



News/What to Watch For:

Powdery mildew on apple can leave foliage curled and leaves may prematurely drop. It can be prevented with a variety of commercial fungicides ([click here for options](#)), or for backyard trees: sulfur OR oil (only in temps below 85 F) or Spectracide Immunox.

If iron chlorosis is still present, a foliar spray of chelated iron (Miller's Ferriplus, Sequestrene) is a temporary fix. Soil applications in spring provide the best results.

Updated Codling Moth and Peach Twig Borer dates and recommended products, pages 3-4.

JUST THE BASICS: Current Treatments

APPLE & PEAR

- *Spider mites* are becoming active and can be treated with 1% horticultural oil.
- 2nd generation *codling moth* treatment coming up.

PEACH/NECTARINE, APRICOT

- Continue protecting lower trunk of susceptible trees against greater peachtree borer.


CHERRY


- *Western cherry fruit fly* treatment should continue until harvest to prevent "wormy" fruit.

WALNUT

- Damage from *walnut husk fly* should be prevented now on susceptible walnuts.

Insect and Disease Information

 : information for residential settings

 : information for commercial orchards

APPLE & PEAR

Codling Moth



Hosts: apple

Some areas are approaching the start of the second gen. for codling moth. If you feel you have protected your trees well during the first generation, and are not seeing much injury to your fruit, you may be able to get away with one to two sprays for the second generation, and one spray for the third generation. Otherwise, starting with the second generation, keep the fruit continually protected until mid-September.

Some observant backyard growers have alerted me to the fact that they are approaching the label restriction for the maximum number of sprays for the product they are using. The table to the right shows the maximum number of sprays allowed for each insecticide. Using a different product for each codling moth generation will help to prevent going over the maximum spray limit for any given product.

| Product | Max Sprays | Last Spray to Harvest (PHI) |
|--|-------------|-----------------------------|
| Bonide Fruit Spray (captan, malathion, carbaryl) | 2 | 14 |
| Bonide Fruit & Plant Guard (lambda-cy, pyraclostrobin, boscalid) | none listed | 21 days |
| Concern Multi-Purpose (and all pyrethrin products) | none listed | 0 |
| Cyd-X Virus Spray | none listed | 0 |
| Malathion | 3 | 7 |
| Monterey Insect Control (and all spinosad products) | 6 | 7 |
| Ortho Fruit & Veg. | 4 | 7 days |
| Sevin | 8 | 3 |
| Spectracide Triazicide | 5 | 21 |

Insect and Disease Information, continued from previous page

PEACH/NECTARINE, APRICOT, CHERRY

Greater Peachtree Borer

Hosts: peach/nectarine

Continue to protect the lower trunks of your susceptible trees through September. As you spray the trunk, be sure to remove tall grass, weeds, or mulch from around the base of the tree so that the spray can cover the entire trunk (and even an area just below the soil line).

Materials for home growers include the following. Repeat every 21-30 days:

- carbaryl (Sevin)
- permethrin: this option works the best. (Many brands, including Bonide Borer-Miner Killer, Enforcer Outdoor Insect Killer, Hi-Yield Broad Use Including Gardens; Lilly Miller Multi-Purpose Insect Spray)
- Spectracide Triazicide

There is also an option to use beneficial nematodes, such as *Steinernema carpocapsae* (all strains). It must be ordered online (such as from Arbico Organics), and is applied in water. The environment in which the nematodes are applied must be kept moist. The nematodes will work their way into the tree at the soil line to attack and feed on developing larvae inside the tree. The application rate would be 500 nematodes per square inch of bark surface. Research has shown that applying the nematodes in early spring is the best option (when temperatures are cooler and soil is moister), but an application in late summer (mid September) could also reduce larvae by 60% (over not treating at all).

Peach Twig Borer

Hosts: peach/nectarine, apricot

In some areas, we are approaching the end of the first generation of peach twig borer, with egg hatch for the second generation in mid to late July. Where this insect is a problem, the second generation is more devastating because the larvae will attack the fruit.

Growers that will be harvesting apricots will need to manage sprays that will protect the fruit to harvest. Some option that have a shorter pre-harvest interval are Assail, Belt, and Intrepid (7 days) or Entrust (1 day).

Spider Mites

Hosts: all fruit trees

Spider mite numbers continue to build, as they thrive on hot, dry, and dusty conditions. On apple trees, heavy populations can lead to a scorched appearance to the foliage. If spider mite populations are building on tart cherry trees, it is impor-

Spider mites, continued



tant to control them to prevent loss of tree vigor, especially when crop load is high as it is this year. With harvest approaching, a spray of 1% oil could help reduce populations.



Predatory mites are essential in helping to keep pest spider mites under control. They can be seen under a hand lens of about 20-30x, and are about the same size as spider mites but are pear-shaped, and faster moving. Some insecticides such as pyrethroids or carbaryl are harmful to predatory mites and can result in a buildup of spider mite populations.

Commercial growers have a variety of options to use for spider mites, but be aware of the max number of applications (often 1 or 2) and the PHI (often 21 days or more).

apple
cherry
peach/nectarine

Backyard growers, see last page of this newsletter.

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 and Second Generations

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. Time the last treatment to be 10-25 days (depending on the material) before the "End" date.

Starting with the 2nd generation, the fruit should be protected until September 15, or just before harvest (whichever is earliest). Because of the hotter temperatures occurring during 2nd and 3rd generations, there is no "break" and egg hatch occurs almost continuously. In sites with lower populations or very little outside pressure, just make sure fruit is protected during the period of greatest egg hatch.

| County | Location | End 1st Gen. | Start Spray, 2nd Gen. | Period of Greatest Egg Hatch |
|-------------------|----------------|--------------|-----------------------|------------------------------|
| Box Elder | Perry | July 3 | July 11 | July 24 - August 6 |
| | Tremonton | July 5 | July 14 | July 25 - August 6 |
| Cache | River Heights | July 11 | July 19 | August 2 - |
| | Richmond | July 16 | July 24 | August 6 - |
| Carbon | Price | July 5 | July 14 | July 27 - |
| Davis | Kaysville | passed | July 8 | July 20 - July 31 |
| Grand | Castle Valley | passed | passed | July 7 - July 17 |
| Juab | Tintic | July 8 | July 18 | August 1 - |
| Salt Lake | North Holladay | June 24 | July 3 | July 14 - July 24 |
| | Taylorsville | June 26 | July 5 | July 16 - July 26 |
| Sevier | Monroe | June 28 | July 6 | July 20 - August 3 |
| Tooele | Erda | July 1 | July 9 | July 21 - July 31 |
| | Grantsville | June 26 | July 4 | July 16 - July 27 |
| Uintah | Vernal Airport | July 5 | July 13 | July 28 - |
| Utah | Alpine | July 8 | July 17 | July 30 - |
| | American Fork | past | July 11 | July 22 - August 3 |
| | Genola | past | July 8 | July 19 - July 31 |
| | Lincoln Point | past | July 9 | July 22 - August 2 |
| | Orem (Lindon) | past | July 9 | July 21 - August 1 |
| | Payson | past | July 10 | July 22 - August 3 |
| | Provo Airport | past | July 8 | July 21 - August 1 |
| | Provo Canyon | July 7 | July 14 | July 27 - August 6 |
| | Santaquin | past | July 10 | July 23 - August 3 |
| | Tickville | past | July 10 | July 27 - |
| | West Mountain | July 5 | July 13 | July 25 - August 5 |
| Weber | Ogden Airport | past | July 8 | July 19 - July 29 |
| Wasatch | Heber City | July 18 | July 27 | --- |
| Washington | New Harmony | June 24 | July 3 | July 15 - July 27 |
| Wayne | Torrey | past | past | July 12 - July 24 |

Spray Timing - Peach Twig Borer

Peach Twig Borer, First and Second Generations

End of egg hatch, where you should “keep fruit protected up to” is at 800 degree days after biofix, and eggs of the 2nd generation (which would be laid on fruit) should be treated between 1200 and 1300 degree days. End of 2nd generation egg hatch corresponds to 1900 degree days.

For the 2nd generation start date, choose the earlier date if you have high pest pressure in your area, and choose the later date if you have low pest pressure.

| County | Location | Keep Fruit Protected Up To: | Start Date 2nd Gen. | Keep Fruit Protected Up To: |
|------------------|---------------|-----------------------------|---------------------|-----------------------------|
| Box Elder | Perry | July 7 | July 25 - 29 | --- |
| | Tremonton | July 13 | July 28 - Aug 1 | --- |
| Cache | All Locations | July 16 | Aug 8 - 5 | --- |
| Carbon | Price | July 12 | July 28 - Aug 1 | --- |
| Davis | Kaysville | July 6 | July 21 - 25 | --- |
| Grand | Castle Valley | passed | July 4 - 7 | July 28 |
| Iron | Cedar City | July 12 | July 29 - Aug 2 | --- |
| Juab | Tintic | July 13 | July 31 - Aug 4 | --- |
| Salt Lake | Holladay | passed | July 14 - July 18 | --- |
| | Taylorsville | passed | July 14 - July 18 | --- |
| Sevier | Monroe | July 4 | July 21 - 26 | --- |
| Tooele | Erda | July 3 | July 17 - 21 | --- |
| | Grantsville | passed | July 14 - 18 | --- |
| Utah | Alpine | July 17 | Aug 3 - 6 | --- |
| | American Fork | July 4 | July 20 - 23 | --- |
| | Genola | passed | July 16 - 20 | --- |
| | Lincoln Point | passed | July 16 - 20 | --- |
| | Orem | July 6 | July 21 - 25 | --- |
| | Payson | passed | July 18 - 22 | --- |
| | Provo Airport | passed | July 18 - 21 | --- |
| | Santaquin | passed | July 18 - 22 | --- |
| | Tickville | July 5 | July 25 - 31 | --- |
| West Mountain | July 6 | July 21 - 25 | --- | |
| Weber | Pleasant View | passed | July 16 - 19 | --- |
| Wayne | Torrey | passed | July 11 - 15 | --- |

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 | <i>Conventional</i> acetamiprid carbaryl gamma-cyhalothrin malathion <i>Soft/organic</i> oil (1%) spinosad codling moth virus | Ortho Fruit and Veg. Sevin, Bonide Fruit Tree Spray, etc. Spectracide Triazicide Malathion Many products, EcoSmart Green Light, Gardens Alive Bull's Eye, Monterey Cyd-X | 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 |
| San Jose scale | apple | <i>Conventional</i> acetamiprid carbaryl gamma-cyhalothrin malathion <i>Soft/organic</i> oil (1%) insecticidal soap | Ortho Fruit and Veg. Sevin, Bonide Fruit Tree Spray, etc. Spectracide Triazicide Malathion Many products Safer's, Bayer Natria | only treat when crawlers are active. oil and soap: allow 4 hours-time for application to dry before temps reach 85 or above. |
| Spider mites | all | <i>Soft/organic</i> oil (1%) insecticidal soap | Many products, EcoSmart Safer's, Bayer Natria, Bonide | oil and soap: allow 4 hours-time for application to dry before temps reach 85 or above. |
| Coryneum blight | peach, apricot | <i>Conventional</i> myclobutanil captan | Spectracide Immunox Captan | Use as a preventive before a rain. |
| Peach twig borer | peach, nectarine | <i>Conventional</i> acetamiprid carbaryl malathion permethrin <i>Soft/organic</i> spinosad kaolin clay | Ortho Flower, Fruit & Veg Sevin, Bonide Fruit Tree Spray, etc. Malathion Hi-Yield Indoor/Outdoor Broad Use; Lilly Miller Multi-Purpose Insect Spray see 'codling moth' above Surround | see comments under Codling Moth permethrin: every 14 days; this ingredient is becoming less available in stores and may cause spider mite outbreaks Surround: every 3-5 days; works to repel, not kill insects; only moderate control; must purchase online |
| Walnut husk fly, Western cherry fruit fly | walnut peach apricot cherry | <i>Conventional</i> acetamiprid carbaryl malathion <i>Soft/organic</i> pyrethrin spinosad | Ortho Fruit & Veg. Sevin Malathion Concern Multi-Purpose see above | start applications when fruit in sunniest locations develops a salmon blush spinosad: every 7 days |

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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