Tree Fruit IPM Advisory

Weekly Orchard Pest Update, Utah State University Extension, **April 13, 2012**

What's In Bloom?

(Wasatch Front)

- Bridalwreath spirea: end bloom
- Chanticleer pear: end bloom
- Cranberrybush viburnum: begin bloom
- Crabapple: begin bloom
- Flowering dogwood: begin bloom
- Forsythia: end bloom
- Kwanzan cherry: bloom
- Lilac: begin bloom
- Oregon grape: bloom - end bloom
- Quince: bloom - end bloom
- Purpleleaf plum: bloom - end bloom
- Redbud: full bloom
- Serviceberry: end bloom

Insect/Disease Activity

CONIFERS

European Pine Shoot Moth

The European pine shoot moth attacks shoot tips of young, 2-needled pines. Larvae tunnel into shoots and buds, killing them as they feed. Infested shoots are covered with a silk webbing mixed with pine pitch. This insect is a minor pest, but heavy infestations result in rounded trees with multiple leaders and stunted growth.

The larvae spent the winter within pine buds, and this spring, as the shoots begin to expand this spring, the larvae will begin feeding again. They sometimes exit the overwintering shoot and move to another. Now is a good time to target these migrating larvae.

Treatment: Prune out wilted bud tips and shoots with oozing pitch. Target larvae as they move from one location to another with spinosad (Conserve, Ferti-lome, etc.), pyrethrin (Pyganic), carbaryl (Sevin, Bayer) or a synthetic pyrethroid (cyfluthrin, bifenthrin, lambda-cyhalothrin).

Pine Needle Scale

Pine needle scale is an armored scale that attacks two- and three-needled pines like Austrian, Scotch, and mugo pines. The appearance of this scale is white in color, as opposed to the black pineleaf scale which is dark gray. It is also not as serious a pest in Utah as the black pineleaf scale. As the scale sucks plant juices, the needles turn yellow and may drop prematurely. Most pines can tolerate a small population.

Eggs of the pine needle scale hatch into crawlers starting when lilacs bloom (late April to early May) and continue for approximately 2-4 weeks. There is a second generation of crawlers in late July.

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Treatment: Horticultural oil (1%) applied about a week after lilac full bloom, and again 1-2 weeks later targeting the crawlers, is effective and safe on natural enemies. Other contact sprays include Sevin or products containing permethrin, bifenthrin, cyfluthrin, or other synthetic pyrethriod. Full coverage of all needles is important.

White Pine Weevil/Spruce Weevil

White pine weevil is a pest of blue spruce in Utah. It rarely attacks pines in the West, but is a common pest of pines in the East.

Adults become active at full bloom of forsythia, which has already happened in many areas along the Wasatch Front. During that time, and within two weeks afterward, is the time to treat, targeting the adults.

They spent the winter in leaf litter and mated females will crawl up pine (limber, western white, Scotch, Japanese), spruce (Norway, blue) or Douglas-fir trees to the terminal growth where they lay eggs within holes they have created on the stem. Larvae bore into the terminals, resulting in wilting and tip dieback, which is evident by August.

Treatment: Thoroughly spray the upper portion of the tree (bark and needles) with a pyrethroid insecticide such as one containing the ingredient bifentrhin or permethrin. Homeowners should get a professional to treat the tree. Prune out wilted terminals in the summer.

DECIDUOUS TREES

Cankerworm

Cankerworms are leaf-feeding caterpillars on various tree species including apple, ash, beech, elm, linden, maples and oaks. There are two species, the spring cankerworm and the fall cankerworm. The fall cankerworm is most common in Utah. It overwinters as eggs on branches and twigs, and larvae will be hatching in the next week or two (shown above). The caterpillars are greenish in color, and move like an inchworm, traveling from branch to branch on silken threads.

They feed irregular holes out of leaves, but do not cause serious damage. You may notice them in late June as they swing down from the trees to burrow into the soil. There they pupate and the fall cankerworm emerges as adults in late fall to mate and lay eggs.

Cankerworm populations rise and fall over the years, and we are predicting a low to moderate population for 2012. Population size peaked in Utah in 2007, and was low in 2009-2011. The mild winter may contribute to survival of eggs this year.

Treatment: If control is necessary, Bt (Bacillus thuringiensis) is an excellent option. It must be applied before the caterpillars are longer than 1 inch in size. Another excellent option that is safe on beneficials is spinosad (Conserve, Green Light).

Lilac-Ash Borer

Lilac-ash borer adults will be flying soon, when lilacs are in full bloom or soon thereafter. The bark of ash tree should be treated about 7-10 days after full bloom of lilacs and again 2-3 weeks later, depending on the product used.

Lilac-ash borer attacks green and white ash, mountain-ash, lilac, and privet. There are very few ash trees left in Utah that have not been attacked by at least a few lilac-ash borers. A heavy infestation can kill trees, while general feeding causes branch dieback and can leave trees susceptible to breakage in storms. Infested trees will have exit holes on the bark, sawdust-like frass, and rough, swollen, cracked bark mostly near branch crotches.

This insect overwinters as a larva inside the host plant and pupates in spring, emerging as an adult moth, usually in early to mid May. Emergence continues for about 6 weeks. Egg-laying occurs within 7-10 days of emergence.

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Healthy plants are able to withstand minor infestations, while stressed plants are more susceptible to attack and failure. Once larvae are feeding within the tree, there is little that can be done. For chemical control, the best option is to target the adults.

Treatment: Small trees can be treated by the home gardener, but in order to get thorough coverage on large trees, treatments should be made by a licensed pesticide applicator. Options include: products containing permethrin (Hi-Yield), bifenthrin, or lambda-cyhalothrin (homeowner use); chloranthraniliprole (Acelepryn), permethrin (Astro, Covert, Waylay), or bifenthrin (Onyx) (commercial use).

Western Tent Caterpillar

Foam-looking tent caterpillar egg masses have been found on chokecherry and ornamental cherry in locations along the Wasatch front (top left). Eggs are hatching now or will be hatching soon (at leaf expansion), and the larvae will create webbed tents at the ends of branches or where branches fork. As they mature and eat up the food within the tents, they will venture out to feed on fresh foliage and return to the tent at night. The larvae mature in 5-6 weeks and leave the tree to find a place to pupate.

Tent caterpillars are more a nuisance than a threat to the tree. They can be destroyed by opening up the next and exposing them to predators. It can be fun to use a blowtorch to singe the nests.

The southwestern tent caterpillar occurs in southern Utah, and feeds voraciously on cottonwoods, willows, and chokecherry.

Treatment: A large amount of materials are registered for use on tent caterpillars including spinosad, Bt (Bacillus thuringiensis, on young larvae), carbaryl, malathion, insecticidal soap, pyrethrin, permethrin, indoxacarb (Provaunt), etc. The key is to treat trees early, when eggs are just hatching.

European Paper Wasp

Most people don't think about paper wasps until summer, when they are attracted to picnics or ripening fruit. Their upside-down, umbrella-shaped paper nest also do not become noticeable until later in the season. But to effectively prevent them from becoming a problem, now is the time to deal with this wasp by hanging the proper trap. The following is adapted from an article by Entomologist, Diane Alston, in the summer 2009 edition of Utah Pests News:

> The European paper wasp is highly attracted to decaying fruit. To build your trap, cut the top from a plastic soda bottle and invert it (without the lid) into the bottom, forming a funnel at the top.
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> Fill the soda bottle with a mixture of 1 part fruit juice to 10 parts water, plus 1 tsp. liquid detergent. The juice must begin to ferment in order to be attractive, and so it may take a day or two for rapid fermentation to begin. You can accelerate the fermentation by adding a piece of overripe fruit.
>
> The wasps will try to fly up towards the light after getting a bite of food, but will hit the bottom of the funnel and fall into the soapy water and get caught in the liquid in the bottom of the trap.
>
> Position traps every 30 ft around the house and yard. The higher the wasp population, the more traps will be required to reduce wasp numbers.
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> The traps should be checked regularly to remove dead wasps and refill the bait.

Upcoming Monitoring/Insect Activity

Pest	Host Plants	Activity	Indicator Plant
European pine shoot moth	two- and three- needled pines	Larvae move to new shoots	Red maple first bloom
Western tent caterpillar	cherry, crabapple	Eggs begin hatching	Forsythia full bloom
Cankerworm	many deciduous trees	Egg hatch	Tatarian honeysuckle, red horsechestnut first bloom
Birch leafminer	birch	Mines visible	flowering dogwood full bloom
Elm leafminer	elm	Adults active	flowering dogwood full bloom
Lilac-ash borer	lilac, ash, mountain-ash, privet	Adults lay eggs	7-10 days after lilac full bloom
Pine needle scale	two-needled pines (mugo, Scotch)	First gen. crawlers	lilac full bloom - end bloom

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