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Upcoming Monitoring/Insect Activity

Peach twig borer	Second generation flight begins at 900 DD (after biofix)
Codling Moth	Second generation egg hatch begins at 1100 DD (after biofix)
Oblique banded leafroller	Moth flight at 832-1000 DD (base 43F)
Greater Peachtree Borer	Moth flight continues until mid-September

Jump to Treatment Timings:

- [Codling Moth - Commercial](#)
- [Codling Moth - Homeowner](#)
- [Peach Twig Borer - Commercial](#)
- [Peach Twig Borer - Homeowner](#)

Attention COMMERCIAL GROWERS: Please see calendar announcements on [page 6](#).

Degree Day Accumulations, as of Friday, June 29

County	Location	Codling Moth, Peach Twig Borer (Base 50°F)			Western Cherry Fruit Fly (Base 41°F)
		DD since March 1	CM DD since biofix*	PTB DD since biofix*	DD since March 1
Box Elder	Perry	1173	991	825	1967
Cache	North Logan	861	724	564	1496
	Richmond	958	743	599	1691
	River Heights	999	775	621	1639
Carbon	Price	1234	964	----	1990
Davis	Kaysville	1146	943	762	1934
Juab	Tintic	1311	----	----	1625
Salt Lake	SLCC	1373	1109	909	2235
	West Valley City	1348	1094	896	2206
Tooele	Erda	1484	1081	----	2331
	Grantsville	1523	1112	----	2354
	Tooele	1500	1115	----	2354
Utah	Alpine	1065	863	699	1825
	Genola	1253	1012	832	2038
	Lincoln Point	1128	916	742	1892
	Orem	1262	1045	803	2072
	Payson	1214	1008	856	1994
	Provo	1269	923	798	2076
	Santaquin	1116	936	777	1876
Weber	West Mountain	1105	854	711	1851
	Pleasant View	1226	1058	874	2025

*“Base 41F” and “base 50F” refer to the lower temperature threshold at which insects develop; ***Biofix** is the date of moth flight.
=Codling Moth, PTB=Peach Twig Borer)

Insect Activity

APPLES AND PEARS

Codling Moth (CM):

Adult moths for second generation will begin emerging at 1000 degree days after biofix, which is now the case along the Wasatch Front. These insects are the adults of the larvae that pupated from the second generation. Keep fruit protected through JULY 10 in Cache County.

First cover spray for the second generation for most locations will occur next week. **Commercial growers** can tank-mix a pesticide that targets eggs with one that targets larvae. Materials for eggs include: Rimon, Horticultural oil, Esteem, Confirm, Intrepid, and Azatin. (Larval materials are listed under the “spray timing” section.

If you feel you have had good control so far (i.e., you have not found many larval entries), you are in good shape for the remainder of the season if you continue your current management. If, however, you have found damaged fruits, be aware that you might find significantly more later in the season, so be aware of your treatment timings. The only way you will know is if you scout your orchard/trees regularly.

[Click here](#) for the USU codling moth fact sheet

PEACHES AND NECTARINES

Peach Twig Borer (PTB):

In most locations except Cache County, the first generation of peach twig borer is over. About 5% of larvae from eggs of the second generation will be hatching at 1200 DD after biofix, which is when the cover spray should be applied.

Continue to monitor for shoot strikes and prune these out as they become visible.

[Click here](#) for the USU peach twig borer fact sheet.

Greater Peachtree Borer (GPTB):

Growers and homeowners on the Wasatch Front should have begun treatment by now. For homeowners, we recommend protecting your peaches, nectarines, and apricots even if you have not seen this pest.

No moths have been caught yet in Cache County.

[Click here](#) for the USU greater peachtree borer fact sheet.

CHERRIES

Western Cherry Fruit Fly (WCFF):

Sweet cherries are being harvested now, and tart cherry harvest is fast approaching. Now is a very critical time to

maintain protection of your cherries--do not slack off on treatment. Materials that have a short PHI include: spinosad (0 days - 7 days), carbaryl (3 days), imidacloprid (7 days), malathion (1 - 3 days), and permethrin (3 days).

[Click here](#) for the USU western cherry fruit fly fact sheet.

Spider Mites:



Spider mite activity was seen in the lower canopy of peach trees in many areas of Utah County. Activity on apples has not quite reached damaging levels.

There are two species of spider mites in Utah orchards: twospotted, and McDaniel. They both feed primarily on apples, pears, cherries, peaches, and nectarines.

The spider mites overwinter as adults on groundcover plants, under surface debris, or in bark cracks at the base of trees. In spring, they feed on weeds and other plants in the ground cover such as dandelion, mallow, bindweed, prickly lettuce, or sweetclover. When temperatures heat up, their populations build, and they migrate up for “fresher” food. This is why you will see them in the lower leaves first.

Once established in the tree, they continue spreading. A single female can lay as many as 150 eggs in her 4-6 week life span. They feed with piercing-sucking mouthparts causing stippled leaves. (Damage can be more severe in pears as feeding causes leaves to turn brown and drop, and on fruit, causes russetting.) In general, tree vigor is reduced.

Continued use of certain pesticides such as pyrethroids can cause mite problems because they kill the important predatory mites that keep spider mites in check.

Disease Activity

APPLES

Fire Blight



Information from Extension Plant Pathologist Dr. Kent Evans:

“Yesterday, I was asked the question, ‘what is going on with fire blight showing up on fruit spreading from the flower-end of the fruit towards the stem end?’

I spent a fair amount of time thinking about it and I believe the answer may be due to a couple of reasons. First of all, this is a severe year for fire blight. At this point there are lots of blighted shoots and a much increased amount of bacterial inoculum present in most orchards I have visited, although some are doing well with little fire blight.

Erwinia amylovora (EA), the bacterium that causes fire blight, survives pretty well on the surface of the host trees leaves, shoots, fruit, and stems in the shaded parts of the trees. Any dew or irrigation water that runs across the plant can

move the bacteria into crevices and/or the flower end of fruit or to any wound/opening into the host plant and start an infection.

Fruit usually start their development with the flower end pointing up. All it takes is enough moisture to move the bacterial cells to an opening into the plant/fruit to get in. The bacteria entered as the fruit enlarged and started to hang in the flower-down position. Until just recently we hadn't noticed the infections.

Since there is so much inoculum and so many EA bacteria on the surface of fruit, it is purely a numbers game, thus increasing the number of infected fruits, from something that is a rare event, to something we are all seeing and wondering, “what the heck is causing that?”

I have no data to prove what I've just explained but I am pretty sure that is what is happening. You've all seen how much inoculum an infected fruit can generate and getting rid of these by pruning isn't a bad idea. As we move into the cooler part of the season we'll see shoot growth, and fire blight, take off again and it will be important to prune to prevent movement of the bacteria into larger wood and/or the trunks of trees.

As always, cleaning pruning tools is advised between each cut with a 10 percent bleach solution to prevent spreading the disease. I maintain the recommended pruning distance of at least 18 inches below a visible canker, even if you've applied Apogee.”

Current Spray Timings - Commercial Growers

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

Codling moth First and Second Generation:

The projected timing dates of the spray periods shown below will be updated each week. End of 1st generation egg hatch is 920 DD after biofix and beginning of 2nd generation egg hatch is 1100 DD after biofix.

County	City	End of 1st Generation Egg Hatch	Beginning of 2nd Generation Egg Hatch
Box Elder	Perry, Willard, Brigham	June 26	July 4
Cache	North Logan	July 10	July 19
	Richmond	July 12	July 21
	River Heights	July 7	July 16
Carbon	Price	July 1	July 10
Davis	Kaysville	June 28	July 6
Salt Lake	Salt Lake City	June 23	June 30
	West Valley City	June 23	June 30
Tooele	Erda	June 24	July 1
	Grantsville	June 22	June 29
	Tooele	June 22	June 29
Utah	Alpine	July 2	July 9
	Genola	June 25	July 3
	Lincoln Point	June 28	July 7
	Orem	June 24	July 2
	Payson	June 28	July 3
	Provo	June 29	July 5
	Santaquin	June 29	July 6
	West Mountain	July 1	July 9
Weber	Pleasant View	June 23	July 1

Materials for codling moth control:

eggs: Rimon, Horticultural oil, Esteem, Confirm, Intrepid, Azatin

larvae: Assail, Asana, Calypso, Carbaryl, Clutch, Diazanone, Guthion, Codling Moth Granulosis Virus, Imidan, Intrepid, Warrior, Sevin, Malathion

Greater Peachtree Borer

chlorpyrifos (Lorsban), endosulfan (Thionex, Phaser), carbaryl (Sevin), lambda-cyhalothrin (Warrior), permethrin (Ambush, Pounce, many brands)

Rosy and Green Apple Aphids:

Provado, Thiodan

Spider Mites:

Acramite, Envidor, FujiMite, Savey, Zeal

San Jose Scale:

acetamiprid (Assail), carbaryl (Sevin), diazinon, esfenvalerate (Asana), imidacloprid (Provado, Merit), pyriproxyfen (Esteem), hort. oil

Current Spray Timings - Commercial Growers, continued

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

Peach Twig Borer, Second Generation:

The projected timing dates of the spray periods shown below will be updated each week. The spray date represents 1200 DD after biofix, when 5% of eggs have hatched.

County	City	Beginning Spray Date. Second Generation
Box Elder	Perry, Willard, Brigham	July 14
Cache	North Logan	July 30
	Richmond	July 29
	River Heights	July 27
Davis	Kaysville	July 17
Salt Lake	Salt Lake City	July 9
	West Valley City	July 11
Utah	Alpine	July 20
	Genola	July 13
	Lincoln Point	July 18
	Orem	July 16
	Payson	July 14
	Provo	July 15
	Santaquin	July 17
	West Mountain	July 19
Weber	Pleasant View	July 12

Materials for peach twig borer control:

-same as codling moth materials

Western Cherry Fruit Fly:

imidacloprid (Merit, Provado-every 14 days), phosmet (Imidan-every 14 days, but not on sweet cherry), chlorpyrifos (Lorsban-every 14 days but not on sweet cherry), diazinon (every 14 days), spinosad (GF-120, Success), permethrins

White Apple Leafhopper:

carbaryl, cyfluthrin (Baythroid), endosulfan (Thionex), novaluron (Rimon), permethrin

Cherry Powdery Mildew:

azoxystrobin (Amistar), boscalid (Pristine), fenarimol (Rubigan), myclobutanil (Laredo), propiconazole (Orbit), quinoxyfen (Quintec), triadimefon (Bayleton), trifloxystrobin (Flint), triflumizole (Procure)

Calendar Information for Commercial Growers

UPCOMING ACTIVITIES:

Utah Orchard Tree Fruit Tour:

Thursday, August 2, 3:00 pm, Commercial growers are invited to attend a field tour and discussion at three orchard locations in Utah and Juab Counties:

Apple Site at Orchard in Genola: Grower and Farm Owner Dale Rowley discusses his codling moth program, use of puffers (a newer mating disruption dispenser), and monitoring program. Extension Entomologist Diane Alston discusses her latest research on codling moth monitoring in mating disrupted orchards.

Apple site at Orchard in West Mountain: Grower Chris Wall, Horticultural Consultant Earl Seeley, and Extension Specialist Kent Evans discuss this season's fire blight problem, control and management practices, and where we go from here. Other disease problems may be discussed.

Tart Cherry Orchard in Tintic: Growers and Farm Owners Phil and Thad Rowley discuss their use of center-pivot irrigation in a harsh, dry environment. Extension Entomologist Diane Alston discusses research on attractants for trapping and managing western cherry fruit fly.

We hope you can join us! Travel is on your own/carpool. Refreshments will be provided. Directions and initial meeting location will be announced at a later date.

Utah Berry Growers Summer Tours

Bear Lake Tour, Thursday, July 26, 5:00 – 7:00 p.m.

The tour will begin at Roger Earley's farm on West Round Valley Road in Laketown. We will be looking at the USU variety trial at that location, discussing weed, disease and insect pest management, and irrigation scheduling. We are also planning additional stops in the Laketown area as time permits.

Driving directions:

Turn South off Highway 30 in Laketown. Turn right at the stop sign onto Center Street/North Round Valley Road. Follow North Round Valley Road approximately 3 miles to the T intersection at West Round Valley / Meadowville Road. Turn left on West Round Valley and travel about 1.4 miles until you see the raspberry fields on the west side of the road.

Utah County Tour, Wednesday, August 22, 3:00 – 5:00 p.m.

Vern Stratton will be hosting the tour, with the first stop at his field just east of State Street (US 89) on 1360 North Street in Orem. We will be looking at strawberry and fall raspberry production, and discussing insect pests and irrigation management. Vern will also be talking about his peach production, and has agreed to share some of his wealth of experience in growing and marketing fresh fruit.

Driving Directions:

Take State Street in Orem to West 1360 North. Go one block east on 1360 North. The paved road turns to the left, but continue straight through the gate.

Current Spray Timings - Homeowners

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

Codling moth First and Second Generations:

The projected timing dates of the spray periods shown below will be updated each week. The “ending spray date-1st generation” is at 920 DD after biofix, when larvae finish hatching, and the “beginning spray date-2nd generation” is at 1100 DD after biofix, when the next batch of larvae begin hatching.

Read your pesticide label for residual period (length of time it is effective) and re-apply at the given interval from beginning date to ending date, so that fruit is protected during this entire period.

County	City	Ending Spray Date-1st Generation	Beginning Spray Date-2nd Generation
Box Elder	Perry, Willard, Brigham	June 26	July 4
Cache	North Logan	July 10	July 19
	Richmond	July 12	July 21
	River Heights	July 7	July 16
Carbon	Price	July 1	July 10
Davis	Kaysville	June 28	July 6
Salt Lake	Salt Lake City (estimate)	June 23	June 30
	West Valley City	June 23	June 30
Tooele	Erda	June 24	July 1
	Grantsville	June 22	June 29
	Tooele	June 22	June 29
Utah	Alpine	July 2	July 9
	Genola	June 25	July 3
	Lincoln Point	June 28	July 7
	Orem	June 24	July 2
	Payson	June 28	July 3
	Provo	June 29	July 5
	Santaquin	June 29	July 6
	West Mountain	July 1	July 9
Weber	Pleasant View	June 23	July 1

Materials for codling moth control:

Chemical	Example Names	Protection Period
carbaryl	Sevin, Bayer Advanced Complete Insect Killer, etc.	7-14 days (read label)
malathion	Bonide Malathion, Hi-Yield 55% Spray,	7-14 days (read label)
<i>Bacillus thuringiensis</i>	Dipel	3-6 days (read label)
spinosad	Success, Entrust	3-6 days (read label)
CM granulosis virus	Virusoft	10-14 days
kaolin clay	Surround	5-7 days

Greater Peachtree Borer

carbaryl (Sevin), permethrin (many brands)

Rosy and Green Apple Aphid:

malathion (Ferti-lome Mal-a-cide, etc.), pyrethrin (Hi-Yield Rose and Flower Spray, etc.)

Current Spray Timings - Homeowners, continued

Peach Twig Borer, Second Generation:

The projected timing dates of the spray periods shown below will be updated each week. The spray date for the second generation represents 1200 DD after biofix, when 5% of eggs have hatched. For materials that last fewer than 10 days, apply a second spray.

County	City	Beginning Spray Date, Second Generation
Box Elder	Perry, Willard, Brigham	July 14
Cache	North Logan	July 30
	Richmond	July 29
	River Heights	July 27
Davis	Kaysville	July 17
Salt Lake	Salt Lake City (est.)	July 9
	West Valley City	July 11
Utah	Alpine	July 20
	Genola	July 13
	Lincoln Point	July 18
	Orem	July 16
	Payson	July 14
	Provo	July 15
	Santaquin	July 17
	West Mountain	July 19
Weber	Pleasant View	July 12

Materials for peach twig borer control are same as for codling moth

San Jose Scale:

Bonide Lime Sulfur Concentrate, sevin, esfenvalerate (Ortho), imidacloprid (Merit), horticultural oil, neem oil

Spider Mite Adults:

insecticidal soap, permethrin, malathion, neem oil

Western Cherry Fruit Fly:

spinosad (GF-120, Natural Guard Spinosad, every 7 days), Sevin (every 7 days), permethrins (every 7-14 days)

White Apple Leafhopper:

products that contain carbaryl or permethrin

Cherry Powdery Mildew:

Hi-Yield Lime Sulfur Spray, Bonide Sulfur Dust

Precautionary Statement: All pesticides have benefits and risks, however following the label will maximize the benefits and reduce risks. Pay attention to the directions for use and follow precautionary statements. Pesticide labels are considered legal documents containing instructions and limitations. Inconsistent use of the product or disregarding the label is a violation of both federal and state laws. The pesticide applicator is legally responsible for proper use.

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