

News/What to Watch For:

“June drop” is happening on peaches; if the fruit was not thinned enough, the drop may be greater than usual. Make sure you keep trees irrigated; during fruit expansion is the most important time. Continue to watch apricot, plum, and peach/nectarine leaves for shot hole infections (purplish lesions and holes in leaves). New spray timing dates for codling moth and peach twig borer.

JUST THE BASICS: Current Treatments

APPLE & PEAR

- *Codling moth* treatment should continue at intervals, with a break between generations 1 and 2 (see table).
- *Fire blight* strikes are showing up and should be pruned out in a timely manner.
- *San Jose scale* nymphs will be hatching soon. See below for best times to treat the crawlers.

PEACH/NECTARINE, APRICOT

- *Peach twig borer* first treatment time is upon us.

CHERRY

- *Western cherry fruit fly* treatment should begin when fruits turn a salmon blush color.

Insect and Disease Information

: information for residential settings

: information for commercial orchards

APPLE & PEAR

San Jose Scale

Hosts: apple

This armored scale insect attacks a wide variety of hardwood trees, including all fruit trees. In Utah, it is most common on apple. It is an immobile insect that feeds on twigs, scaffold branches, and fruit. They are often difficult to see with the naked eye; a 10-20x hand lens helps. They feed by sucking sap from plant tissues.

If you applied a dormant oil spray, keep in mind that most overwintering adults will survive that spray. So a treatment targeting newly hatched nymphs (called crawlers) will need to be applied. The dates for treating the first generation is:

- Cache and Carbon and northern Box Elder Counties: June 26 - July 2



- Carbon County: June 21 - 27
- Iron County: June 23 - 29
- warmer Wasatch Front locations: June 15 - 21
- cooler Wasatch Front locations: June 23 - 29

Insect and Disease Information, continued from previous page

San Jose scale, continued

Adult females produce approximately 200 crawlers each. Crawlers are bright yellow, and slow moving. They walk or are windblown to new sites to settle on twigs or fruit, insert their mouthparts, and feed for the remainder of their lives. Once they form their hard outer covering, they are more resistant to pesticides.

If the scale population is allowed to build, the tree can experience reduced tree vigor and a decline in yield. It is primarily a problem in standard-sized, poorly pruned trees.

(If your area is not listed and you would like to know, please contact me at marion.murray@usu.edu.)

Apple Aphids

Hosts: apple

Green apple aphid is the most common aphid on apples and their populations are increasing now, as the apple leaves are still emerging and succulent. They feed throughout summer and overwinter as eggs. They generally do not cause damage



curled leaf caused by green apple aphid



Rosy apple aphids also curl leaves, but can be identified by their reddish color

Aphids, continued

to established trees. Younger trees or new plantings may need to be protected.

Rosy apple aphids (see image on next page) are easily identified by their rosy color. Feeding by rosy apple aphids can cause leaves to curl inward, and if feeding occurs in fruit clusters, the aphids' toxic saliva distorts fruit growth. We generally do not recommend control recommendations for rosy apple aphid after petal fall because they move from apple trees to weed hosts in early July.

White Apple Leafhopper

Hosts: apple



Leafhopper nymphs were observed several weeks ago, and adults are active now. They are a minor pest of apples and rarely cause economic damage. They cause stippling of leaves but this does not harm the tree. Treatment threshold for leafhopper ranges (according to various sources) from 3 insects per terminal to 6 insects per terminal. Treatment is usually warranted when the pest is a nuisance at apple-picking time

PEACH/NECTARINE, APRICOT, CHERRY

Peach Twig Borer

Hosts: peach/nectarine

The first peach twig borer sprays should be on this week in the Wasatch Front area, in later weeks in cooler areas. If you have apples and are treating for codling moth, you can use the same material for peach twig borer.

Commercial growers can find options by [clicking here](#).

Backyard growers can materials of the last page of this advisory.

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Peach twig borers lay eggs near succulent shoots, where larvae will then bore into, causing wilting.



Greater Peachtree Borer

Hosts: peach/nectarine, plum, apricot

Greater peachtree borer (aka, trunk borer and crown borer) have NOT YET been caught in our monitoring traps. We expect to catch this moth in traps in warmer areas of the Wasatch Front during the week of June 23.

If anyone has a trap up, keep in mind that peachtree borer adults look like a wasp rather than a typical moth. They have clear wings and a metallic, blue-black body striped with yellow.

The female lays eggs on the lower trunk (12" high at most) or exposed roots only. The larvae that hatch immediately bore into the tree trunk and feed on the inner bark and cambium. There they stay until the following spring. Young trees can be girdled and killed in one season, while older trees can usually withstand a few attacks.

Trees with borer may have gummosis mixed with frass at the base of the trunk, or even just below the soil line. If you see these symptoms, plan on implementing a management program.

Once we catch peachtree borers, we will let you know. At that time, insecticides should be applied. (It is too early right now.)

Materials for commercial growers include:

- carbaryl (Sevin)
- esfenvalerate (Asana)
- lambda-cyhalothrin (Warrior)
- permethrin (Ambush, Pounce, many brands)

Materials for home growers include:

- carbaryl (Sevin)*
- permethrin (many brands; works the best; if you cannot find this ingredient, use Spectracide with gamma-cyhalothrin)

Cherry Powdery Mildew

Hosts: cherry

Powdery mildew begins as small, water-soaked lesions that look slightly off-color on the leaves



Powdery mildew on both sweet and tart cherries was observed in Davis and Utah counties this week. Powdery mildew causes a white fuzzy growth on leaves and fruits. In tart cherries, powdery mildew infections that enter the pedicels (stems) will make it difficult to shake the cherries loose. If you see some powdery mildew, treatments will not kill the existing infection, but will prevent spread to other sites.

Obliquebanded Leafroller

Hosts: all fruit trees; primarily a problem on tart cherry

Leafroller larvae are found in curled leaves among webbing. When disturbed, they wiggle very quickly.



The Utah IPM Program has leafroller monitoring traps in several orchards across northern Utah. This week was the first trap catch in the obliquebanded leafroller traps, setting a biofix for those areas. The next advisory will provide spray timing dates for tart cherry growers.

Obliquebanded leafroller overwinters as larvae, and moths of the first summer generation began flying toward the end of

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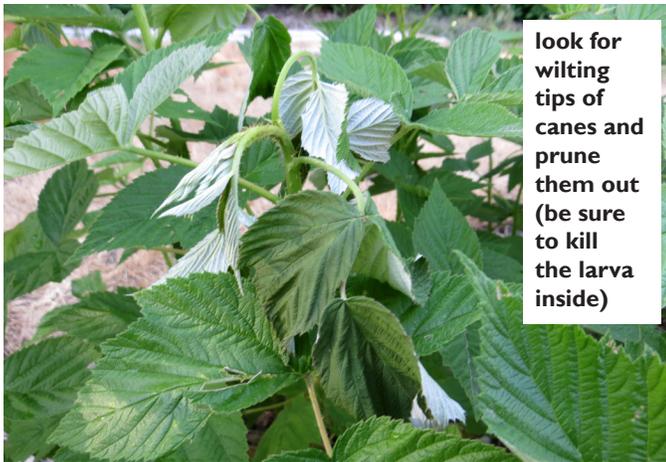
last week in most northern Utah orchards. Larvae emerge in late June and feed for four to six weeks. A second summer generation will emerge in August.

The best way to monitor for this pest is to look for larvae and for rolled leaves webbed together. They feed mostly on the terminal shoots, and feed on fruit as the larvae get bigger. Open or separate the leaves and look for the shiny green larva with a brown head.

SMALL FRUITS

Raspberry Horntail

Hosts: raspberry



Raspberries are in various stages of development in northern Utah; some varieties blooming, some still reaching maturity. The raspberry horntail, a particularly troubling pest of many growers, has been laying eggs since earlier this spring, and the larvae are now feeding inside the tops of canes.

The adult is a type of wasp that is rarely seen. The male is black, and the female is black with yellow markings. Adults emerge from raspberry canes in early spring and lay eggs on canes by inserting eggs just under the epidermis. Larvae then feed inside the tops of the cane.

Wilting of the tips may not be evident until extensive feeding has already occurred. This wilting may recover at night, but later in the season, the top terminal usually dies back. In late

Raspberry horntail, continued

summer, the larvae move down the cane, and remain in the pith for the winter.

Raspberry and blackberry are both susceptible, but in USU surveys of fields in Utah, borers have been mostly found in raspberries. Fields can tolerate low populations, however if left untreated, populations can build and cause quite a bit of damage and frustration.

Because the adult lays her eggs under the epidermis, this insect is difficult to control with insecticides. Monitor plants throughout the season for wilting, and prune and destroy the infested plant material. When pruning, be sure that you get the white larva inside the stem. It may be farther down the stem than you think. To get a feel for where the larvae are feeding, slice a few cut stems vertically to locate the larva. Where there is no borer, the pith will be creamy-white. A pith with loose brown material will indicate borer activity.

Rose Stem Girdler

Hosts: raspberry, blackberry, gooseberry,



Another serious pest of raspberries is the rose stem girdler. The adult is a shiny, bronze colored beetle. Adults are pupating now inside canes, and will be emerging in the next week or so to lay eggs.

Females lay eggs near the base of the canes, and the larvae hatch and tunnel into the cane tissue. Canes may have swellings at the feeding sites, and infested canes may break at weak areas later in the season.

The best treatment option is to remove and destroy infested canes late in the season and over the winter. There are a few insecticides that can be used to kill the eggs and newly hatched larvae, but use caution when spraying flowering plants: treat at dawn or dusk only to avoid harming pollinators, or ideally, do not spray plants in bloom.

Treatment: Malathion*, rotenone + pyrethrin (Pyrellin EC*, Bonide Liquid Pyrethrin Spray*), Diazinon. Treat every 7 days starting in late June, and continue for the next 3 weeks.

*also for homeowner use

Spray Timing Information - Codling Moth

Please check this table at each advisory as the information may change as the dates get closer. The forecasts use the average temperature for each site. Fruit should remain protected through each generation according to interval provided on your pesticide label. Many more locations can be viewed on the [Utah Climate Center TRAPs website](#) (select location; select codling moth).

Codling Moth, First Generation

Apply treatments (the number of times depends on prior infestation), spaced 7-21 days apart (depending on material) to protect fruit up to the end of the first generation egg hatch.

County	Location	Period of Greatest Egg Hatch (DD 340-640)	End 1st Gen.	Start Spray, 2nd Gen.
Box Elder	Perry	May 31 - June 17	July 2	July 11
	Tremonton	June 4 - June 21	July 3	July 11
Cache	River Heights	June 7 - June 26	July 9	---
	Richmond	June 12 - June 30	July 13	---
Carbon	Price	June 4 - June 21	July 7	July 12
Davis	Kaysville	May 29 - June 13	June 27	July 5
Grand	Castle Valley, Moab	May 22 - June 5	June 16	June 24
Juab	Tintic	June 6 - June 23	July 8	---
Salt Lake	Benches/Cooler sites	June 4 - June 21	July 2	---
	Most areas	May 28 - June 13	June 25	July 3
Sevier	Monroe	May 30 - June 14	June 30	July 10
Tooele	Erda	May 29 - June 15	June 28	July 6
	Grantsville	May 27 - June 10	June 24	July 3
Uintah	Vernal Airport	June 3 - June 21	July 5	---
Utah	Alpine	June 6 - June 24	July 6	---
	American Fork	May 30 - June 17	June 29	July 7
	Genola	May 28 - June 17	June 27	July 6
	Lincoln Point	June 2 - June 21	July 2	July 10
	Orem (Lindon)	May 28 - June 13	June 26	July 4
	Payson	May 29 - June 16	June 29	July 7
	Provo Airport	May 29 - June 16	June 26	July 4
	Provo Canyon	June 3 - June 20	July 2	July 10
	Santaquin	May 17 - June 5	---	---
	Tickville	June 1 - June 20	July 7	---
	West Mountain	May 30 - June 16	June 29	July 9
Weber	Ogden Airport	May 29 - June 13	June 26	July 5
Wasatch	Heber City	June 13 - July 1	---	---
Washington	New Harmony	May 27 - June 10	June 25	July 4
Wayne	Torrey	May 24 - June 9	June 22	July 1

Spray Timing - Peach Twig Borer

Peach Twig Borer, First Generation

If you had moderate to severe PTB damage last year, use the earlier spray date; if you had very little PTB damage last year, use the later date to start sprays. (These two dates correspond to 300 and 360 degree days after biofix, or 5% and 16% egg hatch.) End of egg hatch, where you should “keep fruit protected up to” is at 800 degree days.

County	Location	Start Date (lots of injury last year)	Start Date (little injury last yr)	Keep Fruit Protected Up To:	Start Date 2nd Gen.
Box Elder	Perry	June 12	June 17	July 10	---
	Tremonton	June 20	June 23	July 12	---
Cache	All Locations	June 21	June 25	---	---
Carbon	Price	June 17	June 21	July 11	---
Davis	Kaysville	passed	June 13	July 3	---
Grand	Castle Valley	passed	passed	June 19	July 3 - July 7
Iron	Cedar City	June 19	June 23	July 14	---
Juab	Tintic	June 14	June 19	July 12	---
Salt Lake	Holladay	passed	June 12		
	Taylorsville	passed	June 12	June 27	---
Sevier	Monroe	passed	June 13	July 7	---
Tooele	Erda	passed	June 11	June 30	---
	Grantsville	passed	June 10	June 28	---
Utah	Alpine	June 22	June 25	---	---
	American Fork	passed	passed	July 7	---
	Genola	passed	passed	June 29	---
	Lincoln Point	passed	June 14	July 1	---
	Orem	passed	June 12	July 1	---
	Payson	passed	June 13	June 30	---
	Provo	passed	passed	July 1	---
	Santaquin	passed	passed	July 2	---
	Tickville	June 11	June 15	July 12	---
West Mountain	passed	passed	July 2	---	
Weber	Pleasant View	passed	June 11	June 29	---
Wayne	Torrey	passed	passed	June 26	July 12

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.

Target Pest	Host	Chemical	Example Brands	Comments
Codling moth	apple, pear	<p><i>Conventional</i> acetamiprid carbaryl gamma-cyhalothrin malathion</p> <p><i>Soft/organic</i> oil (1%) spinosad</p> <p>codling moth virus</p>	<p>Ortho Fruit and Veg. Sevin, Bonide Fruit Tree Spray, etc. Spectracide Triazicide Malathion</p> <p>Many products, EcoSmart Green Light, Gardens Alive Bull's Eye, Monterey Cyd-X</p>	<p>acetamiprid: every 14 days carbaryl: every 14 - 21 days gamma-cyhalothrin: every 14 days malathion: every 7 days hort. oil: lasts 5-7 days for killing eggs; use at beginning of each generation; apply only when temperatures are below 80 F; follow up with a different product spinosad: every 7 days codling moth virus can only be purchased online</p>
Powdery mildew	all	<p><i>Conventional</i> myclobutanil</p> <p><i>Soft/organic</i> <i>Bacillus subtilis</i> 1% hort. oil, neem oil potassium bicarbonate sulfur (wetttable)</p>	<p>Spectracide Immunox</p> <p>Serenade Garden Disease Control Various; Garden Safe Kaligreen Various</p>	<p>Use all products to protect new foliage; not as curative myclobutanil: every 14 days all others: every 5-7 days as needed</p> <p>do not apply sulfur when temperature is over 75 degrees F; do not mix with oil or apply after or before oil</p>
Aphids	all	<p><i>Soft/organic</i> oil (1%) spinosad</p>	<p>Many products, EcoSmart Safer's, Bayer Natria, Bonide</p>	<p>oil: allow 4 hours-time for application to dry before temps reach 85 or above.</p>
Coryneum blight	peach, apricot	<p><i>Conventional</i> myclobutanil captan</p>	<p>Spectracide Immunox Captan</p>	<p>Use as a preventive before a rain.</p>
Peach twig borer	peach, nectarine	<p><i>Conventional</i> acetamiprid carbaryl malathion permethrin</p> <p><i>Soft/organic</i> spinosad kaolin clay</p>	<p>Ortho Flower, Fruit & Veg Sevin, Bonide Fruit Tree Spray, etc. Malathion Hi-Yield Indoor/Outdoor Broad Use; Lilly Miller Multi-Purpose Insect Spray</p> <p>see 'codling moth' above Surround</p>	<p>see comments under Codling Moth</p> <p>permethrin: every 14 days; this ingredient is becoming less available in stores and may cause spider mite outbreaks</p> <p>Surround: every 3-5 days; works to repel, not kill insects; only moderate control; must purchase online</p>
Western cherry fruit fly	cherry	<p><i>Conventional</i> acetamiprid carbaryl malathion</p> <p><i>Soft/organic</i> pyrethrin spinosad</p>	<p>Ortho Fruit & Veg. Sevin Malathion</p> <p>Concern Multi-Purpose see above</p>	<p>start applications when fruit in sunniest locations develops a salmon blush</p> <p>spinosad: every 7 days</p>

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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