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Upcoming Monitoring/Insect Activity

Peach twig borer	Egg hatch ends at 920 DD after biofix (base 50F)
Codling Moth	Larval hatch: 220-920 DD (after biofix) Second generation egg hatch begins at 1100 DD (after biofix)
Oblique banded leafroller	Moth flight at 832-1000 DD (base 43F)
San Jose Scale	Peak crawler emergence 600-700 DD (after biofix)
Greater Peachtree Borer	Hang traps at 700 degree days (base 50)

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Degree Day Accumulations, as of Wednesday, June 20

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	978	796	630	1690
Cache	North Logan	691	554	393	1247
	Richmond	762	506	362	1364
	River Heights	788	604	450	1389
Carbon	Price	1009	738	----	1673
Davis	Kaysville	951	748	566	1658
Salt Lake	SLCC	1120	856	657	1888
	West Valley City	1110	856	658	1875
Tooele	Erda	1232	828	----	1984
	Grantsville	1286	881	----	2067
	Tooele	1267	882	----	2036
Utah	Alpine	872	670	506	1549
	Genola	1043	803	623	1739
	Lincoln Point	928	716	542	1605
	Orem	1045	828	586	1766
	Payson	961	756	603	1651
	Provo	1049	703	578	1766
	Santaquin	905	725	565	1597
Weber	West Mountain	918	667	524	1581
	Pleasant View	1031	862	678	1748

“Base 41F” and “base 50F” refer to the lower temperature threshold at which certain insects develop

***Biofix** is the date of consistent moth flight. (CM=Codling Moth, PTB=Peach Twig Borer)

Insect Activity

APPLES AND PEARS

Codling Moth (CM):

Many areas are approaching or have passed the period where 95% of eggs have hatched (800 degree days after biofix).

The second generation of codling moth will begin flight at 1000-1050 degree days after biofix, and fruit should be protected starting at 1100 DD after biofix.

Commercial growers should consider tank mixing pesticides that target both the eggs and the larvae for the first cover of the second generation spray. This mix will control eggs that have been and will be laid as well as larvae that have hatched and will hatch. Materials for eggs include: Rimon, Horticultural oil, Esteem, Confirm, Intrepid, and Azatin.

Continue to monitor for codling moth larval entries and remove and destroy those apples. Pay close attention to the following situations:



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

San Jose Scale (SJS):

Estimated Treatment Timings for SJS:

Cache Valley: between June 22 and June 28

Treatment should have been applied by growers on the Wasatch Front by now. Note that crawlers will continue to emerge through August, so if you have a severe infestation, a second application may be necessary.

Pearleaf and Apple Blister Mites:

Blister mites overwinter in buds. When leaves emerge in



spring, the mites feed on the leaves until petal fall. They may also feed on and damage fruit. The mites lay eggs on the leaves, and they hatch and feed within the "blisters." They are usually not noticed until damage shows up in late spring as raised blisters which eventually turn brown.

Control of blister mites is best done during the delayed dormant period, or after harvest, when the mites are moving from one location to another. Commercial growers can use endosulfan (Thionex) or oil plus lime sulfur; and homeowners can use liquid lime sulfur plus oil in late October or November. Note that lime sulfur can cause phytotoxicity, so do not apply on water-stressed trees or during hot weather.

PEACHES AND NECTARINES

Peach Twig Borer (PTB):

First generation peach twig borer flight has ended, and egg hatch ends at 920 degree days after biofix. If you applied a material that lasts fewer than 10 days, plan on a second application for the first generation. Second generation sprays will occur at approximately 1200 DD after biofix (or mid-July). Spray dates will be supplied as we get closer to that time.

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):

Adults have been caught in traps in West Valley City in Salt Lake County and in Lincoln Point, Utah County. Even though moths have not been caught elsewhere, we recommend that all growers along the Wasatch Front begin treatment. Adults begin mating and laying eggs very soon after flight, and continue emergence into mid-September. Mating disruption works very well for borer control, even in small orchards. Dispensers should be hung now.

Otherwise, commercial growers can use a single application of Lorsban for the season, or two applications of Thionex.

For homeowners, we recommend protecting your peaches, nectarines, and apricots even if you have not seen this pest. Once the larvae start feeding within the tree, it may be too late. Read your product label for protection period and reapply as necessary until early September. Most permethrins and carbaryl should be applied approximately every 14 days.

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

CHERRIES

Western Cherry Fruit Fly (WCFF):

Harvest dates for sweet cherries are coming up quick. Consider using a material with a shorter PHI if necessary. Some examples include: spinosad (0 days - 7 days), carbaryl (3 days), imidacloprid (7 days), malathion (1 - 3 days), permethrin (3 days).

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

Spider Mites:

Spider mites can attack all species of fruit trees. They thrive in hot, dry conditions, and the upcoming weather is perfect for mite flare-ups. Keep an eye out for activity, especially starting in the lower and inner canopy as mites crawl up from ground vegetation. If you suspect that you are having a problem, apply a miticide.

Disease Activity

STONE FRUITS



Cytospora Canker:

Cytospora canker is a fungal disease that can cause tree death or kill large limbs. It enters the wood through pruning cuts, wounds, or dead shoots. An infected stem or limb will first exude a gummy substance, and as the bark and inner wood are killed, will then appear as a sunken area. The canker grows with the tree, expanding each year until death of the limb or stem. Healthy, vigorous trees can form callus tissue around the canker, sometimes staying ahead of the fungal growth.

The best control option is to prune out the affected plant tissue or remove the tree. There is no fungicidal spray or cure for existing cankers.

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 6
	Orem	June 24	July 2
	Payson	June 28	July 6
	Provo	June 29	July 7
	Santaquin	June 29	July 7
	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, First Generation:

The projected timing dates of the spray periods shown below will be updated each week. The spray date represents 300 DD after biofix, when 5% of eggs have hatched, and 400 DD after biofix, when 28% of eggs have hatched. For materials that last fewer than 10 days, apply a second spray.

County	City	Beginning Spray Date. High Pops (300 DD after Biofix)	Beginning Spray Date, Moderate Pops (400 DD after Biofix)
Box Elder	Perry, Willard, Brigham	June 1	June 6
Cache	North Logan	June 13	June 20
	Richmond	June 14	June 21
	River Heights	June 9	June 17
Davis	Kaysville	June 4	June 9
Salt Lake	Salt Lake City	June 2	June 7
	West Valley City	June 2	June 7
Utah	Alpine	June 6	June 12
	Genola	June 4	June 10
	Lincoln Point	June 5	June 11
	Orem	June 4	June 9
	Payson	June 1	June 7
	Provo	June 4	June 10
	Santaquin	June 3	June 9
	West Mountain	June 4	June 10
Weber	Pleasant View	May 29	June 4

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)

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 6
	Orem	June 24	July 2
	Payson	June 28	July 6
	Provo	June 29	July 7
	Santaquin	June 29	July 7
	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 granulosus 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, First Generation:

The projected timing dates of the spray periods shown below will be updated each week. The spray date represents 300-400 DD after biofix, when 5-28% of eggs have hatched. For materials that last fewer than 10 days, apply a second spray.

County	City	Beginning Spray Date Range
Box Elder	Perry, Willard, Brigham	June 1 - 6
Cache	North Logan	June 13 - 20
	Richmond	June 14 - 21
	River Heights	June 9 - 17
Davis	Kaysville	June 4 - 9
Salt Lake	Salt Lake City (est.)	June 2 - 7
	West Valley City	June 2 - 7
Utah	Alpine	June 6 - 12
	Genola	June 4 - 10
	Lincoln Point	June 5 - 11
	Orem	June 4 - 9
	Payson	June 1 - 7
	Provo	June 4 - 10
	Santaquin	June 3 - 9
	West Mountain	June 4 - 10
Weber	Pleasant View	May 29 - June 4

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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