

News/What to Watch For:

There is still time to collect foliage for nutrient analysis by the USU Analytical Lab (www.usual.usu.edu)

Spider mites will continue to be active through the end of the month, and then will begin migrating to ground cover for overwintering

Protect peaches from late season **coryneum blight** infection (shown at right) if rain is predicted.

- Backyard growers, apply fungicide before rain; use Captan or Spectracide Immunox
- Commercial growers can find a list on page 4

Continue to carefully irrigate trees through the next several weeks



JUST THE BASICS

APPLE & PEAR

- Continue protecting fruit from *codling moth* through Sept. 15.

PEACH/NECTARINE

- Continue protecting fruit from *peach twig borer* through Sept. 15.

- Continue protecting lower trunk from *greater peachtree borer* through early October.

WALNUT

- Continue protecting walnuts from *walnut husk fly* until one month before harvest.

Backyard Grower Information

APPLE/PEAR

Codling Moth

Hosts: apple, pear

We are still trapping codling moth, and in some areas, weekly catches are high. The recommended time to stop treatments is September 15. The reason for this arbitrary timing is that codling moth can “sense” shorter day length. They are naturally “forced” into a resting stage called diapause starting in late August, and by mid-September, much of codling moth activity has ceased. You might consider one last treatment to maintain protection for these last 3 weeks.

PEACH/NECTARINE

Pests of Ripening Fruit

Hosts: peach/nectarine

Many peach varieties are being harvested now, which means that pests that are attracted to ripening fruit are becoming more apparent, including boxelder bugs, earwigs, European paper wasps, and sap beetles. One of the best tools for managing these pests is to harvest fruit quickly as it ripens, or even just before fully ripe. Keep an eye on the ripest peaches on the trees to see if any of these pests are present.

Boxelder Bugs

Boxelder bugs feed with piercing-sucking mouthparts, and can cause fruit flesh to dry out or can introduce decay bacteria or fungi.

Backyard Grower Information, continued



boxelder bugs feed in clusters due to a pheromone that causes them to form large aggregations

Earwigs

Earwigs are a perennial problem in ripening peaches, as they are concentrated in irrigated areas. Once the fruit softens, they will enter not only through existing openings, but will chew their own holes, leaving deep pits. Earwig damage is usually easy to diagnose because they leave behind black dots of excrement on the fruit surface.

Controlling adults can be difficult due to their limited exposure to surface-applied insecticides. Carbaryl (Sevin) or spinosad have both shown good control for earwigs. Either product should be applied just before the peach fruits start to soften.



earwigs often feed near the stem end where they can hide

European Paper Wasp

Wasps usually seek out fruit that is already damaged, and suck out juices. To deal with European paper wasps, make a homemade trap by cutting the top third from a plastic soda bottle and inverting it into the bottom portion. Punch a hole on each side and tie on string for hanging. Add a mixture of 1 part fruit juice to 10 parts water plus 1 tsp liquid detergent to keep the wasps in the water. Adding a bit of ripened fruit

will make it even more attractive.

Sap Beetles

Sap beetles are opportunistic insects that can enter peaches through tiny openings, primarily caused by split pits or soft sutures. The smallest openings (which would occur at the stem end in the case of split pits) or overripe fruit are all the invitation that is needed. When the fruit is handled, the beetles will scurry out.

As these insects travel in and out of fruit, they introduce fungi into the fruit, causing it to decay.



home-made paper wasp traps can be quite effective



sap beetles are tiny insects with clubbed antennae; they are attracted to over-ripe fruits or they enter fruit through openings

Treatment Options for Pests of Ripening Peaches

The best control measure for pests of ripening fruit is good sanitation. Any damaged, splitting, or overripe fruit should be pulled from the tree and dropped to the ground immediately to encourage decomposition.

If there is a problem with large numbers of any of these pests during harvest, there are two insecticide options. Both options require contact with the target pest.

- pyrethrin (Prentox Pyronyl Crop Spray, Pyrellin, Pyganic, Fertilome Fruit Tree Spray, Natural Guard Neem Spray, etc.): 0-day PHI
- Sevin, 3-day PHI

Commercial Grower Information

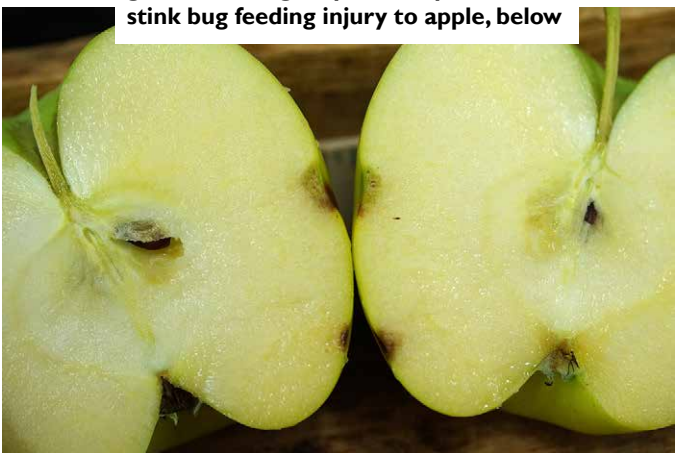
ALL FRUIT TREES

Stink Bugs

Hosts: apple, pear, peach, nectarine



green stinkbug on peach, top;
stink bug feeding injury to apple, below



Stink bug activity will escalate through the end of August and into early September. In Utah, we have several species of stink bugs. The invasive brown marmorated stink bug does occur in Utah, but it has not yet been found damaging fruit.

Late season stink bug damage appears as slightly sunken spots on the fruit skin. On apple, the flesh underneath the injury is corky and light colored. On peach, the lesions are water-soaked. When you slice into the flesh, the damaged area forms a conical shape, with the widest area near the skin. Damage mostly occurs near the top third of the apple, and on fruits near the orchard borders or near natural areas.

Insecticides for late season stink bug management in commercial orchards include Baythroid and Leverage (both 7-day PHI) and Danitol (14-day PHI). Surround (kaolin clay) may provide some repellent activity. Start with treatment of the border rows only, and be mindful of the label's pre-harvest. Avoid using a pyrethroid if you have spider mites, as this could make the problem worse.

PEACH/NECTARINE, APRICOT, CHERRY

Late-Season Coryneum Blight

Hosts: peach/nectarine

Coryneum infections that happen as fruit is ripening are more severe than early-season infections. Thankfully, the peach-harvest weather has been dry so far. But with every rainfall through peach harvest,



the chance of late-season infections increases. The next page lists some options for prevention of coryneum blight. A spray is only needed if at least 4 hours of rain occurs.

Brown Rot: Preventing Post-Harvest Decay

Hosts: peach/nectarine, plum

Brown rot causes fruit to quickly mummify on the tree.



In the last few years, the disease brown rot (caused by the fungus *Monilinia*) has become more apparent in Utah, primarily

Commercial Grower Information, continued

in backyard trees but also in a few commercial orchards. It is one of the most important disease of stone fruit worldwide, but Utah's dry summers has kept it at bay. In July and early August of 2014, northern Utah had heavy monsoonal rains that helped contribute to spread.

Monilinia thrives in warmer temperatures, but needs frequent rains during the pre-harvest period (when fruit has begun to soften) to cause disease. In some cases, 100% crop loss may occur.

Fruit infections are visible as firm, brown lesions that rapidly spread throughout the fruit causing complete decay in just a few days. Spores produced on these fruit can then disperse and infect additional healthy fruit. Fruit that is picked can appear healthy, only to rot in storage or on store shelves. In parts of the country where brown rot is common, flowers and green fruit can become infected. But in Utah, we have found that the most common infections are occurring on ripe fruit.

Where rains are predicted, fungicide applications can begin 2 to 3 weeks before predicted harvest of each variety. A second application would occur 9 days later, and a final application the day before or between pickings.

Many fungicides have a 0 or 1-day PHI and a re-entry interval of 12-24 hours, making this timing possible. See the table on the next page for a list of options. It is important to rotate between pesticide classes to prevent resistance.

The final pre-harvest spray provides protection during the picking and transport process. It may also be very important for fresh farm market peaches, since these fruit are rarely treated with a post-harvest fungicide. If you have had brown rot identified this year or in the past, it will be important to apply a protectant fungicide to prevent infection, especially if rainfall occurs close to or at harvest.

Brown Rot and Coryneum Blight Fungicide Options

| Fungicide | Group | PHI | Also Controls | Efficacy | Resistance Risk |
|-------------------------------------------|-------|-----|----------------------------------------|-----------|-----------------|
| Topsin M (thiophanate-methyl) | 1 | 1 | powdery mildew | excellent | High |
| Elite (tebuconazole) | 3 | 0 | powdery mildew | excellent | High |
| Indar (fenbuconazole) | 3 | 0 | powdery mildew | excellent | High |
| Rally (myclobutanil) | 3 | 0 | powdery mildew | good | High |
| Spectracide Immunox (myclobutanil) | 3 | 0 | powdery mildew, coryneum blight (good) | good | High |
| Orbit (propiconazole) | 3 | 0 | powdery mildew | excellent | High |
| Fontelis (penthiopyrad) | 7 | 0 | coryneum blight, powdery mildew | good | High |
| Vanguard (cyprodinil) | 9 | 2 | | good | High |
| Gem (trifloxystrobin) | 11 | 1 | coryneum blight, powdery mildew | good | High |
| Adament (tebuconazole + trifloxystrobin) | 3/11 | 1 | powdery mildew | excellent | Medium |
| Quilt Xcel (propiconazole + azoxystrobin) | 3/11 | 0 | coryneum blight, powdery mildew | excellent | Medium |
| Pristine (boscalid + pyraclostrobin) | 7/11 | 0 | coryneum blight, powdery mildew | excellent | Medium |
| Captan (captan) | M4 | 0 | coryneum blight | fair | Low |

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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