Regarding the updates on pest management and crop development, here are the upcoming events and their respective ranges considering normal conditions and standard deviation:

### COMING EVENTS

<table>
<thead>
<tr>
<th>Event Description</th>
<th>DD Accumulations (43°F)</th>
<th>DD Accumulations (50°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current DD accumulations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Geneva 1/1-5/14):</td>
<td>598</td>
<td>323</td>
</tr>
<tr>
<td>(Geneva 1/1-5/14/2011):</td>
<td>400</td>
<td>202</td>
</tr>
<tr>
<td>(Geneva &quot;Normal&quot;):</td>
<td>440</td>
<td>229</td>
</tr>
<tr>
<td>(Geneva 1/1-5/21 predicted):</td>
<td>729</td>
<td>408</td>
</tr>
<tr>
<td>(Highland 1/1-5/14/12):</td>
<td>750</td>
<td>397</td>
</tr>
<tr>
<td>(Highland 1/1-5/14/11):</td>
<td>497</td>
<td>253</td>
</tr>
</tbody>
</table>

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

- **American plum borer**
  - 1st flight peak: 636-982 / 349-597
- **Black cherry fruit fly 1st catch**: 702-934 / 380-576
- **Codling moth 1st flight peak**: 574-1008 / 313-597
- **European red mite**
  - 1st summer eggs: 447-555 / 237-309
- **Lesser appleworm**
  - 1st flight peak: 355-773 / 174-440
- **Lesser peachtree borer**
  - 1st catch: 482-684 / 251-379
Mullein bug hatch complete ........508-656  264-358
Obliquebanded leafroller
  pupae present ......................601-821  328-482
Oriental fruit moth
  1st flight peak ....................352-550  178-294
Pear psylla hardshells present ....493-643  271-361
Plum curculio
  oviposition scars present ........485-589  256-310
Rose leafhopper adults
  on multiflora rose ..................689-893  366-498
San Jose scale 1st flight peak ......554-746  294-418
Spotted tentiform leafminer
  sapfeeders present ...............343-601  165-317

PEST FOCUS
Highland:
High populations of Rosy Apple Aphid causing feeding injury to foliage.
Plum Curculio, European Apple Sawfly and Obliquebanded Leafroller fruit damage observed.
Pear Psylla nymphs, newly emerged adults and eggs observed.

TRAP CATCHES (Number/trap/day)
Geneva

  5/4   5/7   5/11  5/14
<table>
<thead>
<tr>
<th>Insect</th>
<th>4/30</th>
<th>5/7</th>
<th>5/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redbanded Leafroller</td>
<td>15.5</td>
<td>9.3</td>
<td>4.5</td>
</tr>
<tr>
<td>Spotted Tentiform Leafminer</td>
<td>8.0</td>
<td>4.7</td>
<td>3.1</td>
</tr>
<tr>
<td>Oriental Fruit Moth</td>
<td>4.7</td>
<td>5.2</td>
<td>1.9</td>
</tr>
<tr>
<td>American Plum Borer</td>
<td>0.0</td>
<td>0.3*</td>
<td>0.0</td>
</tr>
<tr>
<td>Lesser Appleworm</td>
<td>0.0</td>
<td>0.0</td>
<td>0.6</td>
</tr>
<tr>
<td>San Jose Scale</td>
<td>1.3*</td>
<td>0.3</td>
<td>0.0</td>
</tr>
<tr>
<td>Codling Moth</td>
<td>0.3*</td>
<td>1.2</td>
<td>0.9</td>
</tr>
</tbody>
</table>

Highland (Peter Jentsch)

<table>
<thead>
<tr>
<th>Insect</th>
<th>4/30</th>
<th>5/7</th>
<th>5/14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redbanded Leafroller</td>
<td>4.2</td>
<td>1.3</td>
<td>0.4</td>
</tr>
<tr>
<td>Spotted Tentiform Leafminer</td>
<td>25.4</td>
<td>6.3</td>
<td>3.4</td>
</tr>
<tr>
<td>Oriental Fruit Moth</td>
<td>10.6</td>
<td>3.9</td>
<td>2.4</td>
</tr>
<tr>
<td>Codling Moth</td>
<td>0.0</td>
<td>1.4*</td>
<td>4.6</td>
</tr>
<tr>
<td>Lesser Appleworm</td>
<td>0.0</td>
<td>1.0*</td>
<td>3.4</td>
</tr>
<tr>
<td>Tufted Apple Budmoth</td>
<td>0.0</td>
<td>0.1</td>
<td>-</td>
</tr>
<tr>
<td>Fruittree Leafroller</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Variegated Leafroller</td>
<td>-</td>
<td>-</td>
<td>0.0</td>
</tr>
</tbody>
</table>

ORCHARD RADAR DIGEST

[Box Text: ON DECK]

Geneva:

Roundheaded Appletree Borer
Dogwood Borer
First DWB egg hatch roughly: June 17.

Codling Moth
1st generation, first sustained trap catch biofix date: May 5. Codling moth development as of May 14: 1st generation adult emergence at 7% and 1st generation egg hatch at 0%.

Lesser Appleworm
Peak LAW trap catch: May 11.

Mullein Plant Bug
The most accurate time for limb tapping counts, but possibly after MPB damage has occurred, is when 90% of eggs have hatched. Expected 90% egg hatch date: May 9.

Obliquebanded Leafroller
1st generation OBLR flight begins around: May 30.

Oriental Fruit Moth
1st generation 55% egg hatch and first treatment date, if needed: May 19.

San Jose Scale
First adult SJS crawlers appear: June 10.

Spotted Tentiform Leafminer
1st generation sapfeeding mines start showing: May 9. Optimum sample date is around May 10, when a larger portion of the mines have become detectable.

White Apple Leafhopper
1st generation WALH found on apple foliage: May 3.

[Section: INSECTS]

CAN'T GET STARTED
(Art Agnello, Entomology, Geneva; ama4@cornell.edu)

[Box Text: AT A MINIMUM]

Considering how far "ahead" we started out about 6 weeks ago, it's notable how completely things seem to have stalled since late April, and we're still seeing lots of (admittedly) late bloom and pollination activity taking place, at least in western NY, so it looks almost like a complete catch-up in terms of timing. If it weren't for the extensive damage that's been done to most of the initial fruit buds, we might be tempted to shrug it off and return to business as usual. The truth is that the story on this year's crop is still being written, and we won't have a very clear picture for at least a couple more weeks. Any late-set fruitlets may or may not compensate for the early damage, depending on quality as well as quantity of the fruit produced, and the traditional insect pest patterns have been pretty much turned on their head. For instance, plum curculios have probably been hanging around in the trees with nothing to do for weeks; can they hold out
indefinitely before giving it up as a missed opportunity? Who knows, but I think we'll all be seeing some new scenarios this season.

When the situation does clear up, it's certain that some growers will conclude that they will in fact have enough of a crop to warrant an insect management program, and others will be certain that they don't. The first group will need to make some judicious choices about the most economical way to proceed in order to protect the fruits on the trees, and probably their program will have to be customized by block and variety (even more than normal). For orchards with essentially no crop, there will still be a need for some maintenance efforts, as certain pests occur and multiply regardless of the presence of fruit. Following are some advised tactics to follow in this case, excerpted and adapted from Rick Weinzierl in the Illinois Fruit and Vegetable News:

**Apples**
- **Aphids:** Examine terminals for rosy apple aphids and green aphids at about 2-week intervals. Treat if more than 30 percent of terminals are infested and natural enemies are absent. Controlling woolly apple aphid
generally is advised where infestations are observed on greater than 50 percent of pruning scars.

• White apple leafhopper and potato leafhopper: Scout for these after petal fall, especially on young trees where vigorous growth is important to bring the trees into productivity. Even a few potato leafhoppers feeding on leaves of new shoots can cause curling of leaves and stunted growth, so control is warranted on young trees when potato leafhopper is simply present.

• San Jose scale: An application of Esteem about 500 DD base 50°F from March 1, or 310 DD after 1st male catch (May 4 in Geneva this year) might be considered in blocks where scale problems were severe last year. We'll provide our best estimate of when this should be occurring, or else use double-sided tape wrapped around twigs or branches in problem blocks to determine when crawlers are active in specific locations.

• Dogwood borer: Adults, which are clearwing moths, lay eggs in burr knot tissue or the graft unions on clonal rootstocks, and in interstems. Larvae tunnel in the burr knot tissue and adjacent cambium, sometimes girdling trees. Flight usually begins in mid-June in NY, but this year could be earlier. A coarse trunk spray of Lorsban any time from now on will prevent egg-laying
by adults; alternatively, mating disruption using Isomate-DWB has proven to be an effective tactic.

- Japanese beetle: If beetles are defoliating trees from June through August to the extent that desired growth or vigor is compromised, control them using one of the products recommended in the Tree Fruit Guidelines.

- European red mite: If an application of oil went on before bloom and no pyrethroids will be used, it's unlikely that outbreaks will occur. However, keep an eye on the foliage nonetheless, particularly if the summer turns hot and dry. An uncontrolled mite population will adversely affect next season's fruit bud establishment, which occurs in late July to August. Thresholds are 2.5 mites per leaf in June, 5 mites per leaf in July, and 7.5 mites per leaf in August.

**Peaches**

The list of potential pests even in the absence of fruit is shorter in peaches: mainly peachtree borers, San Jose scale, Japanese beetle, and European red mite. In the absence of a crop, there is no reason to control plum curculio, stink bugs and plant bugs, or oriental fruit moth (unless there is sufficient larval tunneling in shoot tips to reduce new growth and compromise next year's crop).
• Lesser peachtree borer flight usually is under way by the end of May, and often spans most of the summer; peachtree borer flight should begin by mid-June. Where control is needed, a trunk and lower scaffold branch spray of Lorsban provides control; however, both species can be effectively managed using Isomate PTB-Dual.

• San Jose scale: As in apples, an application of a recommended product at the completion of crawler hatch in about mid-June might be considered in blocks where scale problems were severe last year.

• Japanese beetle: Same as in apples, if beetles are defoliating trees from June through August to the extent that desired growth or vigor is compromised, control them.

• European red mite: Again as in apples, if an application of oil went on before bloom and no pyrethroids will be used as cover sprays, it's unlikely that outbreaks will occur.

Fruited Blocks
An inspection of various blocks in the region today made it apparent that a number of orchards will have some portion of a normal crop, some will have less than that, and of course some will have none. Unfortunately, a reduced crop doesn't translate into
very much of a reduced pest management effort, as it's still necessary to spray the whole tree to protect however many fruits are present. However, it is possible to be a bit more restrained and still confer some adequate control of the biggest threats.

Despite scant evidence of much insect activity or damage so far, it's reasonable to assume that plum curculio will still pose a threat to any fruitlets that are present, so a normal protective spray should be applied to any fruited blocks that have reached petal fall; if one was already applied more than a week ago, at least one more spray is needed, as the PC oviposition period is almost certainly not finished yet. An effective option would be Actara, Calypso, Imidan, or — particularly if no fruit is likely to be exported this year — use up that single application of Guthion you have this season, and you can obtain optimal control without having to spend a lot. The OPs will also give protection from sawfly, and the neonics could additionally cover rosy apple aphids, leafhoppers, and, in the case of Calypso, internal leps. In blocks with a history of OBLR, Intrepid or a B.t. at petal fall will head off feeding on young fruitlets that might otherwise add to your bottom line. We'll be doing our best to figure out the timing and potential hazards of all the usual suspects as this unseasonable
season continues to unwind, but for the time being, there's no excuse for neglecting whatever remnants of a crop you may eventually be very interested in harvesting four months from now.

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 3 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/index.html>