom Do not use antibiotic unless necessary; apply within 24 h of a wetting event only if fire blight was present last year
Green peach aphid	peach, nectarine	imidacloprid pyrethrin	Bayer Fruit, Citrus & Vegetable spray Pyganic	<ul style="list-style-type: none"> start with a single application horticultural oil and insecticidal soap will also work

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.

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