Tree Fruit IPM Advisory: June 20th, 2006

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

************News Alert!************

It is now time to put out pheromone traps for greater peachtree borer (GPTB) in northern Utah peach, nectarine, and apricot orchards. GPTB is a clearwinged moth that lays eggs on the base of stone fruit tree trunks. Cherries are not an attractive host in northern Utah. Larvae bore into the crown of the trunk and multiple larval tunnels can girdle and kill trees. After the first adults of the season are detected in an area, it will be time to protect trees with an insecticide trunk spray or place pheromone mating disruption dispensers (Isomate-P, Pacific Biocontrol Corp.®). Future advisories will alert you to when GPTB activity is detected.

************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): In northern Utah, adult moth emergence of the 1st generation of codling moth is nearing an end; 90-100% completed. The number of moths caught in pheromone traps should decline for the next 2-3 weeks. Larval emergence or egg hatch for the 1st generation ranges from 54-93% completed (see CM table below). 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 7-8 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 2 to 22 (see table below).

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

	DDs Since Biofix	% Moth Flight of 1st Gen^.	% Egg Hatch of 1st Gen.^^	Projected End of 1st Gen.*	Projected Onset of 2nd Gen.**
Box Elder County					
Perry	745	100%	91%	Jun 27	Jul 4
Cache County					
Logan	533	91%	60%	Jul 12	Jul 20
North Logan	501	90%	54%	Jul 14	Jul 22
Davis County					
Kaysville	651	98%	81%	Jul 1	Jul 8
Salt Lake County					
Salt Lake City	775	100%	93%	Jun 25	Jul 2
Utah County					
Alpine	566	94%	68%	Jul 5	Jul 13
Genola	721	99%	89%	Jun 28	Jul 5
Payson	674	99%	83%	Jul 1	Jul 8
Provo (bench)	661	98%	82%	Jun 30	Jul 8
Santaquin	665	98%	82%	Jul 1	Jul 8
West Mountain	622	97%	77%	Jul 2	Jul 9

^ The percentage of 1st generation adult moths that have emerged.
^^ The percentage of 1st generation eggs that have hatched.
* 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 1st generation adult peach twig borer moths is near or at completion for northern Utah sites (see PTB table below). Larval emergence (egg hatch) is 49-95% completed. Insecticides to protect fruit from tunneling larvae should have been applied by 300-400 DDs (5-28% egg hatch) after biofix and then repeated based on the protection longevity of the product if necessary to prevent wormy fruit throughout the 1st generation. Larval emergence for

the 1st generation is projected to end from Jun 22 to Jul 2. The beginning of the 2nd generation egg hatch (5% egg hatch at 1200 DD) will be reached in mid July (Jul 11-21) (see PTB table below). Protection of fruit with insecticides should once again be initiated at this point.

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

	DDs Since Biofix	% Moth Flight of 1st Gen.^	% Egg Hatch of 1st Gen.^^	Projected End of 1st Gen.*	Projected Onset of 2nd Gen.**
Box Elder County					
Perry	596	100%	87%	Jun 24	Jul 14
Davis County					
Kaysville	524	99%	70%	Jun 28	Jul 17
Utah County					
Alpine	459	98%	49%	Jul 2	Jul 21
Genola	645	100%	93%	Jun 23	Jul 13
Lincoln Point	578	100%	83%	Jun 26	Jul 15
Payson	610	100%	90%	Jun 25	Jul 15
Provo (bench)	669	100%	95%	Jun 22	Jul 11

^ The percentage of 1st generation adult moths that have emerged.
^^ The percentage of 1st generation eggs that have hatched.
* 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. Cherry fruits have turned rosy or red in color in most locations and are soft enough for female fruit flies to puncture and lay eggs.

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: Watch for **spider mites** and their stippling and bronzing feeding injury to leaves and fruit. When daily temperatures rise above 85ºF, spider mite populations can increase rapidly. Twospotted spider mite can complete a generation in 7-10 days when temperatures exceed 90ºF and each female can produce 100-150 eggs. 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.
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. If densities of 3-4 nymphs per leaf are present, consider treating before the oldest nymphs (5th 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 PEST FACT SHEETS:
Fire Blight:
http://extension.usu.edu/files/factsheets/Disease%20027%20UPDC%20Fire%20blight.PDF
Apple Powdery Mildew:
http://extension.usu.edu/files/factsheets/Disease%20016%20UPDC%20Apple%20powdery%20mildew.PDF

Phytophthora Crown and Collar Rot of Fruit Trees:
http://extension.usu.edu/files/publications/Disease%20006%20UPDC%20Phytophthora.PDF
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
Prionus Root Borer: http://extension.usu.edu/files/publications/prionus7-14.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/