scaffolds

Update on Pest Management and Crop Development

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

July 8, 2013 VOLUME 22, No. 16 Geneva, NY

INSECTS

HATCHING PLANS

ORCHARD RADAR DIGEST AND THE COTTON IS HIGH

(Art Agnello, Entomology, Geneva)

THE HEAT IS ON

Geneva Predictions:

Roundheaded Appletree Borer
Peak egglaying period roughly: June 25 to July 8.
Peak hatch roughly: July 10-28

Codling Moth
Codling moth development as of July 8: 2nd generation adult emergence at 1% and 1st generation egg hatch at 98%.

Lesser Appleworm
2nd LAW flight begins around: July 9.

Oriental Fruit Moth
2nd generation OFM first treatment date, if needed: July 5.

Redbanded Leafroller
Peak catch and approximate start of egg hatch: July 11.

Spotted Tentiform Leafminer
Optimum first sample date for 2nd generation STLM sapfeeding mines: July 10.

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❖❖ Our summer seems to have just bypassed the traditional July warming-up phases and jumped straight to August-like dog-days, complete with recurring afternoon pop-up thunderstorms. This type of weather pattern tends to benefit some insect pests and hinder others. The following is a brief rundown of some items to keep near the top of your "scramble" list, just to help prevent anything from boiling over.

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IN THIS ISSUE…

Internal Leps

We are still generally in between the first and second flights for both codling moth and oriental fruit moth. The first brood CM hatch essentially ended last week, so most sites with traditionally heavy pressure from these pests should have already addressed first generation larval control needs. Look for the first captures of the 2nd flight for purposes of timing management sprays; we should note a definite uptick in trap numbers within the next 7–10 days, especially if the current hot spell continues.

Obliquebanded Leafroller

According to our developmental models, the first summer brood hatch should be anywhere from about 50–90% complete around the state this week. Orchards with historically high OBLR pressure should have received an application of a suitable material during the first part of July, so this week would be the latest possible time for such an application against the larvae of this brood if they haven't been attended to. Delegate, Altacor, Belt, Rimon and Proclaim are appropriate choices, particularly in cases where the larvae are a bit larger, and a B.t. product such as Dipel, or else the IGR Intrepid are also options, but these tend to be more effective when applied against the earlier stages. If you are applying Belt, Altacor or Delegate to control codling moth and oriental fruit moth, they will also be very effective against OBLR at this time. Regardless, we have found that this specific spray is the most critical for preventing fruit-feeding damage at harvest, so put this at the top of your list of priorities if OBLR has distressed you in the past.

Apple Maggot

Adults made their first appearance in the Hudson B+Valley today, and should begin showing up in the other traditional high-pressure sites around the state this week. Stings and larval tunneling would first be detected in early and favored varieties such as Ginger Gold and Honeycrisp, particularly in the Hudson Valley. If you aren't monitoring in specific orchards and haven't yet made preparations for a protective spray against AM (and aren't using Delegate or Altacor for OBLR, both of which have some activity on AM), prudence would suggest attention to this pest. Hanging a few volatile-baited sphere traps on the edge of susceptible plantings can provide valuable insight on when (and whether) immigrating flies are posing a threat. Growers on a Delegate or Altacor program for leafrollers/internal leps should get some protection against moderate AM pressure. For those not using Imidan in their cover sprays, Assail and Calypso will both provide excellent control of apple maggot as well as internal leps.

Spotted Wing Drosophila (from Peter Jentsch)

This year, SWD was found in the Northeast considerably earlier than in 2012: on 10 June along a wooded edge in western Mass. It was then captured in apple cider vinegar traps baited with a yeast solution in WNY on 11 June, and in the southern and mid-Hudson Valley on 17 and 21 June, respectively. On 3 July, adult SWD were observed in traps placed along the border and interior of a small fruit patch in southern Orange County in the raspberry variety "Prelude", in which we also found 2 of 25 fruit sampled to be infested with eggs. The brambles had been on a two-week

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SWD preventive program with applications made twice-weekly. Yet, on the same farm in a nearby block of untreated sweet cherries, 14 of 20 (or 70% of the) fruit sampled were infested with a total of 44 eggs. Drosophila larvae have not yet been observed in fruit, indicating the relatively early stage of infestation in early ripening cherry and raspberry. In 2012, very low population levels of SWD led to very high levels of fruit injury, which lead us now to recommend to growers with SWD in the (Hudson Valley) to begin pest management programs for this insect. As we are not completely certain that SWD is the causal agent, we will continue to observe fruit to assess the adult emergence for species confirmation. However, the detection of eggs in pre-harvested and sound fruit is a strong indication of the kind of damage SWD is capable of causing. We are advising that agricultural producers of stone and small fruits should pay strict attention to cherries, brambles and blueberries, monitoring fruit closely during the early stages of coloring and ripening, while monitoring traps daily for the presence of this pest. As these commodities enter the 7-day pre-ripening period, they are at greatest risk. Low levels of fly presence in traps may signify relatively high levels of fruit infestation potential in these commodities. ❖❖

PEST FOCUS

Geneva: **Obliquebanded leafroller** larvae 1st observed in terminals 7/3.

Highland: 1st **apple maggot** trap capture. Japanese beetle adults feeding on foliage.

FRUIT BASKET

EVENT ANNOUNCEMENTS

GENERAL INFO

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

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- 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 biocontrol
- 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

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 conrol 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

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. Registration materials will be available shortly.❖❖

INSECT TRAP CATCHES (Number/Trap/Day)

Geneva, NY

	6/24	7/1	7/8
Redbanded leafroller	0.0	0.1	0.0
Spotted tentiform leafminer	7.3*	13.4	11.8
Oriental fruit moth	0.1	0.1	0.5
San Jose scale	0.0	0.0	0.0
Codling moth	0.0	0.4	0.2
American plum borer	0.1	0.1	0.0
Lesser peachtree borer	0.3	0.1	0.2
Pandemis leafroller	0.8	0.4	0.0
Obliquebanded leafroller	1.3	0.2	1.0
Dogwood borer	2.3	3.0	2.6
Apple maggot	0.0	0.0	0.0

* first catch

Highland, NY

	7/1	7/8
Redbanded leafroller	4.6	2.1
Spotted tentiform leafminer	25.3	34.2
Oriental fruit moth	0.2	4.1
Lesser appleworm	0.4	0.5
Codling moth	0.1	0.1
Obliquebanded leafroller	2.7	0.6
San Jose scale	0.0	0.1
Apple maggot	0.0	0.3*

UPCOMING PEST EVENTS

	43°F	50°F
Current DD accumulations (Geneva 1/1–7/8/13):	1610	1072
(Geneva 1/1–7/8/2012):	1991	1337
(Geneva "Normal"):	1616	1029
(Geneva 1/1–7/15 predicted):	1831	1244
(Highland 1/1–7/8/2013):	1871	1251

Coming Events:	Ranges (Normal ±StDev):	
Apple maggot 1st catch	1243–1663	791–1067
Apple maggot 1st oviposition punctures	1605–2157	1144–1544
American plum borer 2nd flight begins	1535–2073	1014–1378
Comstock mealybug 1st flight peak	1505–1731	931–1143
Redbanded leafroller 2nd flight begins	1252–1580	771–1031
Redbanded leafroller 2nd flight peak	1554–2002	996–1344
Dogwood borer flight peak	1460–1844	914–1200
Lesser appleworm 2nd flight begins	1418–2002	918–1326
Pandemis leafroller flight subsides	1419–1659	884–1066
Spotted tentiform leafminer 2nd flight peak	1377–1791	860–1192
STLM 2nd tissue feeders present	1378–2035	913–1182
Codling moth 2nd flight begins	1582–2256	1033–1513
Obliquebanded leafroller 1st flight subsides	1594–2028	1033–1361
Oriental fruit moth 2nd flight peak	1471–1989	936–1338
San Jose scale 2nd flight begins	1620–1966	1050–1324

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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