

News/What to Watch For:

If powdery mildew is visible on apples, a petal-fall fungicide application may be needed.

Do not forget to thin apples and peaches. Information on timing will be in next advisory.

Codling Moth Spray Dates and Residential Products, pgs 5-6.

JUST THE BASICS: Current Treatments

APPLE & PEAR

- Commercial growers in most locations need to hang *codling moth* mating disruption dispensers, if using.
- Continue to watch the [TRAPs website](#) for *fire blight* risk. Apply antibiotic only when: blight has been a problem in your trees; risk is HIGH or EXTREME; there is 2+ hours of moisture from rain, irrigation, or dew, and trees are still in bloom.

PEACH/NECTARINE, APRICOT

- If *coryneum blight* has been a problem in your trees, an fungicide application at petal fall may be required.

Insect and Disease Information

 : information for residential settings

 : information for commercial orchards

Frost Damage to Flowers

By the time you read this, the beautiful warm weather outside will have made northern Utah's snowstorm of just 2 days ago a distant memory. The impact of the storm is that many flowers were blown off trees, limbs were broken, bees weren't flying to pollinate, and the cold temperatures that followed

may have killed some flowers. You can evaluate the flowers by slicing them in half to see if the ovary is brown. Frost-damaged fruit may fall from the tree early or may have scars that are not visible until further development. Be sure to prune any broken branches cleanly off.



Insect and Disease Information, continued from previous page

APPLE and PEAR

Codling Moth



Hosts: apple, pear

- **no action currently; see page 5 for when to treat**

We have uploaded the dates for codling moth biofix (first flight of moths) onto the [Utah TRAPs website](#) and the Utah TRAPs app, where you can look at when to treat trees in 60 locations. (On the website, select your location from the map or drop-down menu, pick codling moth from the list of pests, and hit submit). A selection of locations is shown on page 5.

The starting treatment date is equivalent to the start of egg hatch for this pest. Keep in mind that the dates shown will change, and will be updated in the next advisory.

Commercial growers can find materials for treating codling moth by [clicking here](#).

Backyard growers can find options on page 6.

Fire Blight



Hosts: apple, pear

- **no action currently needed**

For the next 10 days, the risk of fire blight infection is LOW to CAUTION for all areas of northern Utah. It looks like the risk this season will be if any late apple or pear flowers remain on the tree into May, when the temperatures may warm.

If the risk level for infection does increase to high or extreme while trees are still in bloom, you have a 24-hour window in which to apply an antibiotic. Most areas (except much of Utah County, which has resistance) can use the antibiotic, streptomycin, while areas that have resistance should use oxytetracycline.



the greatest risk of infection by fire blight is when "late" blossoms are still present later in the spring, when the weather is warmer

Apple Aphids

Hosts: peach/nectarine

- **may need to treat if present**

Aphids thrive in cooler temperatures, and populations are starting to increase on the succulent foliage. Several species were spotted in Utah County this week. Aphids can be treated with oil or insecticidal soap (see page 6).

Commercial growers can find materials for treating aphids by [clicking here](#).



green
apple
aphids



if left
un-
treated,
feeding
by rosy
apple
aphids
can
deform
fruit



this is the earliest that woolly apple aphids have been spotted; look for them on pruning cuts

Insect and Disease Information, continued from previous page

PEACH/NECTARINE, APRICOT, CHERRY

Green Peach Aphid

Hosts: peach/nectarine

- **may need to treat if present**

Green peach aphid colonies will continue to increase after bloom. To determine whether a treatment is needed, examine trees for the presence of colonies from now to the shuck split stage. Count the number of colonies on ten trees and use a treatment threshold of 2 colonies/tree at petal fall for peach, and 1 colony/tree for nectarine. See [USU Extension video on How to Monitor for Fruit Pests Using a Beating Tray](#).



Green peach aphids are generally only a problem when their populations become exceedingly high. Moderate populations are managed by our native natural enemies, including lacewing larvae, lady beetles, syrphid fly larvae, and parasitic wasps.

High green peach aphid populations might warrant a spray before leaves become curled upon themselves (contorted leaves shield aphids that are feeding within). Alternatively, growers applying the shuck-split spray can mix insecticides that suppress aphids as well.

Commercial growers can find options by [clicking here](#).

Backyard growers can use horticultural oil (1%) or insecticidal soap (both are readily available in garden supply stores).

Coryneum Blight

Hosts: peach/nectarine, apricot, cherry

- **treat at shuck-split stage**

If coryneum blight is a problem for you, one of the most important times to apply a fungicide is at or right after the shuck split stage. Most peach orchards in northern Utah are at petal fall or approaching shuck-split.



peach shuck split stage



peach fruit can get infections all season long.

This pathogen is spread primarily by rain, and optimal conditions for infection are when temperatures are from 70 to 80°F.

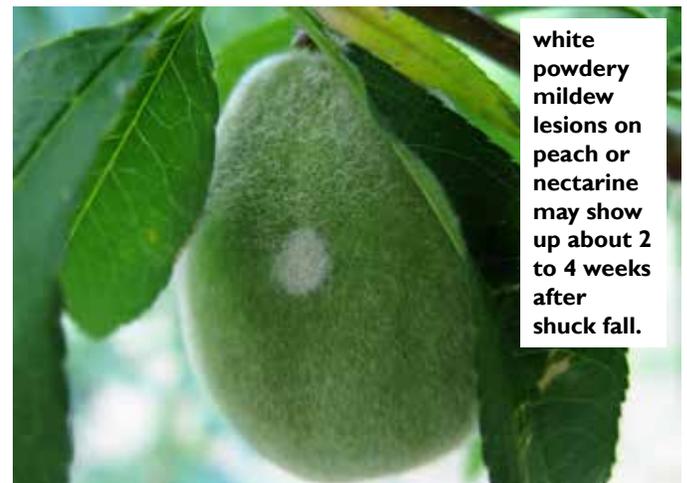
Commercial growers can find options by [clicking here](#).

Homeowners can use chlorothalonil (do not use after shuck split) and can also prune out any infected twigs. In addition, do not let sprinklers spray water onto leaves or branches.

Powdery Mildew on Peach Fruit

Hosts: peach

- **may need to treat at shuck-split if PM was a problem last year**



white powdery mildew lesions on peach or nectarine may show up about 2 to 4 weeks after shuck fall.

Insect and Disease Information, continued from previous page

Peach powdery mildew overwinters on roses and sometimes on peach buds. In spring, when nights are cool and moist, and days are warm, spores infect foliage and peach fruitlets. On fruit, new lesions look like white spots. Infections on fruit can continue all spring until the pit hardening stage. (The only way to tell pit-hardening is to slice peaches.) Infections on leaves are typically only seen later in the season.

Infections on fruit won't be noticeable until 2 to 4 weeks after shuck fall. At that time, monitor 25 fruits on several trees for the presence of round, whitish, powdery spots on the fruit surface. A total of 10 to 20 fruit infections and greater than 20 fruit infections per tree represents moderate and high risk, respectively.

PM can be prevented with a shuck-split or shuck-fall fungicide application. Find options for commercial growers by [clicking here](#).

In residential settings, chlorothalonil can be used (and will also help with coryneum) between petal fall and shuck split.

Continue fungicide sprays on susceptible varieties at 10 to 14-day intervals until the pit hardening stage is reached.

Greater Peachtree Borer

Hosts: peach/nectarine

- **no action needed now**



crumbly oozing from the base of the tree indicates greater peachtree borer

We have had a few inquiries about oozing at the base of peach and nectarine trees. This ooze, especially if it appears to be mixed with sawdust, is from the greater peachtree borer. The larva inside the tree is currently feeding on the inner bark, causing the tree to react by producing gum to "push out" the larva. The "sawdust" is insect frass (poop).

In early June, the larva will stop feeding and pupate to an adult moth. The moth will emerge from the tree, and after mating, the females will lay eggs on bark to repeat the cycle.

We have hung monitoring traps in several orchards, and will announce when to treat in a future advisory.

Announcement

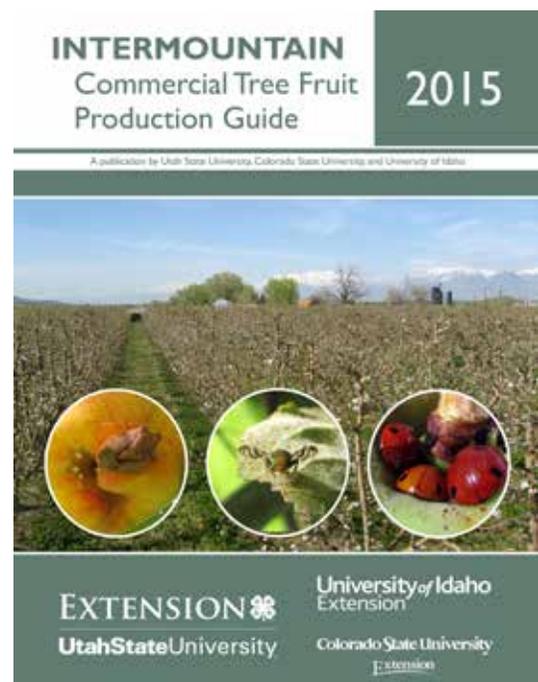
The 2015 edition of the Intermountain Commercial Tree Fruit Production Guide is now available for download or to purchase.

Updates for the 2015 edition include:

- all new pesticide rates and comments
- several new pesticide registrations
- residual length added (this information can be found after the pesticide name in the spray tables)
- more information on invasive pests
- updated disease biology section
- additional organic information on weeds, soil amendments, and pest management

You may download a free pdf here: intermountainfruit.org/

Or, you may purchase a bound copy for \$5 (to cover shipping). The books will be available on the [USU Extension Shopping Site](#). Once there, click on "Agriculture and Natural Resources" category and scroll down.



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 Generation

In the table, choose either Option A or B when starting your codling moth sprays.

Option A is what most people will do. Apply insecticide at the recommended date, and repeat.

Option B is an alternative that may help to reduce sprays. Liberally apply horticultural oil (1%) on the first date, and then apply your regular insecticide on the later date. The oil kills eggs that have been laid on fruit up to that point.

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.

| County | Location | Option A | Option B | |
|------------|----------------------|-------------------|---------------|-------------------------|
| | | Apply first spray | Apply oil | Apply first insecticide |
| Box Elder | Perry | May 15 | May 12 | not yet known |
| | Tremonton | May 17 | May 15 | not yet known |
| Cache | Logan Airport | not yet known | May 20 | not yet known |
| | River Heights | not yet known | not yet known | not yet known |
| Carbon | Price Airport | not yet known | not yet known | not yet known |
| Davis | Kaysville | May 8 | May 5 | not yet known |
| Iron | Cedar City Airport | May 16 | May 14 | not yet known |
| Juab | Tintic | not yet known | not yet known | not yet known |
| Salt Lake | Benches/Cooler sites | May 17 | May 15 | not yet known |
| | Most areas | May 10 | May 8 | not yet known |
| Sevier | Monroe | May 4 | May 1 | May 19 |
| Tooele | Erda Airport | May 18 | May 16 | not yet known |
| | Grantsville | May 14 | May 11 | not yet known |
| Uintah | Vernal Airport | not yet known | not yet known | not yet known |
| | Alpine | May 14 | May 12 | not yet known |
| | American Fork | May 11 | May 9 | not yet known |
| | Genola | May 9 | May 6 | not yet known |
| | Lincoln Point | May 17 | May 14 | not yet known |
| | Orem (Lindon) | May 8 | May 6 | not yet known |
| | Payson | May 10 | May 8 | not yet known |
| | Provo Airport | May 13 | May 11 | not yet known |
| | Provo Canyon | May 17 | May 15 | not yet known |
| | Santaquin | May 15 | May 13 | not yet known |
| | West Mountain | May 10 | May 7 | not yet known |
| Weber | Ogden Airport | May 15 | May 13 | not yet known |
| | Pleasant View | May 7 | May 4 | May 20 |
| Wasatch | Heber City | not yet known | not yet known | not yet known |
| Washington | New Harmony | May 9 | May 6 | not yet known |
| Wayne | Torrey | May 13 | May 11 | not yet known |

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 | <p><i>Conventional</i> carbaryl acetamiprid malathion gamma-cyhalothrin</p> <p><i>Soft/organic</i> oil (1%) spinosad</p> <p>codling moth virus</p> | <p>Sevin, Bonide Fruit Tree Spray, etc. Ortho Max Flower, Fruit, and Veg. Malathion Spectracide Triazicide</p> <p>Many products Green Light, Gardens Alive Bull's Eye, Monterey Cyd-X</p> | <p>acetamiprid: every 14 days carbaryl: every 14 - 21 days malathion: every 7 days gamma-cyhalothrin: every 14 days hort. oil: lasts 5-7 days for killing eggs; use at beginning of each generation; apply at 1% rate 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</p> |
| Powdery mildew | apple | <p><i>Conventional</i> myclobutanil</p> <p><i>Soft/organic</i> neem oil</p> <p>potassium bicarbonate</p> | <p>Spectracide Immunox</p> <p>Garden Safe, Fertilome Triple Action Kaligreen, Monterey Bi-Carb</p> | <p>myclobutanil: lasts 14 days; repeat once neem oil: repeat 1 to 3 times every 5 days potassium bicarbonate: repeat 1 to 3 times every 7 days</p> |
| Fire blight | apple, pear | <p>streptomycin oxytetracycline</p> | <p>Ferti-Lome Mycoshield</p> | <p>Do not use antibiotic unless necessary; apply streptomycin within 24 h of a wetting event only if fire blight was present last year; oxytetracycline within 12 hr.</p> |
| Aphids | all | <p><i>Soft/organic</i> oil (1%) insecticidal soap</p> | <p>Many products, EcoSmart Safer's, Bayer Natria, Bonide</p> | <p>oil: allow 4 hours-time for application to dry before temps reach 85 or above.</p> |
| Coryneum blight | peach, apricot | <p><i>Conventional</i> chlorothalonil</p> <p>captan</p> | <p>Fung-onil, Ortho Max Disease Control Captan</p> | <p>Apply once at shuck split stage chlorothalonil: do not use after shuck split captan: use as a preventive before a rain</p> |

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.

Tree Fruit IPM Advisory

is published weekly by Utah State University Extension

Editor: Marion Murray, marion.murray@usu.edu

[click here](#) for archived advisories