

scaffolds

Update on Pest Management
and Crop Development

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

July 29, 2013

VOLUME 22, No. 19

Geneva, NY

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INVASION AERIAL

ORCHARD
RADAR
DIGEST



MIDSUMMER
SAMBA

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

LET'S DANCE!

Geneva Predictions:

Roundheaded Appletree Borer

Peak hatch roughly: July 10–28

Dogwood Borer

Peak DWB egg hatch roughly: July 28.

Codling Moth

Codling moth development as of July 29: 2nd generation adult emergence at 46% and 2nd generation egg hatch at 11%.

2nd generation 30% CM egg hatch: August 6 (= target date where one spray needed to control 2nd generation CM).

White Apple Leafhopper

2nd generation WAL found on apple foliage: August 5.



PEST FOCUS

Geneva: 1st **apple maggot** oviposition punctures noted 7/25.

❖❖ Most of the season's arthropod pest control decisions are likely to be completed this week and next. As you prepare to make what may be your final turns through the orchard for crop protection purposes before starting to concentrate on harvest activities, try to keep alert to any late-breaking pest developments that might be expected to round out the summer. As in most years, forecast weather trends appear to be more of what we've been having in terms of heat (it's not over yet) and rain (ditto), which will have their specific impacts on insect activity, depending on the species. Here's a quick rundown of some of the more important August pests to keep in mind during this homestretch.

continued...

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GENERAL INFO

- ❖ Event announcements and registration forms

PEST FOCUS

INSECTTRAP CATCHES

UPCOMING PEST EVENTS

Apple Maggot

Adult numbers have been fairly sparse in the orchard sites where we're trapping for them this year. However, in historically high-pressure orchards, early to mid-August is the most active period for flies to be out and laying eggs. With the recent rains softening the ground and easing the task of adult emergence, we're sure to see an uptick in trap numbers during this period. As always, localized trapping can pay off in the event that some blocks are under greater pressure than others, even on the same farm, so please continue to monitor traps in representative blocks.

Internal Lepidoptera

This complex of fruit-feeding larvae continues to pose a threat in several problem sites. The second generation flights are under way, and are even heavy in some cases, so it still pays to stay on top of the situation in your specific orchard. Some spots with fruit damage have been noted, but in general, most orchards look to be in good shape.

Conditions are still favorable for good August flights, particularly for codling moth. Most areas of the state will reach at least the 50% mark of 2nd generation egg hatch this week, so we're definitely in the window for control sprays against the smallest larvae. This is an appropriate time for management sprays for oriental fruit moth as well, so prudence would dictate a critical evaluation of your late-season fruit protection status, to be sure you are adequately covered until the PHI for the various respective varieties.

Recommended options in apples include Altacor, Assail, Belt, Calypso, Delegate, or Voliam Xpress. In peaches, you can use Altacor, Assail, Delegate, or Voliam Xpress. Pyrethroids and OPs may be less suitable because of locally resistant populations. This is also a suitable time for Cyd-X, Carpovirusine, or (in apples, pears and plums only) Virosoft applications against codling moth. For control of OFM, alternate row middle applications will not be as effective as whole orchard sprays in high pressure blocks. Assess the pressure in your specific situations, check the pre-harvest intervals, and determine whether a full or border spray might be in order.

European Corn Borer

Recall that these moths have a final flight that extends

to the middle of September, and that the offspring can inflict last-minute fruit feeding damage to later varieties. Delegate (PHI = 7 days) is a good option for control of European corn borer. Also, one or two late sprays of a B.t. product like Dipel can go a long ways toward minimizing this injury, and the 0-day PHI is compatible with any harvest schedule.

Mites

It can't be said often enough that mites are extremely good at exploiting any high temps to crank out a few more generations before they call it quits for the winter; twospotted spider mites are also possible, including in stone fruit plantings. A frequent (weekly) inspection of your foliage can pay big dividends if they happen to build rapidly before the crop is fully mature. The 7.5 mites/leaf threshold (sampling chart on p. 74 in the Recommends) would be appropriate at this point in the season.

Obliquebanded Leafroller

The second summer flight of OBLR is due to start this week or next, which means that the first larvae will be out looking for something to nibble on soon afterwards. If you struggled to manage the 1st summer brood, you might also cast a judicious eye on your fruits while you're in

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is published weekly from March to September by Cornell University—NYS Agricultural Experiment Station (Geneva) and Ithaca—with the assistance of Cornell Cooperative Extension. New York field reports welcomed. Send submissions by 2 pm Monday to:

scaffolds FRUIT JOURNAL
Dept. of Entomology
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Geneva, NY 14456-1371

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This newsletter available online at:
<http://www.scaffolds.entomology.cornell.edu/index.html>

there checking the leaves for mites, to determine whether a late application of Altacor, Delegate, Proclaim, Rimon or a B.t. material such as Dipel, Deliver or Biobit might be of use in heading off late-season feeding damage.

And don't forget...

Review the comments in the June 3 issue regarding management options for woolly apple aphids, which are still present and may be increasing. ❖❖

SEEING SPOTS

SWD UPDATE
(Julie Carroll, NYS IPM Program, Geneva, and Faruque Zaman, LIHRL, Riverhead; jec3@cornell.edu & fz88@cornell.edu)

❖❖ Some recent first reports of spotted wing Drosophila have come in over the past week:

- Three male and 1 female SWD were collected in the whole wheat dough combo trap in a blackberry planting in Tompkins County on July 24.

- Twenty-one male and 12 female SWD were caught in two traps set in the hedgerow near a blueberry planting in Clinton County. No SWD were caught in the two traps in the blueberry planting itself; reported July 29.

- Suffolk Co. update: There has been an upswing in the number of SWD adults in traps this week (11/trap/week, as of July 24). All these were in 8 traps placed in blackberries, raspberries, blueberries and adjacent areas. Average 40% blackberries (near ripe) were found to have SWD eggs in fruits that have been collected from 3 farms on 7/24 (total 184 berries were checked). A few larvae were found in these fruits meaning there are possibilities that larvae may be visible in harvested fruits. Raspberries and blueberries had only a few SWD eggs laid (<2.0%, as of July 24).

- One male and one female SWD were caught in traps set in a raspberry planting in Livingston County; reported July 25.

- Four male SWD were caught in traps set in

one location in Rensselaer County and three male SWD were caught at another location. All the traps that caught SWD were set in hedgerows of berry plantings of blueberry and high tunnel raspberry and were collected on July 22.

- Two male SWD were caught in traps set in a blueberry planting hedgerow in Washington County. Traps were collected on July 22.

- A single SWD male was caught in a trap collected on July 22 in day neutral strawberries in Wayne County.

- SWD has been caught in a trap set in woods adjacent to a blueberry plantation in eastern Schuyler County. One male and one female were caught during the week preceding July 11; four males and four females were caught during the week preceding July 17.

- Two female SWD were caught in a trap set in a blueberry planting in Seneca County collected on July 17.

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>

IN
GOOD
FORM

 EVENT
ANNOUNCEMENTS

CORNELL FRUIT FIELD DAY

❖❖ Cornell University will host the 2013 Fruit Field Day at the New York State Agricultural Experiment Station in Geneva, NY, on Thursday, August 1, from 8:00 a.m. to 5:00 p.m. The field day will be composed of two concurrent day-long tours, one of tree fruit presentations and another tour of grapes, hops and small fruit presentations. Fruit growers, consultants, and industry personnel are invited to tour field plots and learn about the latest research and extension efforts being carried out by Cornell researchers in Geneva and Ithaca and on commercial farms around the state. The event will focus on all commodities of key importance to New York's \$350 million fruit industry: apples, grapes, cherries, raspberries, strawberries, blueberries and other berry crops, plus hops.

The lunch hour will feature an address by CALS Dean Kathryn Boor, NYSAES Director Tom Burr, and an announcement of the new names for Cornell's recently released NY1 and NY2 apple varieties. Also, there will be a FREE beer sampling to spotlight the newly initiated hops research taking place at the Station. After lunch, equipment dealers and representatives from various companies will showcase their latest products and technologies to improve fruit crop production and protection.

The list of presentations will include the following topics:

Tree Fruit Tour

- Apple breeding at Cornell and new varieties in the pipeline

- Precision apple thinning
- Apple mechanization
- Tall Spindle management in years 1-6
- Spray volume for Tall Spindles
- Precision spraying in the orchard
- Fruit russet control on NY1
- CG rootstocks
- Nutrient removal by fruit harvest and maintenance application of fertilizers
- Impacts of glyphosate on apple tree health
- Evaluation of bactericide programs for fire blight management
- Persistent NY nematodes for plum curculio bio-control
- Peach rootstocks
- Rain protection in cherries
- Pear systems and rootstocks
- Apple scab management in a fungicide-resistant orchard
- Impact of glyphosate on apple tree health
- Development of functional markers for apple fruit quality breeding

Berries/Grapes/Hops Tour

- Soil and root factors in improved blueberry productivity
- Mass trapping and exclusion tactics to control Spotted Wing Drosophila in organic blueberries
 - Limiting bird damage to small fruit crops
 - SWD trap network in NY
 - Day-neutral strawberries and low tunnel production
 - SWD, a new threat to strawberries and raspberries in NY
 - Enhancing pollination and biological control in strawberries
 - Training systems for Arandell
 - New hops variety trial and pest management trials
 - Biology and control of sour rot in grapes
 - Precision spraying in the vineyard
 - High tunnel raspberry and blackberry production
 - A fixed-spray system for SWD control in high tunnel raspberries

continued...

The event will be held on the Experiment Station's Fruit and Vegetable Research Farm South, 1097 County Road No. 4, one mile west of Preemption Road in Geneva, NY. Signs will be posted. Attendees will travel by bus to the research plots to hear presentations by researchers on the work being conducted. The cost of registration is \$30 per person (\$40 for walk-ins) for all-day attendance. Lunch will be provided.

Pre-registration is required for the \$30 rate, register on-line at: <http://is.gd/ffd2013>
For sponsorship and exhibitor information, contact Debbie Breth at 585-798-4265 or dib1@cornell.edu.

CORNELL UNIVERSITY STORAGE WORKSHOP

This year's workshop, slated for August 6 in Ithaca, will feature an international, national and statewide cast. Our guest speakers include Dr. Angelo Zanella, who heads the post-harvest research group at Laimburg Agriculture Research Centre in Italy, and who will be presenting their work on DCA and ILOS, as well as their experiences with DPA. Other presentations will include Honeycrisp, and Empire and Gala browning by Jim Mattheis (USDA, Washington), Jennifer DeEll (Ontario Ministry of Agriculture and Food, Canada), as well as the Cornell team of Chris Watkins and David Rosenberger. Industry presentations include DECCO, PACE and Storage Control Systems. See below for program and registration form.



STORAGE WORKSHOP – 2013

August 6th - Ithaca, NY**DEC credits pending!****PROGRAM**

- 8.00-8.30: Registration
- 8.30-9.15: Honeycrisp-update on air & CA Storage (Watkins, Mattheis, DeEll)
- 9:15-9.35: DPA contamination in storages (Zanella)
- 9.35-9.55: Prediction of storage disorders with new technologies (Mattheis)
- 9.55-10.15: Updates from DECCO (Holowid)
- 10.15-10.40: Refreshment break
- 10.40-11.10: Gala and Empire browning (Mattheis, Watkins)
- 11.10-11.30: Carbon dioxide injury with & without DPA (Watkins)
- 11.30-12.00: Decay control in the absence of postharvest drenches (Rosenberger)
- 12.00-12.20: Updates from PACE (Felicetti)
- 12.20-1.20: Lunch
- 1.20-2.10: Dynamic CA and other new storage technologies (Zanella)
- 2.10-2.30: Minimizing energy and maximizing quality (Schaefer)
- 2.30-3.00: Impacts of glyphosate on internal browning: conclusions from four years of research (Rosenberger)
- 3.00-3.15: Afternoon break
- 3.15-3.30: NY1 and NY2 (Watkins)
- 3.30-4.15: Recommendations for 2013, and ask the "experts" (Watkins, Rosenberger, DeEll, Mattheis, Zanella)

REGISTRATION: Cost of the workshop is \$70/person if paid by July 30th. \$80 after July 30th and at the door. Only payments BEFORE July 30th will include lunch.

NOTE – NEW LOCATION: 146 Morrison Hall, Tower Rd. Cornell University.

GETTING TO Morrison Hall: Please check out the following web site:<http://www.cornell.edu/maps/> Morrison Hall is on the Corner of Judd Falls Rd and Tower Rd. For cheapest parking option, get permit from info booth on Tower Rd. & park behind Morrison Hall

BBQ: You are invited to attend a free BBQ on August 5th from 6 – 9PM at the Cornell Orchards. (\$15/registrant's guest or without registration before July 30.)

LODGING: A block of rooms is being held at a conference rate at the Best Western. Rooms are \$109 plus tax (free breakfast and free shuttle to CU). Phone 607/272-6100. Please state that you are attending the Storage Workshop.

FURTHER INFORMATION:

Inquiries should be addressed to Max Welcome, Department of Horticulture, 134 Plant Science Building, Cornell University, Ithaca, NY 14853, phone 607/255-5439, email: mw45@cornell.edu

REGISTRATION FORM

Storage Workshop

August 6th

Fee:

\$70 if postmarked by July 30th

\$80 after July 30th

Name: _____

Address: _____

City: _____ State: _____

Zip code: _____

Telephone: _____

E-mail: _____

Affiliation: _____

BBQ: yes _____ no _____

Please make check payable to:

Cornell University

Please send form and check to:

Maxine Welcome/Storage Workshop

Department of Horticulture

134 Plant Science Building

Cornell University, Ithaca, NY 14853

INSECT TRAP CATCHES (Number/Trap/Day)						
Geneva, NY				Highland, NY		
	<u>7/22</u>	<u>7/25</u>	<u>7/29</u>		<u>7/15</u>	<u>7/22</u>
Redbanded leafroller	0.0	0.3	0.0	Redbanded leafroller	2.1	0.6
Spotted tentiform leafminer	20.0	9.0	4.1	Spotted tentiform leafminer	10.5	28.8
Oriental fruit moth	0.2	0.0	0.0	Oriental fruit moth	1.2	1.3
San Jose scale	20.1	44.8	57.5	Lesser appleworm	0.2	0.9
Codling moth	0.8*	0.0	0.0	Codling moth	0.6	0.3
American plum borer	0.0	0.2	0.5	Obliquebanded leafroller	0.2	0.2
Lesser peachtree borer	0.1	0.0	0.1	San Jose scale	44.5	148
Obliquebanded leafroller	0.0	0.0	0.0	Apple maggot	0.1	0.5
Dogwood borer	4.3	1.2	0.8			
Apple maggot	0.1	0.3	0.1			
* first catch						

UPCOMING PEST EVENTS		
	43°F	50°F
Current DD accumulations (Geneva 1/1–7/29/13):	2216	1531
(Geneva 1/1–7/29/2012):	2631	2192
(Geneva "Normal"):	1831	1458
(Geneva 1/1–8/5 predicted):	2397	1663
<u>Coming Events:</u>	<u>Ranges (Normal ±StDev):</u>	
American plum borer 2nd flight peak	2002–2586	1347–1785
Spotted tentiform leafminer 3rd flight begins	2257–2655	1512–1844
Obliquebanded leafroller 2nd flight begins	2255–2655	1516–1838
Oriental fruit moth 2nd flight subsides	2069–2567	1376–1794
San Jose scale 2nd flight peak	2128–2500	1434–1750
Apple maggot flight peak	2103–2657	1408–1838
Codling moth 2nd flight peak	1931–2735	1278–1892
Comstock mealybug 2nd gen. crawlers emerge	2234–2624	1505–1781
Redbanded leafroller 2nd flight subsides	2182–2742	1471–1891

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.

This material is based upon work supported by Smith Lever funds from the Cooperative State Research, Education, and Extension Service, U.S. Department of Agriculture. Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the U.S. Department of Agriculture.