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Update on Pest Management and Crop Development

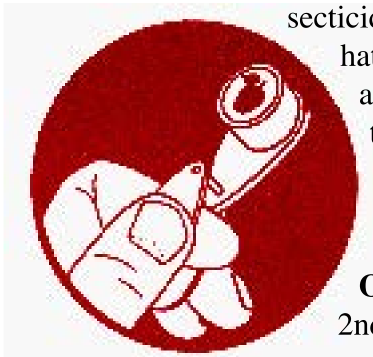
F R U I T J O U R N A L

June 9, 2014 VOLUME 23, No. 12 Geneva, NY

INSECTS

JUNE BUGS

ORCHARD RADAR DIGEST



[H = Highland; G = Geneva]:

Roundheaded Appletree Borer
RAB egglaying begins: June 5 (H)/June 8 (G);.
Peak egglaying period roughly: June 22 to July 7 (H)/June 27 to July 12 (G).

Dogwood Borer
First DWB egg hatch roughly: June 22 (H)/June 26 (G).

Codling Moth
Codling moth development as of June 9: 1st generation adult emergence at 63% (H)/50% (G) and 1st generation egg hatch at 9% (H)/2% (G).
1st generation 3% CM egg hatch: June 6 (H)/June 10 (G) = target date for first spray where multiple sprays needed to control 1st generation CM.
1st generation 20% CM egg hatch: June 12 (H)/June 115 (G) = target date where one spray needed to control 1st generation CM.

Lesser Appleworm
2nd generation LAW flight begins around: July 7 (H)/July 12 (G).

Obliquebanded Leafroller
1st generation OBLR flight, first trap catch expected: June 7 (H)/June 11 (G).
Where waiting to sample late instar OBLR larvae is not an option (= where OBLR is known to be a problem, and will be managed with insecticide against young larvae): early egg hatch and optimum date for initial application of an insecticide effective against OBLR (with follow-up applications as needed): June 21 (H)/June 26 (G).

Oriental Fruit Moth
2nd generation OFM flight begins around: June 26 (H)/June 30 (G).

Redbanded Leafroller
2nd RBLR flight begins around: June 27 (H)/July 1 (G).

San Jose Scale
1st generation SJS crawlers appear: June 15 (H)/June 20 (G).

Spotted Tentiform Leafminer
2nd STLM flight begins around: June 13 (H)/June 18 (G).

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IN THIS ISSUE…

QUITE A YARN

THE WORSTED THAT COULD HAPPEN

(Art Agnello, Entomology, Geneva; ama4@cornell.edu)

❖❖ This is the point of the season at which we normally begin to hear reports of the first infestations of woolly apple aphid (WAA) in problem sites in western NY. In addition to apple, its hosts include American elm, hawthorn, and mountain ash. It overwinters as an egg in bark cracks and crevices, or as a nymph on roots underground and in various protected locations on trees. WAA is attracted to the base of root suckers and around pruning wounds and cankers on limbs and trunks, and colonizes both above-ground parts of the apple tree as well as the roots. In the spring, the nymphs, which are reddish-brown with a bluish-white waxy covering, crawl up from the roots to initiate aerial colonies. These initially build up on the inside of the canopy on sites such as wounds or pruning scars, and later become numerous in the outer portion of the tree canopy, usually during late July to early August.

The aerial colonies occur most frequently on succulent tissue such as the current season's growth, water sprouts, unhealed pruning wounds, or cankers. The main injury to young and mature trees is stunting due to the formation of root or twig galls; mature trees are usually not damaged. Heavy infestations cause honeydew and sooty mold on the fruit and galls on the plant parts, which interferes with harvest operations because red sticky residues from crushed WAA colonies can accumulate on pickers' hands and clothing.

During late June, water sprouts, pruning wounds, and scars on the inside of the tree canopy should be examined for WAA nymphs. During mid-July, new growth around the outside of the canopy should be examined for WAA colonies. No economic threshold has been determined for treatment of WAA, but they are difficult to control, so the occurrence of any colonies should prompt the consideration of some remedial action.

WAA is frequently parasitized by *Aphelinus mali*, a tiny wasp that is also native to North America. Parasitized aphids appear as black mummies in the colony. *A. mali* has been successfully introduced to many apple-growing areas of the world, and is providing adequate control of the WAA in several areas. It does not provide sufficient control in commercial orchards in our region because of its sensitivity to many commonly used insecticides; however, the wasp is thought to reduce WAA populations in abandoned orchards.

WAA is difficult to control with insecticides because of its waxy outer covering and tendency to form dense colonies that are impenetrable to sprays. Insecticide treatments are more effective the earlier they are applied, since they are more capable of decreasing the population before it becomes widespread, and the insects' waxy covering is less extensive earlier in the season. WAA is resistant to the commonly used organophosphates,

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Dept. of Entomology
NYSAES, Barton Laboratory
Geneva, NY 14456-1371
Phone: 315-787-2341 FAX: 315-787-2326
E-mail: ama4@cornell.edu

Editors: A. Agnello, D. Kain

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but other insecticides are effective against WAA, including Diazinon and Thionex, and some newer products such as Admire, Assail, Beleaf, or Movento may offer suppression (for Movento and Assail, addition of a non-ionic surfactant or horticultural mineral oil will improve activity). Good coverage to soak through the insects' woolly coverings is integral to ensuring maximum efficacy. Additionally, a Lorsban trunk application for borers made at this time will effectively control any crawlers that might be contacted by these sprays.❖❖

STINK BUG SURVEY CLOSING SOON

❖❖ Got stink bugs? We need your help! We're surveying growers to assess the impact of BMSB on crops and gather information that will help us defeat this pest. Receive a free Guide to Stink Bugs* if you complete the 10-minute BMSB survey (https://cornell.qualtrics.com/SE/?SID=SV_5ssnjXLNhvp6v1H). Your participation will help us to help you Stop BMSB! The survey will be available until June 30th.

—The Outreach Team for "StopBMSB," a project focused on the biology, ecology, and management of the brown marmorated stink bug.
For more info: StopBMSB.org
[* see it at https://pubs.ext.vt.edu/444/444-356/444-356_pdf.pdf]
❖❖

PEST FOCUS

Geneva: **Pandemis leafroller** 1st catch 6/5. **Obliquebanded leafroller** and **dogwood borer** 1st catch today, 6/9.

INSECT TRAP CATCHES (Number/Trap/Day)

Geneva, NY

	6/2	6/5	6/9
Redbanded leafroller	0.2	0.0	0.0
Spotted tentiform leafminer	1.3	0.7	0.0
Oriental fruit moth	4.3	0.8	0.8
Codling moth	2.5	2.2	1.6
Lesser appleworm	0.0	1.0	1.9
San Jose scale	0.7	0.3	0.0
American plum borer	0.7	0.3	0.3
Lesser peachtree borer	0.7	3.0	1.6
Pandemis leafroller	0.0	1.0*	1.9
Obliquebanded leafroller	_	0.0	0.1*

Highland, NY

	6/2	6/9
Redbanded leafroller	0.6	0.0
Spotted tentiform leafminer	1.8	0.9
Oriental fruit moth	4.1	1.9
Codling moth	2.8	3.5
Lesser appleworm	1.3	0.3
Variegated leafroller	1.1	3.9
Tufted apple budmoth	1.2	3.2

UPCOMING PEST EVENTS

	43°F	50°F
Current DD accumulations (Geneva 1/1–6/9/14):	846	507
(Geneva 1/1–6/9/2013):	860	523
(Geneva "Normal"):	914	504
(Geneva 1/1–6/16/14, predicted):	1037	650
(Highland 1/1–6/9/2014):	1044	627

Coming Events:	Ranges (Normal ±StDev):	
American plum borer 1st flight peak	590–970	321–589
Codling moth 1st flight peak	561–991	306–586
Lesser appleworm 1st flight peak	349–761	170–432
San Jose scale 1st flight subsides	855–1227	508–760
Pandemis leafroller 1st catch	773–901	443–525
Pandemis leafroller flight peak	874–1170	503–717
Obliquebanded leafroller 1st trap catch	812–986	472–594
Obliquebanded leafroller 1st flight peak	830–1204	483–753
Redbanded leafroller 1st flight subsides	592–898	332–560
Black cherry fruit fly 1st catch	702–934	380–576
Cherry fruit fly 1st catch	755–1289	424–806
European red mite summer eggs hatch	737–923	424–572
Rose leafhopper adults on multiflora rose	689–893	366–498
Rose leafhopper adults on apple	809–1053	440–622
Spotted tentiform leafminer 2nd flight begins	992–1166	590–728
Dogwood borer 1st catch	819–1299	473–793
Oriental fruit moth 1st flight subsides	835–1117	489–693
Peachtree borer 1st catch	797–1341	459–829

NOTE: Every effort has been made to provide correct, complete and up-to-date pesticide recommendations. Nevertheless, changes in pesticide regulations occur constantly, and human errors are possible. These recommendations are not a substitute for pesticide labelling. Please read the label before applying any pesticide.

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