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## Upcoming Monitoring/Insect Activity

Peach twig borer	Second generation flight begins at 900 DD (after biofix)
Codling Moth	2nd Generation peak egg hatch at 1320-1720 DD (after biofix)
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 5](#).

## Degree Day Accumulations, as of Wednesday, July 18

County	Location	Codling Moth, Peach Twig Borer (Base 50°F)					Cherry Fruit Fly (Base 41°F)
		DD since March 1	CM DD since biofix*	% CM Egg Hatch	PTB DD since biofix*	% PTB Egg Hatch	DD since March 1
<b>Box Elder</b>	Perry	1746	1563	46	1397	37	2751
<b>Cache</b>	North Logan	1320	1183	3	1022	0	2132
	Richmond	1456	1201	3	1052	0	2335
	River Heights	1499	1315	11	1161	3	2379
<b>Carbon</b>	Price	1747	1476	31	----	----	2700
<b>Davis</b>	Kaysville	1670	1467	30	1285	13	2662
<b>Juab</b>	Tintic	1460	----	----	----	----	2356
<b>Salt Lake</b>	SLCC	1961	1697	68	1497	61	3043
	West Valley City	1920	1666	63	1468	52	3000
<b>Tooele</b>	Erda	2058	1654	61	----	----	3121
	Grantsville	2115	1710	70	----	----	3235
	Tooele	2073	1688	67	----	----	3144
<b>Utah</b>	Alpine	1538	1336	12	1172	3	2487
	Genola	1738	1497	36	1317	19	2723
	Lincoln Point	1604	1393	20	1218	6	2575
	Orem	1780	1563	46	1321	20	2788
	Payson	1761	1555	45	1402	37	2744
	Provo	1782	1436	26	1310	15	2789
	Santaquin	1624	1443	27	1284	13	2575
	West Mountain	1534	1281	8	1139	2	2466
<b>Weber</b>	Pleasant View	1808	1640	60	1456	48	2828

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

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

## Insect Activity

### APPLES AND PEARS

#### Codling Moth (CM):

The continued hot evenings has pushed the codling moth development to a rapid pace! Many areas will most certainly see a third generation (except for the late varieties in Cache County). (The hot days are not making much difference: development of codling moths remains steady at temperatures above 88 degrees.)

Most areas are in the critical protection period of maximum egg hatch (11-71% egg hatch). This is a short time period of rapid development, when fruit should be well-protected. (See table on page 1 for the percentage of eggs that have hatched in your area.)

Commercial orchards using mating disruption should continue to use traps to monitor for moth flight, and treat only when necessary (if 2 or more moths are trapped in one week, an insecticide may be needed (but check for damage first); if 5 or more moths are caught in a week, a supplemental spray definitely is needed).

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

### PEACHES AND NECTARINES

#### Peach Twig Borer (PTB):

Peaches should be protected with sprays by now in all areas except Cache County and parts of Utah County. See table on page 1 for percentage of egg hatch. It is the second generation that will attack the fruit, so keep a watchful eye out for damage.

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

#### Greater Peachtree Borer (GPTB):

All locations should continue treatment of peaches, nectarines, and apricots by spraying the lower 2-3 feet of your tree trunk through mid-September.

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

### ALL TREES

#### Spider Mites:

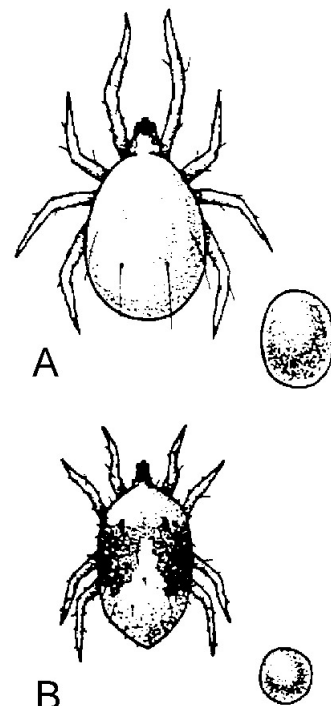
Continue to monitor for damage in the lower interior of the tree canopy. Use a hand lens to look for the fast-moving predator mites. If you can estimate approximately 1 predatory mite per leaf and/or fewer than 5-10 damaging mites per leaf, then there is no need to spray.



Two mites that cause damage to fruit trees are two-spotted spider mites and McDaniel spider mites.

In Utah, the western predatory mite can provide a consistent level of biological control. However, they are very sensitive to chemicals such as pyrethroids, which is why we recommend keeping pyrethroid sprays to a minimum.

Predatory mites are tear-drop shaped (above right), and usually have longer legs. They can be spotted easily with a hand lens because they move rapidly through the slower-moving spider mite colonies.



## 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 Second Generation:

The projected timing dates of the spray periods shown below will be updated each week. Beginning of 2nd generation egg hatch is 1100 DD after biofix. The critical period of protection corresponds to the period 1320-1720 DD, when the rate of egg hatch is the highest. The end of egg hatch for the second generation is 2100 DD after biofix.

County	City	Beginning of 2nd Generation Egg Hatch	Critical Period of Protection	End of Second Generation
Box Elder	Perry, Willard, Brigham	July 2	July 10 - 24	August 8
Cache	North Logan	July 15	July 24 - August 12	September 1
	Richmond	July 14	July 23 - August 11	August 26
	River Heights	July 11	July 18 - August 5	August 20
Carbon	Price	July 4	July 14 - August 2	August 20
Davis	Kaysville	July 5	July 14 - July 29	August 13
Salt Lake	Salt Lake City	June 29	July 6 - 19	August 1
	West Valley City	June 29	July 7 - 20	August 2
Tooele	Erda	June 29	July 5 - 18	August 3
	Grantsville	June 28	July 5 - 18	August 1
	Tooele	June 28	July 3 - 19	August 2
Utah	Alpine	July 9	July 17 - August 2	August 18
	Genola	July 2	July 12 - 27	August 10
	Lincoln Point	July 7	July 15 - 30	August 14
	Orem	July 1	July 5 - 24	August 7
	Payson	July 1	July 9 - 24	August 9
	Provo	July 5	July 10 - 29	August 12
	Santaquin	July 5	July 13 - 29	August 14
	West Mountain	July 10	July 19 - August 4	August 19
Weber	Pleasant View	June 29	July 8 - 23	August 7

### 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

### Cat-Facing Insects:

chlorpyrifos (Lorsban), endosulfan (Thionex, Phaser), carbaryl (Sevin)

### 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, Horticultural 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 11
Cache	North Logan	July 26
	Richmond	July 24
	River Heights	July 19
Davis	Kaysville	July 15
Salt Lake	Salt Lake City	July 8
	West Valley City	July 10
Utah	Alpine	July 19
	Genola	July 14
	Lincoln Point	July 17
	Orem	July 14
	Payson	July 10
	Provo	July 14
	Santaquin	July 15
	West Mountain	July 20
Weber	Pleasant View	July 9

### **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

### **Woolly Apple Aphid:**

Provado, Calypso, malathion

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### **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 p.m.**

Commercial growers are invited to attend a field tour and discussion at three orchard locations in Utah and Juab Counties:

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. In addition, Extension Fruit Specialist Brent Black discusses other irrigation techniques and Extension Entomologist Diane Alston discusses research on attractants for trapping and managing western cherry fruit fly.

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. 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.

We hope you can join us! Travel is on your own/carpool. Refreshments will be provided. If you did not receive a flier announcing the tour, please email me at marionm@ext.usu.edu, and I will send you one.

#### 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 Second Generations:

The projected timing dates of the spray periods shown below will be updated each week. The “beginning spray date” is at 1100 DD after biofix, when the next batch of larvae begin hatching, and the “ending spray date” is 2100 DD after biofix, when the eggs finish 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	Beginning Spray Date	Ending Spray Date
Box Elder	Perry, Willard, Brigham	July 2	August 8
Cache	North Logan	July 15	September 1
	Richmond	July 14	August 26
	River Heights	July 11	August 20
Carbon	Price	July 4	August 20
Davis	Kaysville	July 5	August 13
Salt Lake	Salt Lake City (estimate)	June 29	August 1
	West Valley City	June 29	August 2
Tooele	Erda	June 29	August 3
	Grantsville	June 28	August 1
	Tooele	June 28	August 2
Utah	Alpine	July 9	August 18
	Genola	July 2	August 10
	Lincoln Point	July 7	August 14
	Orem	July 1	August 7
	Payson	July 1	August 9
	Provo	July 5	August 12
	Santaquin	July 5	August 14
	West Mountain	July 10	August 19
Weber	Pleasant View	June 29	August 7

### 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

### Cat-Facing Insects:

carbaryl (Sevin), esfenvalerate (Bug Buster, KGro Multi-Purpose), malathion, permethrin (many brands)

### Greater Peachtree Borer

carbaryl (Sevin), permethrin (many brands) (just spray the bottom 2-3 feet of the tree trunk, and maintain protection through mid-September)

## 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 11
Cache	North Logan	July 26
	Richmond	July 24
	River Heights	July 19
Davis	Kaysville	July 15
Salt Lake	Salt Lake City (est.)	July 8
	West Valley City	July 10
Utah	Alpine	July 19
	Genola	July 14
	Lincoln Point	July 17
	Orem	July 14
	Payson	July 10
	Provo	July 14
	Santaquin	July 15
	West Mountain	July 20
Weber	Pleasant View	July 9

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

### ***Rosy and Green Apple Aphid:***

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

### ***Spider Mite Adults:***

insecticidal soap, permethrin, malathion, neem oil, horticultural oil

### ***Western Cherry Fruit Fly:***

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

### ***Woolly Apple Aphid:***

carbaryl (Sevin), malathion

**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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