Tree Fruit IPM Advisory: June 13th, 2006

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

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

Degree-days, spray dates, and fruit protection intervals are being updated twice per week (Mondays and Fridays). Visit the Orchard Spray Timing Tables for the latest updates at: http://extension.usu.edu/cooperative/ipm/index.cfm/cid.645/ (Select 1st and 2nd generation CM or PTB in the right-side column).

CODLING MOTH (Apple and Pear): Larval emergence for the first generation of codling moth is 33-79% completed (see table below) in northern Utah. Keep fruit protected from newly emerging codling moth larvae through the projected end of the 1st generation. Currently, the codling moth model predicts that egg hatch for 1st generation will end between June 25 and July 14 (see table below). A **critical period for codling moth control is 340-640 DD after biofix (first adult activity).** The percentage of egg hatch (larval emergence) for the first generation changes from 12 to 80% during this period. This relatively short 300 DD window of time (approx. 10-15 days in length) will see the greatest amount of codling moth pressure. It is important to have adequate residues of insecticide present on fruit during this period. There will be a 5-7 day "break" between the 1st and 2nd generation where fruit protection is not necessary. Second generation larval emergence (egg hatch) will begin at 1100 DDs. Using 30-year average temperatures, the second generation is predicted to begin from July 1 to 20 (see table below).

Summary of Codling Moth DDs, Projected End of 1st Generation, and Beginning of 2nd Generation Larval Emergence

	DDs Since Biofix/ % Egg Hatch of 1st Gen.	Projected End of 1st Generation*	Projected Onset of 2nd Generation**
Box Elder County			
Perry	624 (78%)	Jun 30	Jul 5
Cache County			
Logan	446 (42%)	Jul 12	Jul 18

North Logan	415 (33%)	Jul 14	Jul 20
Davis County			
Kaysville	541 (62%)	Jul 1	Jul 7
Salt Lake County			
Salt Lake City	634 (79%)	Jun 25	Jul 1
Utah County			
Alpine	464 (46%)	Jul 5	Jul 12
Genola	609 (75%)	Jun 28	Jul 5
Payson	563 (67%)	Jul 2	Jul 8
Provo (bench)	539 (62%)	Jun 30	Jul 7
Santaquin	547 (64%)	Jul 3	Jul 8
West Mountain	521 (58%)	Jul 1	Jul 8

* Projected End of 1st Generation = 99% egg hatch completed
** Projected Onset of 2nd Generation = 1% egg hatch of 2nd generation

Also, you can go to the "Orchard Spray Timing" tables posted on the IPM website to track the rate of codling moth development for your area: http://extension.usu.edu/cooperative/ipm/index.cfm/cid.645/. Select 1st and 2nd Generation CM in the right column and then the most recent date.

Refer to past advisories for a listing of insecticides recommended to control codling moth in commercial and home orchards.

PEACH TWIG BORER (Peach, Nectarine, and Apricot): Emergence of peach twig borer larvae from eggs is 15-82% completed in northern Utah (see PTB table below). PTB larvae prefer to feed in succulent shoots (new leaf growth) over fruit; therefore, it isn't as critical to initiate insecticide treatments at the very beginning of egg hatch as it is for codling moth. Based on past experience, most peach growers shoot for 300-400 DDs after biofix for their first spray. This corresponds to 5-28% egg hatch for the first generation. Larval emergence for the 1st generation is projected to end from Jun 21 to Jul 1 and 5% egg hatch (1200 DD) for the 2nd generation will be reached in mid July (Jul 14-20) (see table below).

Summary of Peach Twig Borer DDs, Projected End of 1st Generation, and Beginning of 2nd Generation Larval Emergence

	DDs Since Biofix/ % Egg Hatch of 1st Gen.	Projected End of 1st Generation*	Projected Onset of 2nd Generation**
Box Elder County			
Perry	475 (54%)	Jun 25	Jul 14

Davis County			
Kaysville	414 (31%)	Jun 28	Jul 17
Utah County			
Alpine	357 (15%)	Jul 1	Jul 20
Genola	534 (72%)	Jun 23	Jul 12
Lincoln Point	470 (52%)	Jun 25	Jul 15
Payson	499 (63%)	Jun 25	Jul 14
Provo (bench)	547 (82%)	Jun 21	Jul 11

* Projected End of 1st Generation: = 99% egg hatch completed
** Projected Onset of 2nd Generation = 5% egg hatch of 2nd generation

Also visit the PTB phenology table to check the projected developmental status of PTB in your area: http://extension.usu.edu/cooperative/ipm/index.cfm/cid.645/. Select 1st and 2nd generation PTB to view the most recent tables.

Refer to past advisories for a listing of insecticides recommended to control peach twig borer in commercial and home orchards.

WESTERN CHERRY FRUIT FLY (Sweet and tart cherry): Western cherry fruit fly adults have been caught in most locations in northern Utah. Based on numerous years of observation in Utah, fruit is not susceptible to egg-laying from cherry fruit fly females until it changes from yellow to a salmon or blush color. When earliest maturing fruit on the tree takes on a blush color, protect cherries with an insecticide application. Based on research, adult females are not ready to lay mature eggs until 7-10 days after first catch of the season. Use these two pieces of information for your location to initiate insecticide sprays to protect fruit from cherry fruit fly.

Insecticides effective for WCFF:
- GF-120 NF (apply with an electric pump sprayer mounted on a 4-wheeler; reapply every 7 days; excellent adulticide; not rainfast)
- Provado (moderate adulticide, excellent larvicide, can kill larvae within fruit; reapply every 14 days; watch for mite flare-up with repeated applications)
- Success and Entrust (reapply every 7 days)
- Guthion (reapply every 14 days; 15 day PHI)
- Sevin (reapply every 7 days; watch for mite flare-up with repeated use)
- Diazinon (reapply every 7-10 days; 21 day PHI)
- Malathion (reapply every 3 days; watch for mite flare-up with repeated use)

OTHER ORCHARD INSECT AND MITE PESTS: Low numbers of **spider mites** have been seen on the lower center leaves of fruit trees. Scout for spider mites and their stippling and bronzing feeding injury. Also look for predaceous mites that can prevent plant-feeding spider mites from reaching economic injury levels. Horticultural mineral oil can be an excellent suppressant of mite populations. Consider adding 1% or less concentration of oil in with cover sprays to keep mite populations at bay. When daily

temperatures rise above approximately 85ºF, spider mite populations can increase very rapidly. Twospotted spider mite can complete a generation in 7-10 days when temperatures are high and each female can produce 100-150 eggs.

Visit fact sheets on spider mites for more information on scouting, biological control, and management:
Web Spinning Spider Mites:
http://extension.usu.edu/files/gardpubs/6.pdf
European Red Mite:
http://extension.usu.edu/files/gardpubs/5.pdf

The drying down of vegetation outside of orchards can prompt the migration of **lygus and stink bugs** into orchards. These insects can cause cat-facing injury to young pome and stone fruits. Scout for plant-feeding bugs with a sweep net in the vegetation borders, ground cover, and canopies of orchards at risk for migration of plant bugs. Endosulfan (Thionex), Danitol, and Warrior are effective insecticides that can be used post-bloom to protect fruit from cat-facing injury. See a factsheet on cat-facing insects and how to prevent fruit injury:
Cat-facing Insects:
http://extension.usu.edu/files/gardpubs/3.pdf

Light stippling of apple and cherry leaves from **white apple leafhopper** feeding has been observed. No more than one nymph per leaf was observed in Diane's recent scouting trip. If densities of 3-4 nymphs per leaf are present, consider treating before the oldest nymphs (5^{th} instar) and adults develop. Effective insecticides include Sevin, Thionex, Provado, Avaunt, Surround, and horticultural mineral oil. Refer to this factsheet for scouting and spray timing information:
White Apple Leafhopper:
http://extension.usu.edu/files/gardpubs/7.pdf

TO VIEW SPECIFIC ORCHARD INSECT FACT SHEETS:
Codling Moth: http://extension.usu.edu/files/gardpubs/8.pdf
Peach Twig Borer: http://extension.usu.edu/files/factsheets/twigbore.pdf
Campylomma Bug: http://extension.usu.edu/files/gardpubs/9.pdf
Apple Aphids:
http://extension.usu.edu/files/publications/Insects%2013%20apple%20aphids..pdf
Speckled Green Fruitworm:
http://extension.usu.edu/files/publications/green%20fruitworm7-14.pdf
Cat-facing Insects:
http://extension.usu.edu/files/gardpubs/3.pdf
European Red Mite:
http://extension.usu.edu/files/gardpubs/5.pdf
Web Spinning Spider Mites:
http://extension.usu.edu/files/gardpubs/6.pdf
White Apple Leafhopper:

http://extension.usu.edu/files/gardpubs/7.pdf

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/