April 13, 2011

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What to Look for/Do Now:

- Look for aphid eggs and newly hatched aphids on or near buds and in cracks and crevices (eggs are black in color and the size of a grain of rice)
- Look for old fire blight infections (leaves are usually retained) in apple/pear, and coryneum cankers in peaches (check around buds for dried gum), and prune these out

Bud Stages

Current bud development is similar to the past three years, which is to say, behind "normal". Trees seemed to have fared the severe dip in temperature that occured last December, with just a few dead buds here and there.

Box Elder County
Apples: green tip
Apricots: bloom
Cherries: swollen bud
Peaches: swollen bud - 1/4 inch green
Pears: green cluster

Cache County
Apples: silver tip
Cherries: dormant
Peaches: swollen bud
Pears: swollen bud

Davis County, Salt Lake County
Apples: green tip - half-inch green
Apricots: bloom - petal fall

Insect and Disease Activity

Remember, oil can still be applied up to the points shown below. As bud stages advance, use a 1.5% volume oil rather than 2% to prevent phytotoxicity. (During summer months, the rate would be 1%.) Areas that experienced the aphid swarms last year (see below) will want to put on an oil treatment.

The period for applying delayed dormant sprays is:

- Apples: up to 1/2” green
- Apricot: use 1% oil at this time (if necessary)
- Pears: up to green cluster
- Peaches and Nectarines: up to pre-bloom

Aphids

Last fall, many of you in Salt Lake, Davis, and Utah counties may remember heavy swarms of aphids choking your lungs. The long, warm fall allowed the aphids to build up in population on their summer hosts, and they migrated--all at once--to their woody hosts to lay eggs. We weren't sure what the spring population of aphids would be like, and are now seeing that in some areas, there were massive amounts of eggs laid on apricot, cherry, and plum, and they started hatching a few weeks ago. Oil or

Cherries: swollen bud - bud burst
Peaches: 1/4 inch green
Pears: bud burst - green cluster

Utah County
Apples: silver tip - green tip
Apricots: bloom - petal fall
Cherries: swollen bud
Peaches: 1/4 inch green
Pears: bud burst - green cluster

insecticidal soap should take care of most of the aphids now. As the leaves expand, the aphids will move to hidden areas and are more difficult to eradicate.

Having these aphids around so early can be an advantage, however. They serve as an early food source for our natural enemies like lady beetles, syrphid flies, and lacewings. Normally, natural enemies do not "get going" until later in the season, when we typically see the aphid populations. An early jump-start for the good guys will help in future aphid control.

Codling Moth

If you are hanging pheromone traps for monitoring codling moth in apple/pear, they should be out in the orchards in northern Utah by the end of next week. Traps are useful to determine when the adult codling moths first start flying, and also to monitor the population size and the success of your management program. With the help of many volunteers, the USU IPM Program maintains a system of traps in northern Utah. The information from the trapping results are used to determine when to treat for codling moth.

We are in the process of creating videos that explain what traps look like and how they are used, and will let you know when they are ready. In the meantime, if you are not monitoring codling moths with traps, don't worry--we've got you covered.

Peach Twig Borer

One effective management strategy is to spray *Bacillus thuringiensis* (Bt) during bloom. At this time, the larvae are feeding "out in the open" rather then buried within shoots or fruit. Succulent shoots have not yet expanded, so the larvae are forced to feed on young leaves and petals. Bt is a bacteria that kills larave upon ingestion. It is safe on bees, so it can be applied during bloom (but it is best to apply early or late in the day when bees are not flying to prevent disturbing them). There are many brands of insecticide that contain Bt. Apply twice, once at 20% bloom, and again 5-7 days later. If you apply a delayed dormant oil spray and this bloomtime spray for peach twig borer, you will have gone a long way in reducing the population for the season. (So long as your neighbors do the same!)

Brown Rot

Brown rot is a fungal disease of **cherry and peach**, caused by either *Monilinia laxa* or *M. fructicola*. Although the fungus may be present in Utah, we rarely see the disease because our usually hot and dry climate conditions are not conducive to growth of the fungus nor formation of disease. Three springs in a row of cool, moist weather, which favors this disease, may result in the appearance of this pest in some orchards.

Brown rot causes browning and wilting of flower blossoms followed by death of the small twigs. The leaves will remain attached on twigs killed by brown rot. Gumming may be associated with the dying flowers. The primary damage shows up later on fruit (close to harvest) as large, brown,

rotted areas with gray, ball-shaped, powdery tufts.

If you see symptoms of blossom blight associated with gumming on peach or cherry, please email me at marion.murray@usu.edu.

Coryneum Blight (Shothole)

If you had coryneum blight (also known as shothole) last year, expect to see it again this year. The extra moisture we've been having is conducive to sporulation and spread. Infections will show where this fungus is present up as soon as leaves start expanding. Pay close attention to apricot leaves as they are very susceptible.

Coryneum blight is caused by a fungus that overwinters in buds, causing small gummy cankers. From there, it spreads to leaves and later, to developing fruit. Infections on the leaves cause small round holes, with the center of the lesion sometimes barely attached. On fruit, lesions vary from dark colored warts to sunken spots (depending on time of infection). Look for developing straw to purple colored spots (which eventually drop out and leave holes in the leaves).

Treat apricots and/or peaches at the shuck-split stage. (This is when the papery covering surrounding the developing fruit breaks off.) At this timing, backyard growers can use chlorothalonil (various brands including Daconil), or captan, while commercial growers can use Abound, Ziram, or Pristine.

Apple Powdery Mildew

Powdery mildew is one of the most common diseases of apple trees in Utah, causing stunting and distortion. Apple cultivars such as ‘Jonathan’, ‘Jonagold’, ‘Idared’, ‘Rome’, and ‘Gala’ are most susceptible, while ‘Red’ and ‘Golden Delicious’ are more resistant. Powdery mildew overwinters as mycelium (fungal strands) under bud scales which are spread by wind and rain splash in spring (rain is not always necessary for secondary spread). This fungus needs warm days and moist nights, and we can probably expect that this spring.

If this disease has plagued your trees in the past, consider a powdery mildew control program, which begins at pink/open cluster and continues into July (when terminal buds set). (It is best to start when the flower clusters have opened ("open cluster") so that the fungicide can reach the entire terminal.) A fungicide spray every 2-3 weeks (for susceptible cultivars) should keep trees protected and reduce inoculum levels next year.

Commercial growers can use Bayleton, Funginex. Rally, Rubigan, Sulfur, Flint, Procure. Homeowners should use sulfur formulations, and also consider pruning out infected shoots in spring.

Upcoming Insect and Disease Monitoring

Pear psylla	Adults active just before bud swell; egg-laying from bud swell to green cluster
Rosy apple aphid	First egg hatch around first pink
Codling moth	Hang traps at first pink

European red mite (rare)	First egg hatch around apple full bloom
Campylomma bug	Egg hatch begins at apple first pink
White apple leafhopper	Egg hatch begins at apple first pink

Bud Stage Images

Apple

green tip half-inch green

Cherry

swollen bud bud burst

Peach

dormant swollen bud

Pear

dormant swollen bud

Apricot

bloom petal fall

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