Tree Fruit IPM Advisory: May 9th, 2006

Past IPM advisories are archived at:
http://extension.usu.edu/cooperative/ipm/index.cfm/cid.610/

News Alert!

Codling moth biofix has occurred in some locations. Codling moth biofix dates are May 1 for Willard, Perry, and Brigham City (Box Elder Co.), May 4 for West Mountain (Utah Co.), and May 5 for River Heights (Cache Co.).

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

DEGREE-DAY (DD) ACCUMULATIONS:

Location	Codling Moth/Peach Twig Borer		Western Cherry Fruit Fly
	DDs Since Mar 1	DDs Since Biofix	DDs Since Mar 1
Utah County	236-322	28 (West Mtn.)	540-654
Salt Lake County	249-277	No moth catch yet	583-640
Davis/Weber Counties	234-238	No moth catch yet	549-555
Box Elder County	245	53 (Perry, Willard, BC)	555
Cache County	151-152	14 (River Heights)	312-382
Set traps by	CM: 125/ PTB: 250		WCFF: 700
First adults expected	CM: 200-250/ PTB: 400		WCFF: 900-950

REQUEST FOR HELP WITH BIOFIX INFORMATION: For anyone setting and monitoring insect traps (for codling moth, peach twig borer, cherry fruit fly, greater peachtree borer) in orchards this year, please send in your biofix dates (dates of first insect catch) by email (respond to this email message). Include your location, insect

species, and biofix date. This will help us with determining insect biofix dates for a wider range of locations. Thank you.

CODLING MOTH (Apple and Pear): The first codling moth adults were caught in Willard, Perry, and Brigham City (Box Elder Co.) on May 1, in West Mountain (Utah Co.) on May 4, and in River Heights (Cache Co.) on May 5. These catch dates correspond to 192, 219, and 138 DDs since March 1, for the three sites respectively. The catch in Cache Co. was unusually early based on DDs and tree phenology. First catch in Box Elder and Utah Counties is within the normal range of DD accumulation for biofix (200-250 DD). Biofix is expected at anytime in all locations in Northern Utah. Thank you to all who have sent in biofix information!

Codling Moth Control: Most insecticides function as larvicides, which means the insecticide kills the codling moth larvae following egg-hatch (and hopefully before they enter the fruit). For the 1st cover spray of the season, Assail, Danitol, Imidan, Guthion, Intrepid, and Calypso can be expected to perform well. Remember to buffer spray water where necessary and follow the label directions closely. Uniform coverage is crucial. Tank-mixing 1% (or less) of oil will likely increase the efficacy of most materials. Where growers have had a history of insecticide resistance, consider tank-mixing materials with different modes of action. Intrepid, Rimon, and Esteem are effective ovicides (kills codling moth eggs) and will help to reduce insecticide resistance. Assail and Calypso have ovicidal and larvicidal activity.

Homeowners can use a 1% oil spray (such as SunSpray Ultra-Fine) with esfenvalerate (Ortho Bug B Gon), carbaryl (Sevin), malathion, spinosad (Ferti-lome formulation), permethrin, Codling moth virus (Cyd-X, Virusoft, Carpovirusine), pyrethrin, pyrethrum, azadirachtin (AZA-Direct), or Bt (Dipel, Thuricide). Bagging fruit to keep larvae out after fruit is at least ½ - ¾ " inches in diameter and placing cardboard bands around trunks to trap cocooning larvae can also suppress injury. Go to the USU Extension Home Orchard Pest Management Guide for more detailed management information: http://extension.usu.edu/files/publications/homeorchard2006.pdf

In terms of DDs, another critical "benchmark" for codling moth is 340 DDs. This is the point at which egg-hatch (larval emergence) accelerates tremendously. Approximately 70% of the 1st generation can be expected to hatch within the 340-640 DD period. This relatively short 320 DD window of time will see the greatest amount of pest pressure. Multiple applications may be necessary for the 1st generation, depending on the severity of the codling moth infestation.

PEACH TWIG BORER (Peach, Nectarine, and Apricot): It is time to put out peach twig borer pheromone traps in the warmer locations in northern Utah. First peach twig borer moths are expected 10-14 days after codling moth, about 400 DD after March 1.

WESTERN CHERRY FRUIT FLY (Sweet and tart cherry): It is approaching time to put out cherry fruit fly traps: 700 DDs. First flies are expected about 900 DDs. Yellow

sticky traps for fruit fly should be placed in cherry orchards in the next 1-2 weeks in northern Utah.

PLUM CURCULIO (All tree fruits): Plum curculio is a state quarantine insect pest that has only been found in Box Elder County. The first plum curculio adults of the season were found in traps in Perry and Brigham City on April 24. Traps for regulatory concerns should be placed in other northern Utah counties now. For more information on this insect pest, go to: http://extension.usu.edu/cooperative/ipm/index.cfm/cid.1473/

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

FIRE BLIGHT: As long as apple and pear trees are in bloom, blossom infections by fire blight bacteria are a concern. Be on the watch for oozing cankers. These cankers should be removed by pruning out the disease at least 18-22 inches back from the actively oozing canker. Special care should be taken to remove the diseased wood and burn it or remove it to a waste disposal area that will be buried. Removal of an infected tree may be warranted if a canker occurs on or very near the main trunk. Special care should be taken to wash the pruning tools between each cut when working around active fire blight. A 10 percent solution of household bleach can be used or even by spraying pruning tools with Lysol between each cut. Be sure to wash hands if a person comes into contact with the bacterial ooze prior to handling branches/limbs of other uninfected trees. If one must use chemicals to control the disease there are two agricultural antibiotics, streptomycin and tetracycline, that may be used to spray apples or pears during the blooming period. These chemicals are not usually needed in the home fruit orchard if homeowners keep watch for new fire blight infections (rapid wilt and shepherds crooking at the end of affected shoots) and promptly remove them by pruning the disease out before it spreads to neighbors or commercial orchards nearby.

APPLE POWDERY MILDEW: Apple powdery mildew over winters in the flower buds and infections have been heavy in some locations this year. Maintain a vigilant mildew control program.

POWDERY MILDEW OF CHERRY: A new compound is available to control powdery mildew of cherries (also grapes and hops). The trade name is Quintec and the active ingredient is quinoxyfen. It is a group 13 fungicide with a "CAUTION" label. The manufacturer is Dow AgroSciences. We recommend rotating among different modes of action for the chemicals labeled to control powdery mildew on cherry. Other chemicals labeled to control powdery mildew on cherries include the following: Abound, Cabrio, Elite, Flint, Orbit Pristine, Procure, Rally, and Rubigan. Produts such as Microthiol do control powdery mildew but have the unwanted or negative effect of killing beneficial mite populations. Stylet and Supreme Oils also inhibit germination of powdery mildew spores but excessive use of these products may harm the cherry trees.

CORYNEUM BLIGHT: Spring 2006 is shaping up much like the Spring of 2005, a prolonged wet and cool season just right for Coryneum blight. This is a disease that can be actively growing on stone fruits (almonds, peaches, nectarines, and cherry) in very

cold weather when you might be thinking it is too cold for any disease to get going. Depending on where you are, your peaches may be blooming or approaching petal fall soon. Chemical control recommendations for the blossom time of crop development include Abound, Captan, Indar, Rovral, Orbit, Elite, Thiram Granuflo, wettable sulfur and Pristine.

**********Sprayer Calibration**********

Nozzles on sprayers wear out. As nozzles wear, the flow rate usually increases. With recent increases in pesticide costs, economics require properly applying the correct amount of spray material in the orchard. Further, materials such as plant growth regulators used for fruit thinning, fruit loosening, or stop drop have a narrow acceptable dose range, where harmful side effects may result from over application of the material. Replacing worn nozzles and properly calibrating orchard spray equipment are important for reasons of both economics and biology.

With cooperation and suggestions from crop consultant Earl Seeley, an interactive spreadsheet has been developed to assist in the calculations required for proper sprayer calibration. This program can be accessed on the web through the USU Horticulture website at http://www.hort.usu.edu/html/fruits/treeFruit.htm . Under the title "Commercial Grower Resources," click on the link titled "Sprayer Calibration." Please note that web access requires Internet Explorer version 5.5 or higher. If you do not have Explorer 5.5 or have other difficulties accessing this file, it can be sent to you by email in Microsoft Excel format. Send email requests for the Excel file to blackb@ext.usu.edu . In the spreadsheet, the numbers highlighted in red text are for your inputs. Inputs required by the user include ground speed, row spacing, desired gallons per acre, and relative distribution of spray among the nozzles on the sprayer (percent of spray to be directed to the lower vs. the upper portion of the tree canopy. The spreadsheet will then calculate gallons per minute for each nozzle. Instructions are also provided for static testing your sprayer after calibration.

**********Herbicides**********

At the USU Horticulture website mentioned above, you will also find a link to a list of herbicides currently registered for use in orchard management. This list is maintained by weed scientists in Oregon, Washington and Idaho for the Pacific Northwest (http://pnwpest.org/pnw/weeds). Although a few of the materials listed are only registered in one or more of these states, most are registered for use in Utah.

FOR MORE INFORMATION ON TREE FRUIT PEST MANAGEMENT:

For a posting of archived and current pest advisories and orchard spray timing tables, see the USU Extension IPM web page at:
http://extension.usu.edu/cooperative/ipm/

The 2006 update of the Utah "Home Orchard Pest Management Guide" (USU Extension Publication HG 137) is now available at:
http://extension.usu.edu/files/publications/homeorchard2006.pdf

For Utah commercial orchard insect control guides (peach and cherry), see:
http://extension.usu.edu/cooperative/ipm/index.cfm/cid.1424/

For one-stop shopping for information on Utah insects, plant diseases, IPM, and the Plant Pest Diagnostic Laboratory, go to our "Insects and Plant Diseases" umbrella web site at:
http://extension.usu.edu/cooperative/ipd/