Fire Blight, Coryneum, Biofixes, Peach Twig Borer, Mosquitos

March 23, 2005

**********Disease Advisory**********

FIRE BLIGHT: Strikes from last year's blossom infections have been found in an apple block in the West Mountain area of Utah County. Strikes are easily spotted at this time of year because they're often the only dry, dark leaves and/or blossoms left in the canopy. These should be pruned out as soon as possible (18" below the canker) and removed/destroyed. If they aren't pruned out, they will become an inoculum source for infections this spring. Rain-splash, flies, and pollinators will take care of the "legwork," dispersing the fire blight bacteria throughout the orchard. Bloomtime treatments of streptomycin (Agrimycin) or oxytetracycline (Mycoshield) will suppress the bacterium during rain events during bloom.

CORYNEUM BLIGHT (peach shothole): Coryneum blight infections are visible in year-old wood, and scouting would be advisable at this time. Dark patches with reddish borders, often centered at buds, are typical of coryneum cankers. A thorough examination of the peach canopy will reveal such cankers, which should be pruned out and removed/destroyed. If you had a problem with this fungal pathogen last year, then a delayed-dormant application of fixed copper, copper sulfate, captan, or chlorothalonil (Bravo for commercial acreage; Daconil for homeowners) would be advisable. Petal fall or shuck-fall sprays can be made as well.

GENERAL INFORMATION ON PESTICIDES FOR TREE FRUIT PATHOGENS: The University of California Statewide IPM Project has put out a publication that rates almost all available fungicides, bactericides, and microbials for their efficacy against major tree fruit pathogens. It can be downloaded at:
http://www.ipm.ucdavis.edu/PDF/PMG/fungicideefficacytiming.pdf

**********Insect Advisory**********

A note on "biofixes"—a biofix is a calendar date that marks a biological event (such as the first emergence of adult moths, or bud-break in spring). An accurate biofix is the foundation of most IPM programs because it provides the real-world anchor for well-timed pest controls. Without a biofix, it becomes much more difficult to optimize treatment timings, and temperature-based models are set adrift in speculation, approximation, or extreme guesstimation. For codling moth and peach twig borer, the use of traps baited with sex pheromone is the best way to determine a biofix. The biofix for codling moth and twig borer is broadly defined as the initiation of the male moths' flight. The date on which the first moth(s) is caught at a site becomes the biofix for that site. To account for early, "unrepresentative" males, it is recommended that more than one moth be trapped at a site before the biofix is determined. So, if a single codling moth is caught in an orchard, you'll want to continue checking the traps in that orchard for another week before determining the biofix. How do you determine the biofix? If another moth is caught soon after the initial moth, the biofix is the date when you caught the initial moth. If another moth is NOT caught within a week of the initial catch (as can happen during a frosty Utah spring), then we enter a "gray area" in which dusk temperatures, orchard history, and lure type are considered. The main point, however, is to set traps so you know what your local moth population is up to. Next week we'll discuss degree-days and how they are used to improve spray timing.

PEACH TWIG BORER (PTB): Several growers have asked recently about the use of Dimilin as a

delayed-dormant material for twig borer. Dimilin (diflubenzuron) is a very persistent (half-life of 5-10 weeks) insecticide that has been used with success for many years on a variety of sites. In California, Dimilin has been effective on twig borer in almonds. Recently, Dimilin received a label for peaches, nectarines, plums, and apricots. As with most IGR insecticides, Dimilin must be ingested to cause mortality, and it isn't a contact-killer like Asana (ie, Asana kills larvae via contact and/or ingestion). Dimilin may kill some PTB larvae if applied at the delayed-dormant period, but it would seem to be better suited as a bloom application because it is persistent and easy on bees. Bt (DiPel, Crymax) and Success are also very good bloomtime treatments, although these materials decay rapidly in sunlight and require re-application 7-10 days later. A single early-bloom (20-50% bloom) application of Dimilin should provide fresh residue on young peach leaves and flower petals as the PTB larvae are coming out to feed.

PRIONUS BORER: This is a very large root-boring beetle that is native to the western U.S. It feeds on a variety of tree hosts, but it seems to have particular affection for Utah cherries. It has been found in tremendous numbers in Box Elder County sweet cherries, and reports of infestations in Utah County tart cherries have recently surfaced. The prionus grubs (larvae) can kill young cherry "whips" as well as 15 year-old trees. This advisory is intended to inform growers about the prionus beetle, and to recommend that growers take extra care to ensure no prionus larvae are present in the soil when cherries are planted into acreage previously occupied by cherries. Currently, there is no insecticide registered for prionus, and no pheromone available for trapping purposes. Letting the ground go fallow for a year (during which time a soil treatment can be applied) may be appropriate if the soil is known to be infested with prionus larvae. If cherries are going to be transplanted into infested acreage, pre-plant soil treatments of Vydate or certain formulations of acephate may provide some suppression, but there is no proven option at this time. If growers suspect that a tree is infested (look for canopy dieback), dig up the soil around the tree crown and look for dark furrows, reddish-brown granular material, or the shiny white grubs within the crown or roots. If trees are being pushed out, look for the large white grubs squirming around in the loose soil. They're large and stark white—you can't miss them.

MOSQUITO ABATEMENT: While this issue is not related to tree fruit IPM, all Utahns should inform themselves on the threat of West Nile Virus. It is here in Utah and will likely be worse this year than previous years. Proper mosquito abatement and personal precautions will help keep the public safer.
