

JUST THE BASICS: Backyard

GENERAL

- Rake up fallen fruit to reduce pest pressure for next year.
- Mow tall weeds around trees/install barrier or wire to reduce rodent problems and deer rubbing.
- Make sure all new plantings get white tree wrap (December through early April) or white paint (50% latex/50% water), from the base of the tree to scaffold limbs, to prevent sunscald.
- Give trees a good watering before the ground freezes.
- Do not do any pruning now; wait until winter (apples) or early to mid-spring (peaches).

APPLE & PEAR

- Apply a treatment when the first leaves start turning color to control *blister mites* (see below).
- To reduce *codling moth* for next year, remove excess fruit on the tree and rake fruit on the ground.

PEACH/NECTARINE

- Prevent new *coryneum blight* (shothole) infections this fall by applying copper to trees when 50% of leaves have fallen.

JUST THE BASICS: Commercial

GENERAL

- Mow fallen fruit to reduce pest pressure for next year.
- Mow tall weeds around trees to reduce rodent problems and deer rubbing.
- Make sure all new plantings get white paint (50% latex/50% water) from the base of the tree to scaffold limbs, to prevent sunscald.
- Irrigate this fall before the ground freezes.

APPLE & PEAR

- To reduce *codling moth* for next year, remove bins and debris from the orchard after harvest.

PEACH/NECTARINE

- Prevent new *coryneum blight* (shothole) infections this fall by applying copper to trees when 50% of leaves have fallen. Use enough pressure to blow off existing leaves.

Backyard Information

APPLE & PEAR

Blister Mites

Hosts: apple, pear

Blister mites and other eriophyid mites can be treated now, and no later than just before leaf drop. They are more of an aesthetic problem, and do not harm the health of the tree. In fact, they serve as a food source for early emerging predatory mites in the spring. In turn, the predatory mites will take care of the harmful spider mites that are active during summer.

Blister mites belong to a group of mites called eriophyid mites (air-ee-oh-FYE-id). They are so small that they are invisible to the naked eye, but their feeding can cause visible symptoms.



Backyard Information, continued from previous page

Blister mite spots on pear turn black by mid to late season.



Small raised blisters form on the leaves of pear and apple, which—by the middle of summer—look like brown or black leaf spots. In the fall, infested leaves will change color and drop before the healthy leaves.

In early fall, just as the leaves start to turn color, the mites migrate to leaf buds to spend the winter under the bud scales. Their exposure at this time makes it a good opportunity to treat.

If treatment is desired, options include:

- 1.5-2% oil, thoroughly covering the tops and bottoms of the leaves
- Sevin (carbaryl), alone or with 1% oil

PEACH/NECTARINE/CHERRY

Coryneum Blight

Hosts: peach/nectarine, plum, apricot

The time to treat coryneum blight this fall is when 50% of leaves have dropped. Options include:

- copper (Bonide Copper, Lily Miller Microcop, etc.)
- chlorothalonil (Fertilome Broad Spectrum, Ortho Max Disease, etc.)

This disease affects many parts of the tree, including buds, small twigs, leaves, and fruit, so it is important to prevent new infections from happening in the fall.

When leaves drop, they leave a small open scar, and if any spores land on those scars under the right weather conditions, the fungus will invade the tissue and kill the bud. It is these bud infections that then lead to new leaf and fruit infections the following spring.

New coryneum infections occur in the fall on leaf scars, so be sure that the spray at 50% leaf drop covers these areas.



Mealy Plum Aphid

Hosts: most noticeable on apricot or flying around the yard

For the last several weeks, aphids have been flying in very high numbers to their woody plant hosts to get ready for egg-laying. Some people think they are gnats or flies, but aphids are the nuisance culprits. Mealy plum aphid is the most common.

This aphid spends the summer on cattails and reed grasses. We had a very hot summer this year, so the populations built to very high levels on those summer hosts. In late summer, mealy plum aphid takes flight, searching for apricot and plum trees on which to feed. The tiny dots on the leaves are young aphids, not eggs. When those young aphids mature, they mate and lay cream-colored eggs in cracks and crevices near buds.

NOT TO FEAR: The number of aphids seen in fall does not mean a big population the following spring. Those flying aphids you've seen will be killed by frost, and only a small portion of the eggs that were laid will survive the winter.

In addition, letting the aphids do their “thing” this winter allows for food for natural enemies (lady beetles, lacewings, parasitoid wasps), helping these good insects to thrive.



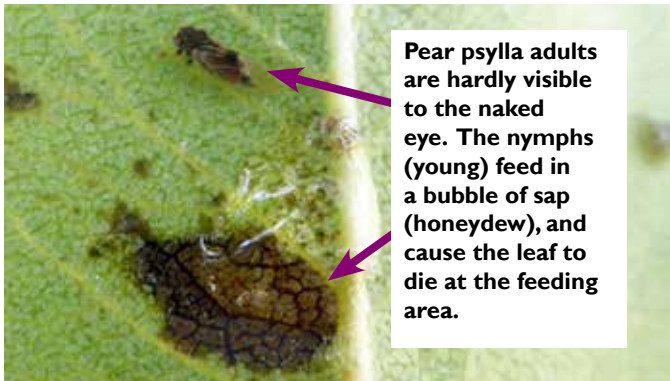
This fall, aphids have been flying to their woody hosts to lay eggs in cracks and crevices near buds.



Commercial Information

Pear Psylla

Hosts: pear



Pear psylla adults are hardly visible to the naked eye. The nymphs (young) feed in a bubble of sap (honeydew), and cause the leaf to die at the feeding area.

Early fall is a good time to treat for pear psylla before the adults migrate to protected areas in leaf litter or on tree bark for the winter.

To determine whether a post-harvest treatment is necessary, examine one shoot on at least 20 trees in your orchard (or 20 shoots on 1 to 2 trees) for the presence of nymphs (usually sitting in a drop of honeydew). If activity is seen on at least 5 shoots, a treatment is warranted. Oil or carbaryl are options.

Fire Blight

Hosts: apple, pear



Fire blight-affected shoots are easy to spot in fall and winter because the leaves remain attached.

Thankfully, this spring was not a heavy fire blight season. But as fall approaches, it is still important to inspect orchards for fire blight cankers. They are easy to spot because the leaves remain attached to the dead shoots.

The infected shoots should be pruned out when you conduct your normal late winter pruning. At that time (when trees are dormant), it is not necessary to sterilize your pruners between cuts, and affected shoots and branches should be removed 10-12 inches below the visibly diseased tissue. If you are diligent about removing as much fire blight as possible, you are lessening the chances of an outbreak for next season.

PEACH/NECTARINE/CHERRY

Coryneum Blight

Hosts: peach/nectarine, plum, apricot

The time to treat coryneum blight this fall is when 50% of leaves have dropped. Use a high-pressure sprayer to knock the rest of the leaves off the tree. Options include:

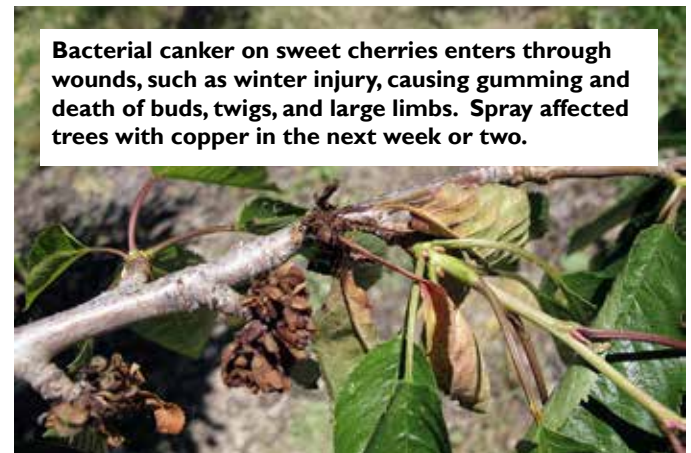
- fixed coppers or copper sulfate (Kocide, C-O-C-S, etc.)
- chlorothalonil or Ziram

When leaves drop, they leave a small open scar, and if any spores land on those scars under the right weather conditions, the fungus will invade the tissue and kill the bud. It is these bud infections that then lead to new leaf and fruit infections the following spring.

If any orchards have severe infections, it will take at least three years of diligent fall, spring, and summer treatments to suppress the disease incidence.

Bacterial Canker (*Pseudomonas syringae*)

Hosts: sweet cherry; rarely on peach



Bacterial canker on sweet cherries enters through wounds, such as winter injury, causing gumming and death of buds, twigs, and large limbs. Spray affected trees with copper in the next week or two.

Like coryneum blight, new bacterial canker infections can enter trees through leaf scars in the fall. Research out of Oregon State University has shown that an application of fixed copper or Bordeaux Mixture in mid to late October can help reduce the incidence of this disease the following spring.

Bacterial canker is a disease of young sweet cherry trees, or mature cherries affected by winter injury or other factors that cause wounds. The bacteria invade bark and phloem tissue, causing cankers that can grow to eventually kill large branches or the entire tree.

Sweet cherries that show oozing sap from dead buds and twigs, along with clusters of dead leaves or dead shoots, typically means an infection by bacterial canker.

Commercial Information, continued from previous page

INVASIVE PEST UPDATES

Dr. Lori Spears, USU Cooperative Agriculture Pest Survey Coordinator, leads monitoring efforts for invasive pests in Utah agriculture. She provides an update of two important fruit pests below.

Brown Marmorated Stink Bug

Brown Marmorated Stink Bug (BMSB; *Halyomorpha halys*) is a major invasive pest of tree fruits, small fruits, vegetables, and ornamentals. BMSB is now considered to be established in Weber, Davis, Salt Lake, and Utah counties. This summer and early fall, hundreds of adults and nymphs and several egg masses were found in Salt Lake County on ornamental plants, particularly catalpa trees, and on buildings. Most were seen in July and August.

BMSB adults (but not injury) were found for the first time in fruit crops in Utah. One adult was collected in a trap located at the edge of a peach orchard near wild habitat in Davis County in June. In late September, an observant Utah County grower discovered one adult from a box of newly-harvested plums that had been in storage for one night. The storage facility was in close proximity to an apple and peach orchard, bordered by an alfalfa field, and near only a few homes.

To learn more about how to monitor for BMSB, what crops it favors, and recommended management strategies, [please click here for the Invasive Fruit Pest Guide for Utah.](#)



Garry Berman, USDA APHIS, Bugwood.org

Orchards in the eastern U.S. and areas of the West Coast have, so far, experienced the brunt of BMSB damage.

Spotted Wing Drosophila

Spotted wing drosophila (SWD; *Drosophila suzukii*) is an invasive pest of fruits. SWD was first detected in Utah in Davis County in 2010. Since 2014, SWD adults have also been found in Rich, Cache, Box Elder, Weber, and Utah counties. Eggs and larvae have not been found in Utah, probably due to low populations; however, adults are occurring in the same locations in subsequent years, suggesting that SWD is reproducing and completing full generations in Utah.

This year, SWD adults first started appearing in traps (located in commercial orchards, wild sites, and backyard gardens) in mid-August, and their numbers have been steadily increasing. In previous years, activity peaked during mid-October and so it is likely that their numbers will peak sometime in the next couple of weeks before dropping to near zero by early to mid-November.

A general practice for sites that are infested is to break up fruit that is on the ground with a flail mower or other device. This prevents fruit material from hosting larvae. For more specific information about SWD monitoring and/or management, [please click here for the Invasive Fruit Pest Guide for Utah.](#)



Ed Show, UC Cooperative Extension, Santa Cruz County

To date, SWD maggots have not been found in fruits in Utah. The mystery of where they are feeding remains.

Trap catch of SWD in each monitored county during the week of Sept. 30, and for the season (as of October).

County	SWD During the Week of Sept. 30	Season-long Total	Notes
Rich	4	12	all in commercial crops
Cache	465	1,030	790 in wild sites or backyard gardens
Box Elder	64	132	all in commercial crops
Weber	8	41	all in commercial crops
Davis	49	127	111 in wild sites or backyard gardens
Utah – Provo and north	2	9	one in a wild site
Utah – south of Provo	9	43	36 in wild sites

Apple Maladies Found at Harvest



Codling moth can introduce fungi or bacteria that can cause a soft, spongy rot.



The rot introduced by codling moth can also be dry and firm.



Earwig feeding. Note the black dot (excrement) inside the hole, which helps to identify earwig feeding.



Birds are becoming more and more of a problem in orchards.



Powdery mildew causes lace-like russeting on fruit.



Some nutrient or pesticide sprays can puddle at the stem end, and cause russeting of the fruit skin.

Apple Maladies, continued from previous page



Frost injury often appears as a circular ring of russet around the apple.



Light frost damage will show up as a ring of small lesions around the bottom of the apple.



Hail damage can sometimes look like insect damage or a disorder.



Thrips are tiny insects that can lay eggs on the developing apple, causing a “pansy” shaped spot.



When campylopus bugs feed on developing fruitlets in spring, they cause a raised blister.



Apple scab is somewhat rare in Utah, causing black, circular, scabby lesions.

Apple Maladies, continued from previous page



San Jose scale bodies can be rubbed off of fruit for home consumption, but fruit is unacceptable for the retail market.



Lesions caused by bitter pit of apple are focused closer to the calyx end.



“Jonathan spot” occurs on Jonathan, Rome, Gravenstein, and other varieties. Its cause is unknown.



Lenticels within a sunburned area on fruit frequently become brown or black.



When sunburn is severe, fruit can crack. Fruit can be protected from sunburn by applying the product, Surround, which creates a reflective white surface.



General fruit cracking is common and its cause is not well-understood.

Apple Maladies, continued from previous page



When Fuji and Gala apples expand rapidly toward harvest, the internal pressure may cause cracking at the stem end.



Stink and lygus bugs puncture-type feeding results in deep pits whose symptom is known as “cat-facing.”



When rosy apple aphids feed on leaves and flowers during bloom, the resulting fruit becomes deformed and small.



Fire blight infections can happen later in the season, especially through wounds on fruit, resulting in a soft rot.



A dry rot may develop on the calyx end of fruit, mostly introduced by insect feeding.



Honeycrisp apples have a soft flesh, and are prone to diseases like bitter rot.

Production Information

FALL ORCHARD CHORES

Keep roots moist: At this time of year, leaves on trees are changing color and dropping, while underground, major root growth is occurring. So it is important to maintain adequate but not excessive soil moisture from now until the soil freezes for the winter.

Do not fertilize now: Roots will continue to grow all through fall, but nutrient uptake essentially ceases after the leaves have dropped. It is too late for any fall fertilizer applications, as whatever is applied will leach out of the soil.

Tree removal: Trees suffering from significant insect, disease, or other problems should be removed now. There is still time to install a replacement planting this fall.

Protect from mice, voles: Create or maintain at least 3 feet of clear space from around the base of each tree to help minimize rodents from feeding on bark and roots. Young trees are particularly susceptible to girdling because their trunk circumference is so small. Consider installing a physical barrier around the trunk and down into the soil up to 6 inches.

Prevent winter sunscald: In late winter, bark can be warmed by intense sunlight. If this warming is followed by a cold spell that night, the bark can be killed. Sunscald is one of the primary problems affecting young trees in Utah and is a major factor in the incidence of cytospora canker or flatheaded borers. Protect trunks by applying white tree wrap or painting the trunk and lower scaffold limbs with a 1:1 mixture of white latex paint to water. If using tree wrap, remove it in early April.



The upper scaffold limbs of this peach tree were affected by sunscald many years ago. This type of injury often is not apparent until a few years later. It can serve as an entry for canker-causing diseases.



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