SCAFFOLDS Fruit Journal, Geneva, NY
Volume 24, No. 17
Update on Pest Management and Crop Development
July 20, 2015

COMING EVENTS

<table>
<thead>
<tr>
<th>Current DD* accumulations</th>
<th>43°F</th>
<th>50°F</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Geneva 1/1-7/20):</td>
<td>1833</td>
<td>1223</td>
</tr>
<tr>
<td>(Geneva 1/1-7/20/2014):</td>
<td>1899</td>
<td>1274</td>
</tr>
<tr>
<td>(Geneva &quot;Normal&quot;):</td>
<td>1987</td>
<td>1244</td>
</tr>
<tr>
<td>(Geneva 1/1-7/27, predicted):</td>
<td>2025</td>
<td>1366</td>
</tr>
<tr>
<td>(Highland 1/1-7/20/15):</td>
<td>2229</td>
<td>1540</td>
</tr>
</tbody>
</table>

Upcoming Pest Events – Ranges (Normal +/- Std Dev):

American plum borer
   2nd flight begins.......................1557-2089  1029-1395
Apple maggot
   1st oviposition punctures.........1605-2157  1144-1544
Codling moth 2nd flight begins...1563-2251  1019-1511
Comstock mealybug
   1st flight subsides......................1818-2132  1216-1418
Dogwood borer flight peak........1477-1895  925-1257
Obliqued banded leafroller
   1st flight subsides....................1610-2040  1046-1374
Oriental fruit moth
2nd flight peak ....................1451-1969 925-1323
Redbanded leafroller
 2nd flight peak ....................1553-1993 997-1337
San Jose scale 2nd flight begins ..1629-1979 1058-1336
STLM 2nd flight subsides ..........1994-2366 1316-1634
STLM 2nd gen tissue feeders present ....................1378-2035 913-1182
*[all DDs Baskerville-Emin, B.E.]*

Pest Focus
Geneva:  Lesser Appleworm 2nd flight under way.

TRAP CATCHES (Number/trap/day)
Geneva

<table>
<thead>
<tr>
<th></th>
<th>7/10</th>
<th>7/13</th>
<th>7/16</th>
<th>7/20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redbanded Leafroller</td>
<td>2.0</td>
<td>1.7</td>
<td>1.8</td>
<td>0.9</td>
</tr>
<tr>
<td>Spotted Tentiform LM</td>
<td>15.3</td>
<td>12.0</td>
<td>10.5</td>
<td>8.5</td>
</tr>
<tr>
<td>Oriental Fruit Moth</td>
<td>3.9</td>
<td>1.7</td>
<td>0.7</td>
<td>2.0</td>
</tr>
<tr>
<td>Lesser Appleworm</td>
<td>0.0</td>
<td>0.2*</td>
<td>0.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Codling Moth</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>American Plum Borer</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Lesser Peachtree Borer</td>
<td>0.5</td>
<td>1.0</td>
<td>0.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Peachtree Borer</td>
<td>0.2</td>
<td>0.0</td>
<td>0.2</td>
<td>0.1</td>
</tr>
<tr>
<td>Dogwood Borer</td>
<td>19.0</td>
<td>-</td>
<td>7.8</td>
<td>5.4</td>
</tr>
<tr>
<td>Pandemis Leafroller</td>
<td>0.2</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Obliquebanded Leafroller</td>
<td>1.0</td>
<td>0.4</td>
<td>0.2</td>
<td>0.1</td>
</tr>
<tr>
<td>Insect</td>
<td>6/29</td>
<td>7/6</td>
<td>7/13</td>
<td>7/20</td>
</tr>
<tr>
<td>------------------------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Highland (Peter Jentsch)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Redbanded Leafroller</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Spotted Tentiform LM</td>
<td>31.3</td>
<td>41.1</td>
<td>26.2</td>
<td>17.2</td>
</tr>
<tr>
<td>Lesser Appleworm</td>
<td>0.0</td>
<td>0.4</td>
<td>0.2</td>
<td>2.8</td>
</tr>
<tr>
<td>Oriental Fruit Moth</td>
<td>0.9</td>
<td>1.0</td>
<td>0.5</td>
<td>0.8</td>
</tr>
<tr>
<td>Codling Moth</td>
<td>2.1</td>
<td>0.8</td>
<td>1.7</td>
<td>6.1</td>
</tr>
<tr>
<td>San Jose Scale</td>
<td>0.0</td>
<td>0.1</td>
<td>33.9</td>
<td>61.4</td>
</tr>
<tr>
<td>Dogwood Borer</td>
<td>1.7</td>
<td>0.9</td>
<td>1.7</td>
<td>3.9</td>
</tr>
<tr>
<td>Obliquebanded Leafroller</td>
<td>4.1</td>
<td>0.7</td>
<td>0.4</td>
<td>0.1</td>
</tr>
<tr>
<td>Apple Maggot</td>
<td>-</td>
<td>0.0</td>
<td>0.1</td>
<td>0.1</td>
</tr>
</tbody>
</table>

* = 1st capture

ORCHARD RADAR DIGEST

[Box Text: DOGWOOD DAYS]
[H = Highland; G = Geneva]:
Roundheaded Appletree Borer  
Peak RAB egg hatch roughly: July 4 to July 23 (H)/July 7 to July 29 (G).
Dogwood Borer  
Peak DWB egg hatch roughly: July 24 (H)/July 29 (G).
Codling Moth  
Codling moth development as of July 20:  
1st generation adult emergence at 98% (H)/93% (G) and 1st generation egg hatch at 80% (H)/58% (G).
White Apple Leafhopper  
2nd generation WAL found on apple foliage: July 29 (H)/August 7 (G).

[Section: INSECTS]

MIDSUMMER MEALYBUGS  
(Art Agnello, Entomology, Geneva; ama4@cornell.edu)  
[Box Text: MAKES YOUR SKIN CRAWL]

The first generation of Comstock mealybugs likely came and went without much notice this year, since we had very unfavorable weather for them at the time they normally start showing up (late June), but for management efforts, we normally focus on the summer
brood, which occurs sometime during the 3rd week of July in the Hudson Valley, and shortly thereafter in western N.Y. Now would be a good time to note the presence of any potentially problematic populations in your peaches or pears, in order to be prepared for any needed management decisions. The following information is taken from the Comstock Mealybug IPM Fact Sheet, No. 22:

There are two generations of Comstock mealybug in New York, each taking 60 to 90 days to complete, depending on seasonal temperatures. The egg is generally thought to be the primary overwintering stage, but some nymphs and adult females from the second (summer) generation may also overwinter, with eggs being laid in the spring rather than the previous fall. Adult females and males emerge at the same time, from late June to mid-July for the first (overwintering) generation, and late August to mid-September for the second (summer) generation. Adult females are present for a total of 4-6 weeks, and oviposit for about one week after mating. Males survive for only a few days after emerging.

The elongate, orange-yellow eggs are laid in jumbled masses along with waxy filamentous secretions in
protected places such as under bark crevices, near pruning cuts, and occasionally in the calyx of fruit. The summer-generation eggs are laid from mid-June through late July, and the overwintering eggs from mid-August into October. The early larval instars of the CMB are similar to adult females (wingless and elongate-oval in shape, with a many-segmented body) except that they are smaller, more oval-shaped, lack the long body filaments, and are orange-yellowish because they have less wax covering. Later instars are similar in appearance, but become progressively browner and redder.

The overwintered eggs hatch from mid-April through May and the nymphs (crawlers) migrate from the oviposition sites to their feeding sites on terminal growth and leaf undersides of trees and shrubs. This hatch is completed by the petal fall stage of pears. Nymphs that hatch from these overwintered eggs are active from roughly early May to early July (i.e., as in the above-mentioned reports). As the nymphs approach the adult stage, they tend to congregate on older branches at a pruning scar, a node, or at a branch base, as well as inside the calyx of pears. Second-(summer) generation nymphs are present from about mid-July to mid-September.
The Comstock mealybug poses two major concerns for the pear processing industry of New York: First, the emergence of crawlers and adult females from the calyx of pears at the packinghouse creates a nuisance to workers. Second, pears to be made into puree typically are not peeled or cored by processors who buy New York fruit, so infestations can potentially result in unacceptable contamination of the product.

Another problem, of concern to apple growers in the 1930s and 1940s, and again in the Hudson and Champlain Valleys in the early 1980s, is that the honeydew secreted by the crawlers is a substrate for sooty molds growing on the fruit surface. This problem also occurs on peaches in Ontario, Canada. These molds result in a downgrading of the fruit, and are therefore an additional cause of economic loss.

To date, the Comstock mealybug has been a problem to growers of processing pears because of the contamination and aesthetic reasons noted. An infestation generally requires one or more insecticide sprays during the growing season, directed against the migrating crawlers. Examine the terminal growth for crawler activity periodically throughout the summer.
Crawler and adult female activity can be monitored best by wrapping white, double-sided carpet tape around low scaffold branches and inspecting for crawlers that have been caught on the tape. They can be recognized with a hand lens or, with some experience, by the unaided eye.

We expect summer crawlers to appear in problem blocks over the next 1-2 weeks, for which an application of a material such as Actara (pears only), Admire (pears only), Assail (apples & pears only), Centaur, Movento, or Portal would be advised to control this insect.

[Section: GENERAL INFO]

EVENT ANNOUNCEMENTS
[Box text: FRUIT TOUR]

WAYNE COUNTY FRUITGROWER TOUR
Wednesday, August 5, from 9:30 am
Registration and 1st stop at Wilbert's Fruit Farm, Walworth-Ontario Rd, Walworth, NY (GPS: N 43.160577, W 77.287325)

Sponsored by agr.assistance, this large, informative and entertaining tour is in its 17th year, and will feature
presentations on return bloom, pollination & crop set, frost control, apple scab and fire blight control, hard cider production, improving tree growth, black stem borer, plus much more. Door prizes, lunch, a light-hearted atmosphere, a BBQ/clambake dinner with a live band, growers and industry representatives from NY and surrounding states — always a great way to spend a midsummer day. Free attendance. Contact Lindsay LaMora (585-734-8904; lindsaylamora@aggrassistance.com) for RSVP pre-registration and tour information.

BIRD DAMAGE MANAGEMENT WORKSHOP
Wednesday, August 19, 8:30 AM to 4:00 PM

Cornell University will be holding a bird damage management workshop on Aug. 19 at CCE-Saratoga County, 50 W. High St, Ballston Spa, NY, offering comprehensive knowledge about successful bird management strategies in susceptible fruit crops, including sweet and tart cherry, blueberry, Honeycrisp apples and wine grapes. Morning session topics: which bird species damage fruit, economic losses to fruit from birds, consumer preference for management tactics, NY grower survey, tactics for deer management, regulations & permitting for wildlife control, landscape
factors that place fruit at risk, and bird mitigation strategies (Morning session available via WebEx webinar). Afternoon session: On-farm field demonstrations of scare tactics such as falconry, air dancers, discussion of tactics being used on representative farms. Registration fee, $10; advance registration is required by August 12. Contact: Marcie Vohnoutka, ENY Commercial Horitculture Program, 518-272-4210; mmp74@cornell.edu. DEC credits are being requested.

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.

Scaffolds 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 p.m. Monday to: Scaffolds Fruit Journal
Editors: A. Agnello, D. Kain
Dept. of Entomology, NYSAES
630 W. North St.
Geneva, NY 14456-1371
Phone: 315-787-2341   FAX: 315-787-2326
E-mail: ama4@cornell.edu
Online at
<http://www.scaffolds.entomology.cornell.edu>