UtahState University COOPERATIVE EXTENSION

Tree Fruit IPM Advisory

UTAH PESTS

Weekly Orchard Pest Update, Utah State University Extension, **October 11, 2013**

Announcements

SPOTTED WING DROSOPHILA UPDATE

Lori Spears, USU Coordinator for the Cooperative Agriculture Pest Survey (CAPS) program, reports that the first spotted wing drosophila (SWD) trap catch of 2013 in Utah occurred on September 25. Spears is monitoring 14 traps in 5 locations in Davis County, and on that date, she found 5 flies in backyard sites and at the USU Kaysville Experimental Farm. To date, her traps have captured 22 flies.

Utah is fortunate to continue to have very low numbers of this potentially serious pest. In 2012, a total of 17 flies were captured, in 2011, it was 25 flies, and in 2010, 73 flies. Compare these numbers to other western states that capture close to 100 flies/trap per week at this time of year.

Spears and colleagues are considering investigating exactly what SWD is doing in Utah: is it overwintering here, or are these new introductions each summer; is it reproducing in wild hosts; etc. To date, infested fruit have not been reported in Utah.

Elsewhere, SWD maggots feed in a wide variety of fruit, including cherry, blackberry, raspberry, strawberry, grape, blueberry, and peach. Cherries and small berries are the prime hosts, but all overripe fruit is fair game.

Ed Show, UC Cooperative Extension, Santa Cruz County

Even though SWD populations are low in Utah, it is still important to take precautions to prevent any possibility of infestation by picking fruit before it is overripe, removing fruit from trees after harvest, and removing or mowing/shredding fallen fruit.

Below are links to more information about monitoring and treatment for spotted wing drosophila, and images of damage to fruit (click on orange link):

- USU Extension fact sheet
- USU Extension video about trapping and identification.
- Oregon State has a wonderful website, spottedwing.com, including some very detailed spray recommendations for a variety of fruits.

BROWN MARMORATED STINK BUG UPDATE

The Utah CAPS program is also surveying for the brown marmorated stink bug this year. BMSB was first identified in fall 2012 from a Salt Lake City residence. This season traps placed in 10 Salt Lake City locations have captured a total of 3 stink bugs. An additional, single specimen was detected in another CAPS trap in Utah County (not in an orchard).

The BMSB has devastated a variety of crops (apple, peach, tomato, and others) in eastern U.S., and populations are marching westward. They have become established as nuisance pests in locations in California, Oregon, and Washington. Click here for more info.

Gary Bernon, USDA APHIS, bugwood.org

Announcements, continued from previous page

NEW PEACH WEBSITE

Fruit Report (ucanr.edu/sites/fruitreport) is a new website from University of California, compiling 30 years of research, images, and publications on establishing and managing fresh market peach, plum and nectarine orchards. The website contains numerous topics of interest to Utah growers including information on rootstocks, varieties, pruning and training, nutrition, fruit thinning, and irrigation strategies. There are also many links to other sites covering stone fruit production with an emphasis on peaches.

Fruit Tree Management - JUST THE BASICS

GENERAL

- Clean up all fallen fruit and weeds to reduce pest pressure for next year, as well as rodent habitat
- Make sure all new plantings get white tree paint or tree wrap from Dec through early April to prevent sun scald
- Give trees a good watering before the ground freezes

APPLE & PEAR

- Apply lime-sulfur when the first leaves start turning color to control *blister mites*.
- To reduce *codling moth* for next year, remove bins from the orchard after harvest and clean up and destroy fallen fruit on the ground.

PEACH/NECTARINE & APRICOT

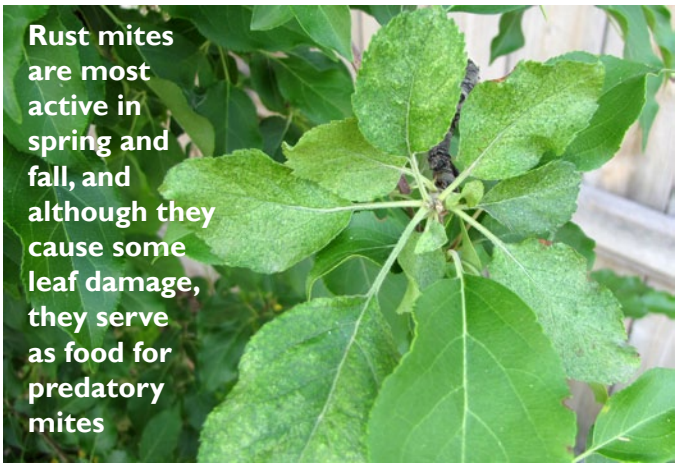
- Prevent new *coryneum blight (shothole)* infections this fall by applying copper to trees when 50% of leaves have fallen.

Insect and Disease Activity

APPLES/PEARS

Apple- and Pearleaf Blister Mites
Apple Rust Mites
Peach Silver Mite

All of these 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. Usually, they do not warrant treatment. In fact, because these mites are one of the first to emerge in spring, they serve as an important food source for beneficial (predatory) mites that start activity before spider mites.



Insect and Disease Information, continued from previous page

Blister mites cause the small raised "blisters" 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 uninfested leaves.

Rust mites cause a stippled appearance to the foliage, almost identical to spider mite injury. Most of the time, rust mites on apples only cause symptoms in the spring. Newer foliage is not affected because predatory mites keep the population in check.

Peach silver mites are most noticeable later in the season because they do not do well in hot, dry conditions. They cause peach leaves to have a metallic sheen. It has not been determined whether their presence affects yield, but they most likely have an effect on photosynthesis.

For all of these mites, a good time to treat is in early fall, just as the leaves start to turn color, when the mites are migrating to leaf buds to spend the winter under the bud scales.

Options to use for blister and rust mites include (only if necessary):

- 1.5-2% oil, thoroughly covering the bottoms of the leaves
- Sevin (carbaryl), alone or with 1% oil
- lime-sulfur (can mix with oil, but not on drought-stressed trees)

Pear Psylla

Pear psylla can be managed in spring or fall with horticultural oil or sulfur. A fall application should be applied just after harvest when the weather has cooled.

STONE FRUITS

Cherry Powdery Mildew

A late season treatment of lime-sulfur just prior to leaf fall can help reduce overwintering inoculum of the fungus that causes powdery mildew on cherries. (If you applied oil soon after harvest for powdery mildew, you should not need the lime-sulfur spray.) Powdery mildew can reduce photosynthetic ability, reduce yields, and when it has infected fruit stems, prevent easy removal of fruit.

Coryneum Blight

In 2012, coryneum blight infections were few and far between. This season, coryneum blight seemed to be more of an issue later in the season on ripening fruit rather than in the spring. This was due to the dry spring and summer followed by a series of monsoon rains along the Wasatch Front in August and September.

Late season coryneum infections are circular, sunken lesions that may look brown or blackish

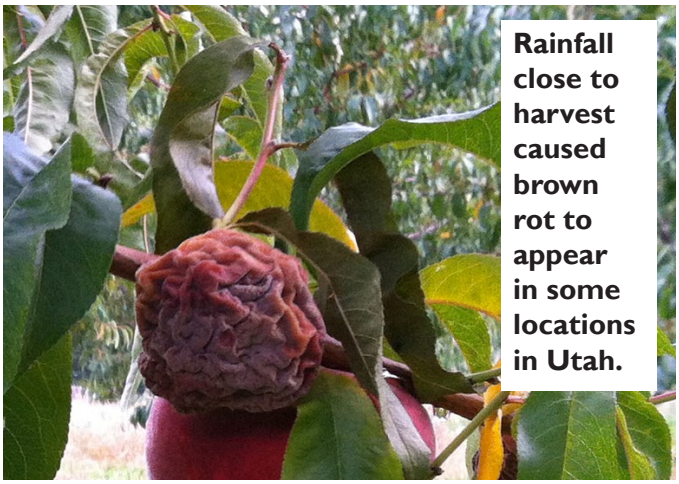
Orchards or backyard trees with any history of coryneum blight will require continued management to prevent future outbreaks.

A copper spray on peach/nectarine and apricots should be applied at 50% leaf drop for prevention of new coryneum infections. This spray should be targeted at leaf scars, so use a little more power in the sprayer to knock off the leaves.

Options for this fall for coryneum include:

- fixed coppers or copper sulfate (Kocide, C-O-C-S, Bonide, Lily Miller Microcop, etc.)
- chlorothalonil (this can be used next spring, too)

Brown Rot on Peach



Rainfall close to harvest caused brown rot to appear in some locations in Utah.

The Utah Plant Pest Diagnostic Lab confirmed two cases of brown rot, one on a backyard nectarine in Lindon, and one in a commercial orchard in Alpine. There may have been more cases that we are unaware of. Although the pathogen that causes brown rot, *Monilinia* sp., does occur in Utah, this is the first known occurrence of brown rot affecting harvest yields on fruit trees.

Insect and Disease Information, continued from previous page

Brown rot is a disease of warm, humid environments and requires several hours of rainfall to spread. The two most susceptible periods for fruit infection are prior to pit hardening and 2 to 4 weeks before harvest.

The pathogen can gain easy access to fruit when any type of injury caused by insect damage, hail/heavy rain injury, bird pecks, bruising, or cracking, is present.

On ripening fruit, symptoms first appear as a small spot that quickly enlarges (within 2 to 5 days) until the whole fruit is rotten. If conditions remain moist, a mass of light grey-brown spores will form on the fruit surface. Fruit that is left on the tree will shrivel and dry out. This mummified fruit will carry spores over the winter, increasing the risk of blossom infection the following spring.

If you suspect you had brown rot on any of your stone fruits, the most important thing you can do now is to remove all infected fruit from the orchard or garden.

To help growers manage or be aware of brown rot for the 2014 season, the Utah IPM Program will add the brown rot disease forecast model to the Utah TRAPs website (which can be accessed here), and include management information in our advisories.

Production Information

Preventing Split Pits

This season, like last year, resulted in many peach fruits with split pits. The problem can happen about 3 weeks after bloom, or during the pit hardening stage when the fruits make their final swell.

When the fruit flesh expands before the pit has fully hardened and the bond between flesh and pit is still tight, internal forces pull on the pit, causing it to break along the suture. Sometimes the problem is not noticed until after storage or when the fruit is opened and the cavity is a gummy mess. The splits can allow insects to enter, introducing rot fungi.

The real issue with split pits lies in the balance of carbohydrates between the canopy and roots. This balance is upset by winter injury, high heat, freeze injury to fruit in spring, excess soil moisture in spring followed by dry soils in summer, excess vigor, or trunk damage.

Practices such as heavy thinning and excess irrigation or fertilizer applications close to harvest can lead to pit splitting. If this is a problem you find every year, develop a balance between fruit size and losses through the following practices:

- leave slightly heavier crops on prone varieties (don't overthin)
- on prone varieties, wait and thin until pits are hard (will have to use knife to test)
- reduce fertilization practices
- maintain even soil moisture

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click here for archived advisories