

FEET TO THE FIRE

VIEW FROM
MID-SEASON
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❖❖ The summer seems to have announced its intentions to pour on the heat for at least the near term, which will tend to benefit some insect pests more than 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 getting out of hand.

Internal Leps

We are generally in between the first and second flights for both codling moth and oriental fruit moth. The first brood CM flight has tapered off and we're nearly through the hatch period, although we should remain attentive for any signs of a renewed surge in trap numbers during this time (the often-noted "B peak" that can vex early season management efforts), so most sites with traditionally heavy pressure from these pests should still be subject to first generation larval control needs. If you aren't actually inspecting the young fruitlets for signs of fresh infestation, it would be prudent at least to consider the need for a(nother) protective spray if weekly adult numbers surpass 5 per trap; Altacor, Delegate, Exirel, and premixes such as Besiege, Minecto Pro and Voliam Flexi are among the top-ranked options, with virus products such as Cyd-X, Madex, and Carpovirusine offering good supplementary activity, along with additional options such as Rimon, Grandevo, and Assail. We'll also be looking for increasing captures of the 2nd flight of oriental fruit moth (time management sprays for when catches exceed 10/trap/



week), and should note a definite uptick in trap numbers within the next 10–14 days, especially if the temperatures maintain their typical July values.

Obliquebanded Leafroller

According to our developmental models, the first summer brood hatch should be anywhere from 50–100% complete around the state this week. Orchards with historically high OBLR pressure should normally receive 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, Exirel, 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 any of the diamides (Altacor,

continued...

IN THIS ISSUE...

INSECTS

- ❖ Mid-season insect roundup
- ❖ BMSB Management Survey
- ❖ Model Building

ORCHARD RADAR DIGEST

TRAP CATCHES

PEST FOCUS

UPCOMING PEST EVENTS

Exirel, plus the various premixes containing the same a.i.s) 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 have not made their first appearance in Geneva yet, but the first flies were captured in Highland today, so they should begin showing up in traditional high-pressure sites around the state soon. 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 start 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 will provide excellent control of apple maggot as well as internal leps where populations are still OP-susceptible.

Woolly Apple Aphid

Individual nymphs should have started to become noticeable as they make their way up into the canopies of infested trees, and we have been seeing some initial aerial colonies in the Geneva research plantings. This would be a prudent time to consider a preventive spray program for this pest in blocks with historically high pressure. Quoting from the June 4 issue's overview of treatment options:

'WAA is resistant to the commonly used organophosphates, but other insecticides are effective

against WAA, including Diazinon and Movento, and some additional products such as Admire, Assail, Beleaf, or Sivanto Prime may offer suppression. For Movento and Assail, addition of a non-ionic surfactant (e.g., LI-700 or Regulaid) or horticultural mineral oil will improve activity. Good coverage to soak through the insects' woolly coverings is integral to ensuring maximum efficacy. Additionally, a Lorsban trunk application for borers made at this time will give collateral control of any crawlers that might be contacted by these sprays.'

European Red Mite

Our recent spike in heat units are favorable for a mid-season buildup of mite populations, so it would be advisable to inspect the foliage in traditional hot spots plus sensitive varieties like Delicious, Braeburn and Gala, to be sure they don't blow up with the warm temperatures. During July, we recommend a 5 per leaf threshold of motile stages, and you can use the appropriate presence-absence sampling chart on p. 76 of the Tree Fruit Pest Management Guidelines to assist in your decision-making.

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scaffolds

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Spotted Wing Drosophila

First captures of female SWD have been recorded in various parts of the state already this season [Cayuga Co. (June 11), Columbia and Schuyler Counties (June 18), Ulster Co. (June 21), Rensselaer Co. (June 25), Suffolk Co. (June 27)], with sustained catches now reported at least in Ulster Co. Although berry fruit crops are considered to be most at risk for SWD infestation, cherries are also potential targets, so growers with either sweet or tart cherries that are not in the process of being harvested soon may want to consider using a protective spray to get them through the final days of maturation in sound shape. Keep apprised of what's going on in your region by consulting the SWD blog [<http://blogs.cornell.edu/swd1/>]. Updated SWD Quick Guides providing capsule descriptions of products registered for SWD management can be found on the Spotted Wing Drosophila Management page:

<http://fruit.cornell.edu/spottedwing/management/>.

Brown Marmorated Stink Bug

Peter Jentsch reports that, to date, they have seen low brown marmorated stink bug (BMSB) adult trap captures that are well below threshold for management in the Hudson Valley. However, scouting for the insect in trees may reveal BMSB eggs and newly hatched nymphs, according to where they should be by now in their development. In tree fruit blocks where nymphs are found, orchard management for the pest should be initiated. One of the most effective tools for management of BMSB is the active ingredient bifenthrin, in a number of formulations; we have applied for a renewal of the Section 18 registration for this use that we have been granted for several years, and will keep you informed on the status of this request. Other products showing efficacy against BMSB include Actara, Danitol, Endigo, Lannate, and Voliam Xpress/Besiege. ❖❖

BMSB MANAGEMENT SURVEY FOR COMMERCIAL PRODUCERS

A nation-wide survey is currently under way to gather information from farmers and growers on the economic impact of the brown marmorated stink bug (BMSB) on agriculture. The objective of the survey is to better provide you with the help you need in managing this pest. We'd like to find out when BMSB became a problem for you, where you currently get information on how to control them, how much damage you have suffered, your use of and interest in various management practices, and your feelings about biological control methods and their potential for your operation. The results of the survey will be used by Extension programs across the United States to fine tune management advice for the BMSB and help prioritize research and outreach activities.

If you'd like to participate, the survey should take you about 20-25 minutes to complete. Your individual survey responses will be confidential and the data collected will only be reported in summaries. Your participation is voluntary and you can decide not to answer a given question if you choose.

The link to the on-line survey along with more information about the survey can be found on the StopBMSB.org website: (<http://stopbmsb.org/go/BfxA>). If you have any questions about the Brown Marmorated Stink Bug Management Survey for Commercial Producers, please contact Jayson Harper by e-mail at jkh4@psu.edu or call 814-863-8638.



MODEL BUILDING

Insect model predictions for Highland[H]/
Geneva[G]

[Source: NEWA Apple Insect Models,
<http://newa.cornell.edu/index.php?page=apple-insects>]

Obliquebanded Leafroller 25% egg hatch
@ 450 DD43; 50% egg hatch @ 630 DD43;
3rd instar larvae occurrence @ 720 DD43
(currently @ 656[G] / 722[H] / 476 [Wmson]
/ 476 [Sodus] / 505 [Wolcott]).

ORCHARD RADAR DIGEST

[H = Highland; G = Geneva]:

Roundheaded Appletree Borer

Peak RAB egg laying period roughly: June 19-
July 2 (H)/June 26-July 9 (G).

Peak RAB egg hatch roughly: July 4-22 (H)/
July 11-29.

Codling Moth

Codling moth development as of July 2:

1st generation adult emergence at 100%
(H)/99% (G) and 1st generation egg hatch at
94% (H)/82% (G).

Lesser Appleworm

2nd LAW flight begins around: July 5 (H)/
July 13 (G).

Obliquebanded Leafroller

Optimum sample date for late instar summer
generation OBLR larvae: July 4 (G).

Oriental Fruit Moth

2nd generation first treatment date, if needed:
July 7 (G); second treatment date, if needed,
July 10 (H)/July 19 (G).

Redbanded Leafroller

2nd gen RBLR peak catch and approximate
start of egg hatch: July 5 (H)/July 13 (G).

Spotted Tentiform Leafminer

Rough guess of when 2nd generation
sap-feeding mines begin showing: July 5 (G).

INSECT TRAP CATCHES (Number/Trap/Day)

Geneva, NY

	<u>6/25</u>	<u>6/29</u>	<u>7/2</u>
Redbanded leafroller	1.0	4.5	7.5
Spotted tentiform leafminer	10.0	22.5	62.5
Oriental fruit moth	4.5	21.0	18.0
Codling moth	6.0	10.0	5.0
Lesser peachtree borer	11.0	9.5	15.0
Obliquebanded Leafroller	1.0	1.0	0.5
Dogwood Borer	0.5	2.5	9.0
Peachtree Borer	2.5	6.5	6.0
Apple Maggot	-	0.0	0.0

Highland, NY

	<u>6/18</u>	<u>6/25</u>	<u>7/2</u>
Redbanded leafroller	4.0	18.5	31.0
Spotted tentiform leafminer	40.5	56.0	89.0
Lesser appleworm	2.0	0.5	0.5
Oriental fruit moth	0.5	5.0	0.0
Codling moth	40.0	49.0	13.5
San Jose scale	1.0	0.0	0.0
Obliquebanded Leafroller	46.0	53.0	17.0
Dogwood Borer	1.5	0.0	0.5
Tufted Apple Bud Moth	-	23.0*	12.0
Sparganothis Fruitworm	-	7.0*	11.0
Apple Maggot	-	-	1.8*

* first catch

PEST FOCUS

Highland: 1st Apple Maggot caught today, 7/2.

UPCOMING PEST EVENTS		
	<u>43°E</u>	<u>50°E</u>
Current DD* accumulations (Geneva 1/1–7/2):	1434.0	949.9
(Geneva 1/1–7/2/2017):	1434.4	876.1
(Geneva "Normal"):	1467.7	928.8
(Geneva 1/1-7/9, predicted):	1654.5	1121.4
(Highland 1/1–7/9):	1718.4	1143.8
<u>Coming Events:</u>	<u>Ranges (Normal ±StDev):</u>	
Apple maggot 1st catch	1226-1690	776-1091
Apple maggot 1st oviposition punctures	1605-2157	1144-1544
American plum borer 2nd flight start	1560-2140	1028-1434
Codling moth 1st flight subsides	1276-1834	810-1206
Codling moth 2nd flight start	1583-2230	1032-1494
Comstock mealybug 1st flight peak	1505-1731	931-1143
Dogwood borer peak catch	1434-1864	898-1233
Lesser appleworm 2nd flight start	1429-2108	924-1405
Lesser peachtree borer flight peak	853-1767	513-1165
Obliquebanded leafroller 1st flight subsides	1630-2048	1060-1377
Oriental fruit moth 2nd flight peak	1454-1951	927-1307
Pandemis leafroller flight subsides	1441-1692	901-1103
Peachtree borer flight peak	1028-2004	619-1355
Redbanded leafroller 2nd flight peak	1529-1975	979-1322
San Jose scale 2nd flight start	1629-1979	1058-1336
Spotted tentiform leafminer 2nd flight peak	1388-1783	869-1185
Spotted tentiform leafminer 2nd generation tissue feeding mines	1378-2035	913-1182
*all DDs Baskerville-Emin, B.E.		



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.

The **Cornell Pest Management Guidelines for Commercial Tree Fruit Production** (aka 'The Recommends') is available from the Cornell Store, both in a printed book format as well as online; visit <https://ipmguidelines.org/> for purchasing details. 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.