

scaffolds

Update on Pest Management
and Crop Development

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

August 12, 2013

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Geneva, NY

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GOING...

ORCHARD
RADAR
DIGEST



SWD UPDATE
(Julie Carroll,
NYS IPM
Program,
Geneva;
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cornell.edu)

FAR
&
WIDE

Geneva Predictions:

Codling Moth

Codling moth development as of August 12: 2nd generation adult emergence at 81% and 2nd generation egg hatch at 46%.



❖❖ Following are some first reports in some more NY counties:

Two male SWD were caught on August 7 in traps set in a red raspberry planting in Chautauqua County. With this report, SWD has been found across New York State, from Suffolk County north to Clinton County, west to Niagara County, and south to Chautauqua County. Sustained trap catch has occurred in the Finger Lakes and Lake Ontario Plains. Fruit infestation (particularly in raspberries and blueberries) is being reported in Long Island and the Hudson Valley.

continued...

PEST FOCUS

Highland: **San Jose scale** crawler emergence predicted for 8/20. (Using 600–700 DD50 from biofix) **Brown marmorated stinkbug** nymphs and adults observed in peach and apple. **Spotted wing drosophila** widespread in traps; damage incidence is high.

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GENERAL INFO

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PEST FOCUS

INSECT TRAP CATCHES

UPCOMING PEST EVENTS

A single male SWD was reared from black raspberry fruit collected from a farm in Monroe County on July 22.

A single female SWD was caught in a trap in Erie County during the week of Aug. 5. The trap was set near brambles.

For your reference, a quick guide to the insecticides labeled and available for use against SWD in the following crops have been posted on the Cornell Fruit website:

Stone Fruits and Grapes

<http://www.fruit.cornell.edu/spottedwing/pdfs/TreeFruitGrapeSWDinsecticides2013.pdf>

Berry Crops

<http://www.fruit.cornell.edu/spottedwing/pdfs/UpdatedLabeledInsecticidesNY-SWD-Final.pdf>



ALL
IN
KNOTS

BORER WARS

(Dave Kain & Art Agnello,
Entomology, Geneva)

[We are reprinting this annual article on borer management because of its timeliness and applicability to dogwood borer infestations in many commercial orchards.]

❖❖ There is increasing concern throughout the Northeast about damage done to apple trees by borers. The species of primary concern is dogwood borer, but American plum borer can be prevalent in western New York apple orchards that are close to tart cherry and peach orchards. While we do not yet have a complete picture of the effects of these borers on dwarf trees, we do know that they reduce vigor and can, in time, completely girdle and kill trees.

We tested a number of insecticides against these borers over a number of growing seasons. Lorsban is very effective for this use and we have urged growers to take advantage of it where needed. In 2001–2003 we compared some other materials, including white latex paint, endosulfan, Avaunt, Surround, Intrepid, Danitol, Imidan, spinosad and Esteem against Lorsban, with varying results. To make a long story short, only Avaunt, Danitol and, possibly Esteem, applied two or three times in midsummer, provided control comparable to one application of Lorsban. Assail and Altacor were effective when applied only once in midsummer but, obviously, will control only the summer generation.

Our tests have shown that borers can be controlled season-long by applying Lorsban at various times in the spring and summer. While a postbloom trunk application of Lorsban is still allowed, enabling growers to spray at the peak of the dogwood borer flight, applying this material prebloom as early as half-inch green works well, too, and may be more convenient. Fall also may be a good time to control dogwood borer. Results from 2002 indicated that Lorsban applied postharvest the previous year (sprays went on in October 2001) controlled

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both the overwintering and the summer generations of dogwood borer. An October 2002 application of Lorsban similarly provided season-long control of dogwood borer in 2003. Lorsban works when applied in the spring or fall because it infiltrates burrknot tissue and kills larvae concealed within. It is also very persistent in wood so it continues to work for a considerable time after it is applied (apparently 9-12 months in our trials). Fall application may offer growers a more convenient alternative for applying borer control sprays. Recall that current Lorsban label restrictions allow only ONE application of any chlorpyrifos product in apples, whether as a foliar or trunk spray, so these recommendations pertain only if no earlier applications have been made. Bear in mind that we now also have a mating disruption option available, Isomate-DWB, which we have found to be very effective in interfering with these insects' pheromone communication process. Use of this product would be recommended as a tactic next June, before the first adult catch of the season.

In a survey conducted in the mid-1990s, we observed some relationships between borer infestation and various orchard parameters such as the proportion of trees with burrknots, proximity to stone fruit orchards and presence of mouseguards. Conventional wisdom has held that borer problems are worse where mouseguards are in place. Mouseguards can contribute to increased expression of the burrknots that borers invade, and may shield borers from predators and insecticide sprays. This has led some growers to contemplate removing mouseguards under the premise that mice are easier to control than the borers. However, results of our survey indicate that dogwood borer larvae may be found as readily in trees without mouseguards as in those with them. (American plum borer may be a different story in orchards near tart cherry or peach trees.) A number of orchards in which we have conducted borer control trials have never had mouseguards and there is no shortage of dogwood borers in them. If mouseguards are deteriorated and no longer protect the tree, there may be some small advantage, in terms of borers, to removing

them. But, in orchards where mouseguards still provide protection against rodents, removing them for the sake of borer control is probably not worth the risk. Instead, we would recommend the use of trunk sprays to control borers. Even with mouseguards on, insecticides will give adequate control if they are applied carefully (i.e., a coarse, low-pressure, soaking spray with a handgun).

Bottom line: as we go into fall, consider using Lorsban after harvest to control borers, and consider leaving mouseguards on trees where they still afford protection. ❖❖

EH,
WHAT'S
UP,
BUGS?

BROWN MARMORATED
STINK BUG UPDATE
(Mike Fargione, CCE HV
Regional Fruit Program, &
Peter Jentsch, Entomology,
Highland; mjf22@cornell.edu
& pjj5@cornell.edu)

❖❖ We are seeing increasing numbers of BMSB this week caught in traps placed along orchard perimeters in Orange, Ulster, Dutchess and Columbia Counties. We have had outside reports of BMSB being seen in an apple and peach orchards in Ulster and in apple blocks in Dutchess County. It would appear 1st generation adults are now beginning to move into tree fruit at a few sites in relatively low numbers.

Over the past week, we began finding symptoms of fruit damage in a few orchards, including damage to apples in Columbia County and damage to peaches and Asian pears in Dutchess County. Peaches and early apples may be very susceptible at this time.

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Since this insect causes the greatest damage along the perimeter of orchards, we suggest growers in the region should be scouting orchard perimeters along wooded edges and hedgerows. Pay special attention to sites with higher elevations, droughty sites and orchard locations where "Tree of Heaven" (*Ailanthus altissima*) is locally found. BMSB may also be more abundant in the upper canopy of the orchard, so consider climbing or use a ladder for improved scouting. The insect is quite active in the evening and may be observed during night and early morning applications or during harvest of early maturing varieties. Inform harvest workers to be on the lookout for the insect by providing images of BMSB life stages.

Given the elusive nature of this pest, low populations observed during scouting can equate to significant but hard-to-see numbers in the orchard that can cause severe fruit injury. At this point, we suggest that pesticide applications should begin after confirmed BMSB sightings have occurred in the orchard, or if confirmed damage is seen, or prophylactically if you have not already applied an effective material and had significant BMSB damage last season. Examples of insect life stages and damage to fruit can be found on the HV Regional Fruit page "Pest Alerts". (<http://hudsonvf.cce.cornell.edu/bmsb1.html>).

You will have to balance the need for effective control with the PHI's restrictions of legal materials. Don't use up your short-PHI materials too soon on late-harvested cultivars, as additional sprays will likely be needed. Based on efficacy, we had previously suggested growers consider bifenthrin (Bifenture EC, Bifenture 10DF or Brigade WSB; PHI=14 days; SLN label for use on BMSB only in Dutchess, Orange and Ulster counties) or fenprothrin (Danitol 2.4EC; PHI=14 days) as a first-spray option. In recent bioassay results, we've found endosulfan (Thionex 50WP and Thionex EC; PHI=21 days) to exhibit effective residual activity, and this may be a good first-spray choice for late-maturing cultivars to help save shorter-PHI materials for later use. Leverage 360 has also been found

to be effective on BMSB, and we suggest saving this in case a late spray is needed because of its short, 7-day PHI. Note: last season's observations have shown that beta-cyfluthrin alone (such as Baythroid XL 1EC and Tombstone formulations) has not been as effective against BMSB as the pre-mix found in Leverage 360. An updated reference list of BMSB control products can be found in the "Resources" section of the HV Regional Fruit Page, (link above).

A spray of one of the effective materials is likely to provide effective residual control for up to 1 week in low to moderate population sites. At that point, you will need to reapply another material if migration is still taking place, or hope you have cleaned up the problem and just continue monitoring. One strategy is to start with an application directed to fruit trees in the first 90 feet of the outer orchard rows. However, you will want to treat the entire orchard where BMSB sightings or damage extend into the orchard interior, and perhaps where you need to refresh apple maggot and codling moth control. Application of the above effective materials may also be effective against these other pests when applied at the higher rates for BMSB control (bifenthrin and endosulfan are labeled for BMSB but not for AM and CM control). As the season progresses, a 4–5-day interval may be needed in sites where high migrations are taking place, especially if materials with low efficacy ratings are used.❖❖

DEMO
MEMOEVENT
ANNOUNCEMENTSCORNELL FRUIT PEST CONTROL FIELD
DAYS

The N.Y. Fruit Pest Control Field Days will take place during Labor Day week on Sept. 4 and 5 this year, with the Geneva portion taking place first (Wednesday Sept. 4), and the Hudson Valley installment on the second day (Thursday Sept. 5). Activities will commence in Geneva on the 4th, with reg-

istration, coffee, etc., in the lobby of Barton Lab at 8:30 am. The tour will proceed to the orchards to view plots and preliminary data from field trials involving new fungicides, bactericides, miticides, and insecticides on tree fruits and grapes. It is anticipated that the tour of field plots will be completed by noon. On the 5th, participants will register at the Hudson Valley Laboratory starting at 8:30, after which they will view and discuss results from field trials on apples and other fruit crops. Although Dave Rosenberger did not run sponsored trials this year, he will be reporting on four field trials involving efficacy of copper products in green tip sprays, potential of Blossom Protect to russet fruit when applied to control blossom blight, scab and rust control with ProPhyt and AgriFos, and efficacy of summer fungicides applied after sooty blotch and flyspeck have become established. No pre-registration is required for either event. ❖❖

INSECT TRAP CATCHES
(Number/Trap/Day)

	Geneva, NY			Highland, NY		
	<u>8/5</u>	<u>8/8</u>	<u>8/12</u>	<u>8/5</u>	<u>8/12</u>	
Redbanded leafroller	0.0	0.0	0.1	Redbanded leafroller	0.4	0.7
Spotted tentiform leafminer	2.5	10.2	21.4	Spotted tentiform leafminer	24.0	21.6
Oriental fruit moth	0.5	0.5	1.5	Oriental fruit moth	0.7	2.6
San Jose scale	173	30.0	14.1	Lesser appleworm	0.4	1.5
Codling moth	1.5	0.0	0.3	Codling moth	1.3	2.7
American plum borer	0.3	0.0	0.4	Obliquebanded leafroller	0.2	0.0
Lesser peachtree borer	0.0	0.0	0.3	San Jose scale	1.0	0.0
Obliquebanded leafroller	0.1*	0.0	0.1	Apple maggot	0.1	0.2
Dogwood borer	0.9	0.5	0.4			
Apple maggot	1.0	0.0	1.3			

* first catch

UPCOMING PEST EVENTS

	<u>43°F</u>	<u>50°F</u>
Current DD accumulations (Geneva 1/1–8/12/13):	2549	1766
(Geneva 1/1–8/12/2012):	3054	2156
(Geneva "Normal"):	2591	1759
(Geneva 1/1–8/19 predicted):	2716	1884
(Highland 1/1–8/12/13):	2939	2075

<u>Coming Events:</u>	<u>Ranges (Normal ±StDev):</u>	
American plum borer 2nd flight peak	2002–2586	1347–1785
Obliquebanded leafroller 2nd flight peak	2593–3011	1758–2098
Oriental fruit moth 3rd flight begins	2295–2863	1553–1991
Oriental fruit moth 3rd flight peak	2662–3236	1831–2243
San Jose scale 2nd flight subsides	2673–3419	1813–2429
Apple maggot flight peak	2103–2657	1408–1838
Codling moth 2nd flight peak	1931–2735	1278–1892
Comstock mealybug 2nd gen. crawlers peak	2380–2624	1658–1737
Comstock mealybug 2nd gen. crawlers subside	2735–2771	1794–1958
Redbanded leafroller 2nd flight subsides	2182–2742	1471–1891
Redbanded leafroller 3rd flight begins	2594–2976	1768–2070
Lesser appleworm 2nd flight peak	2131–3105	1422–2156
Peachtree borer flight subsides	2478–3126	1672–2180
Spotted tentiform leafminer 3rd flight peak	2578–3030	1754–2116

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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