



# Tree Fruit IPM Advisory: May 30<sup>th</sup>, 2006

Past IPM advisories are archived at:

<http://extension.usu.edu/cooperative/ipm/index.cfm/cid.610/>

## News Alert!

Degree-day and predicted spray dates are being updated twice per week (Mondays and Fridays). Visit the Orchard Spray Timing Tables for the latest updates at:

<http://extension.usu.edu/cooperative/ipm/index.cfm/cid.645/> (Select 1<sup>st</sup> generation CM or PTB in the right-side column).

### \*\*\*\*\*Disease Advisory\*\*\*\*\*

**Cherry powdery mildew** is now active and lesions can be observed on cherry leaves. Chemicals listed to control cherry mildew include: Abound, Cabrio, Elite, Flint, Microthiol, Orbit, Pristine, Procure, Quintec, Rally, Rubigan, and light oils (see list below). Applications of any chemical should be followed at a later date with another compound with a different mode of action. I also want to remind folks that the sulphur applications can reduce beneficial mite populations and could lead to excessive reduction of predatory mites (beneficials) that control pest mites later in the season. Compounds followed by an asterisk (\*) are known to have resistance in the mildew population so a different chemical type may be a better choice. The strobilurins are excellent to control mildew and Pristine is actually a mixture two fungicides (pyraclostrobin and boscalid), one is a class 7 and other is a class 11 fungicide. Resistance concerns are less with that compound but avoid excess use of any one chemical type in the list. As always, read and follow instructions on chemical labels in accordance with the laws governing their use. With the exception of the sulfur and oil products listed, labels for these compounds can be found at [www.greenbook.net](http://www.greenbook.net) as well as on the [www.cdms.net](http://www.cdms.net) websites for more information.

| Chemical | Chem type   | Control Efficacy | Resistance likely |
|----------|-------------|------------------|-------------------|
| Abound   | strobilurin | Medium           | High              |

|                |                   |           |      |
|----------------|-------------------|-----------|------|
| Cabrio         | strobilurin       | Excellent | High |
| Flint          | strobilurin       | Excellent | High |
| Pristine       | strobilurin       | Excellent | High |
| Elite          | DMI(triazole)     | Good      | High |
| Orbit          | DMI(triazole)     | Good      | High |
| Rally          | DMI(triazole)     | Good*     | High |
| Rubigan        | DMI(pyrimidine)   | Good*     | High |
| Procure        | DMI(imidazole)    | Good      | High |
| Microthiol     | Sulphur(flowable) | Good      | Low  |
| Wetable sulfur | Wetable powder    | Good      | Low  |
| Superior oil   | Oil               | Excellent | Low  |
| Stylet oil     | Oi                | Excellent | Low  |
| Quintec        | Quinoline         | Excellent | High |

**Fire blight** shoot strikes are becoming a problem at this time of the season. Remove shoot and blossom strikes as soon as as they are evident using hands to break out the branch or twig that is infected. Use of pruning shears or loppers are not necessary for removal of shoot and blossom strikes. Avoid heavy pruning early in the season to avoid promoting succulent shoot growth. Fertility to promote tree health is required but excessive nitrogen fertility will favor succulent shoot growth and should be avoided. Succulent growth favors the development of shoot blight infections. Remove suckers to avoid succulent shoot infections near the roots, remove by hand breaking them.

\*\*\*\*\***Insect Advisory**\*\*\*\*\*

**CODLING MOTH (Apple and Pear):** First cover spray dates to target the beginning of egg hatch is now past in all northern Utah locations. Keep apple and pear fruits protected during the first generation. Use the protection longevity of the insecticide you applied (as stated on product label), codling moth pressure (number of moths caught in traps and past history), and rate of codling moth development over time (we call this “phenology”) to guide timing of insecticide reapplications. **The next critical “window” for codling moth control is 340-640 DDs.** The percentage of egg hatch (larval emergence) for the first generation changes from 12 to 80% during this period. This relatively short 300 DD window of time (approx. 10-15 days in length) will see the greatest amount of codling moth pressure. **The warmer locations in northern Utah have now entered this period of rapid egg hatch: Genola (377 DD), Salt Lake Community College (377 DD), and Perry (381 DD).** Refer to the “Orchard Spray Timing Tables” posted on the IPM website to track the rate of codling moth development for your area: <http://extension.usu.edu/cooperative/ipm/index.cfm/cid.645/>. Select 1<sup>st</sup> Generation CM in the right column and then the most recent update to the tables.

Codling Moth Insecticide Recommendations for Commercial Orchards

Larvicides-Kill young larvae as they hatch from eggs and before they enter the fruit: Guthion, Imidan, Assail, Intrepid, Calypso, Danitol, Codling moth granulosis virus

Ovicides- Kill the eggs before they hatch. Need to apply before and/or during the egg-laying period (50-200 DDs after biofix depending on insecticide): Rimon, Esteem, Intrepid, Assail, Calypso, Horticultural mineral oil

Remember to buffer spray water where necessary and follow the label directions closely. Uniform coverage is crucial. Tank-mixing 1% (or less) of oil will likely increase the efficacy of most materials. Where growers have had a history of insecticide resistance, consider tank-mixing materials with different modes of action.

Codling Moth Insecticide Recommendations for Home Orchards: Homeowners can use a 1% oil spray (such as SunSpray Ultra-Fine) with esfenvalerate (Ortho Bug B Gon), carbaryl (Sevin), malathion, spinosad (Ferti-lome formulation), Codling moth virus (Cyd-X, Virusoft, Carpovirusine), pyrethrin, pyrethrum, azadirachtin (AZA-Direct), or Bt (Dipel, Thuricide). Bagging fruit to keep larvae out after fruit is at least  $\frac{1}{2}$  -  $\frac{3}{4}$  " inches in diameter and placing cardboard bands around trunks to trap cocooning larvae can also suppress injury. Go to the USU Extension Home Orchard Pest Management Guide for more detailed management information:

<http://extension.usu.edu/files/publications/homeorchard2006.pdf>

**PEACH TWIG BORER (Peach, Nectarine, and Apricot):** The beginning of egg hatch for the first generation of peach twig borer is predicted for May 23 to June 5 for northern Utah sites where a PTB biofix was established. Like codling moth, egg-hatch for twig borer begins at 220 DDs following the biofix. However, most peach growers shoot for 300-400 DDs for their first spray. The dates provided in the online phenology tables are the projected FIRST EMERGENCE, not the 300 or 400 DD timing. Growers are encouraged to time their sprays based on their PTB population pressure, the type of insecticide they're using, and the number of DDs accumulated in their growing region. **Genola has now reached 300 DD after biofix. A first cover spray to protect peach, nectarine, and apricot fruits in the Genola area should be applied soon.**

Payson is at 267, Lincoln Point is 248, Provo is 236, and Perry is 232 DD after biofix.

Watch the PTB DD accumulations and time sprays accordingly. Visit the PTB phenology table to check the projected developmental status of PTB in your area:

<http://extension.usu.edu/cooperative/ipm/index.cfm/cid.645/>. Select 1<sup>st</sup> generation PTB and latest update to view the most recent table.

To view pictures of what PTB infestations look like, visit the Extension Photo Gallery:

<http://eureka.ext.usu.edu/admin/plugin.cfm?id=2&gid=21>.

Insecticides effective for PTB: Imidan, Bt-kurstaki, Spinosad (Success, Entrust), Intrepid, Asana, Warrior, Proaxis, Endosulfan (Thiodan, Thionex), Guthion, Sevin, Diazinon, Permethrin (Pounce, Ambush), Malathion

**WESTERN CHERRY FRUIT FLY (Sweet and tart cherry):** Western cherry fruit fly adults have been caught on traps in Kaysville. It is time to put out yellow sticky traps for cherry fruit fly in all locations. Please send in your dates of first catch to post in this advisory.

The first cherry fruit flies of the season often emerge before fruit is soft enough for them to insert their eggs under the fruit skin. Based on numerous years of observation in Utah, fruit is not susceptible to egg-laying from cherry fruit fly females until it changes from yellow to a salmon or blush color. When earliest maturing fruit on the tree takes on a blush (sunny side of fruit), protect cherries with an insecticide application. Based on research, adult females are not ready to lay mature eggs until 7-10 days after first catch of the season. Use these two pieces of information for your location to initiate insecticide sprays to protect fruit from cherry fruit fly.

Insecticides effective for WCFE:

- GF-120 NF (apply with an electric pump sprayer mounted on a 4-wheeler; reapply every 7 days; excellent adulticide; not rainfast)
- Provado (moderate adulticide, excellent larvicide, can kill larvae within fruit; reapply every 14 days; watch for mite flare-up with repeated applications)
- Success and Entrust (reapply every 7 days)
- Guthion (reapply every 14 days; 15 day PHI)
- Sevin (reapply every 7 days; watch for mite flare-up with repeated use)
- Diazinon (reapply every 7-10 days; 21 day PHI)
- Malathion (reapply every 3 days; watch for mite flare-up with repeated use)

**OTHER ORCHARD INSECT AND MITE PESTS:** Following the hot weather of a week ago, some **spider mites** were already seen on the lower center leaves of fruit trees. Scout for spider mites and their stippling feeding injury. Also look for predaceous mites that can prevent plant-feeding spider mites from reaching economic injury levels. Horticultural mineral oil can be an excellent suppressant of mite populations. Consider adding 1% or less concentration of oil in with cover sprays to keep mite populations at bay.

The drying down of vegetation outside of orchards can prompt the migration of **lygus and stink bugs** into orchards. These insects can cause cat-facing injury to young pome and stone fruits. Scout for plant-feeding bugs with a sweep net in the vegetation borders, ground cover, and canopies of orchards at risk for migration of plant bugs. Endosulfan (Thionex), Danitol, and Warrior are effective insecticides that can be used post-bloom to protect fruit from cat-facing injury.

Light stippling of apple and cherry leaves from **white apple leafhopper** feeding was observed last week. No more than one nymph per leaf was observed in Diane's scouting trip. If densities of 3-4 nymphs per leaf are present, consider treating before the oldest nymphs (5<sup>th</sup> instar) and adults develop. Effective insecticides include Sevin, Thionex, Provado, Avaunt, Surround, and horticultural mineral oil.

**TO VIEW SPECIFIC ORCHARD INSECT FACT SHEETS:**

Codling Moth: <http://extension.usu.edu/files/gardpubs/8.pdf>

Peach Twig Borer: <http://extension.usu.edu/files/factsheets/twigbore.pdf>

Campylomma Bug: <http://extension.usu.edu/files/gardpubs/9.pdf>

Apple Aphids:

<http://extension.usu.edu/files/publications/Insects%2013%20apple%20aphids..pdf>

Speckled Green Fruitworm:

<http://extension.usu.edu/files/publications/green%20fruitworm7-14.pdf>

Cat-facing Insects:

<http://extension.usu.edu/files/gardpubs/3.pdf>

European Red Mite:

<http://extension.usu.edu/files/gardpubs/5.pdf>

Web Spinning Spider Mites:

<http://extension.usu.edu/files/gardpubs/6.pdf>

White Apple Leafhopper:

<http://extension.usu.edu/files/gardpubs/7.pdf>

**FOR MORE INFORMATION ON TREE FRUIT PEST MANAGEMENT:**

For a posting of archived and current pest advisories and orchard spray timing tables, see the USU Extension IPM web page at:

<http://extension.usu.edu/cooperative/ipm/>

The 2006 update of the Utah “Home Orchard Pest Management Guide” (USU Extension Publication HG 137) is now available at:

<http://extension.usu.edu/files/publications/homeorchard2006.pdf>

For Utah commercial orchard insect control guides (peach and cherry), see:

<http://extension.usu.edu/cooperative/ipm/index.cfm/cid.1424/>

For one-stop shopping for information on Utah insects, plant diseases, IPM, and the Plant Pest Diagnostic Laboratory, go to our “Insects and Plant Diseases” umbrella web site at:

<http://extension.usu.edu/cooperative/ipd/>

USU Extension and its employees are not responsible for the use, misuse, or damage caused by application or misapplication of products or information mentioned, and make no endorsement explicitly or implicitly of the products or information listed herein