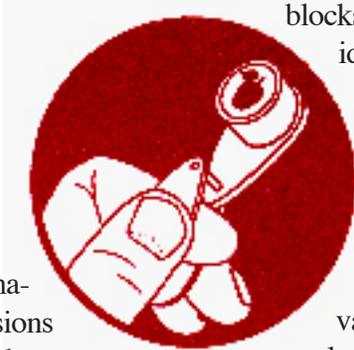


RANK AND FILE

MIDSUMMER
RECONNOITER
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❖❖ Many of the season's major arthropod pest control decisions are likely to be completed during the next couple of weeks. As you prepare to make what may be your final passes 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 conceivably 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 (generally above-average temperatures) and rain (spotty), which will have their specific impacts on insect activity, depending on the species. Here's a quick rundown of some of the more important late July-August pests to keep in mind during this homestretch.

Apple Maggot

Adults have just started flying in most areas, but numbers have not been increasing quickly so far in the Wayne Co. orchard sites where we're trapping for them. In historically high-pressure orchards, early to mid-August is the most active period for flies to be out and laying eggs. With the incoming showers predicted over the next week making it easier for adult emergence from the ground, we're sure to see some upticks in trap numbers during this period. As always, targeted 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 "problem"

blocks. Our best options these days are Imidan, Assail, Altacor, Avaunt, Delegate, Exirel, certain premixes such as Endigo, Leverage, Voliam Xpress/Besiege, and the pyrethroids.

Internal Lepidoptera

This complex of fruit-feeding larvae continues to pose a threat in several problem sites. The second generation flights are under way, but are still generally at low levels, so it pays to stay on top of the situation in your specific orchard, to be sure you're aware of any signs of fruit damage.

Conditions are predicted to be favorable for respectable August flights, particularly for codling moth, and the 2nd generation egg hatch will be under way in the most advanced areas of the state this week, so we'll soon be in the window for control sprays against the smallest larvae. This will be an appropriate time for management sprays for oriental fruit moth as well, so prudence would dictate a

continued...

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- ❖ BMSB survey/Nut production survey
- ❖ NextGen Young Fruit Grower Tour

ORCHARD RADAR DIGEST

UPCOMING PEST EVENTS

TRAP CATCHES

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 both apples and peaches include Altacor, Assail, Delegate, Exirel, Voliam Xpress/Besiege, or Minecto Pro. Pyrethroids and OPs may be less suitable because of locally resistant populations. This is also an appropriate time for Cyd-X or Carpovirusine granulosus virus applications against codling moth, or Madex HP against both OFM and codling moth; these products will help to lower overall population levels over the long term. 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. In sites with more modest pressure, applications of a B.t. product on a 7–10-day schedule helps to maintain populations below an economic level; options include Deliver, Dipel, Biobit, Javelin, and Agree.

Comstock Mealybug

In pears especially, this begins the period of migration of the 2nd generation nymphs into the fruit calyx, where they will be concealed until detected as unwelcome surprises during packinghouse inspections. In apples, infestations tend to result in blooms of sooty mold, particularly over the bottom halves of the fruits. Blocks with mealybug "issues" should receive a protective spray of Actara (pears only), Admire Pro (pears only), or in both apples and pears, Assail, Centaur, Movento, or Portal.

European Corn Borer

These moths have a late flight that extends to the middle of September, and 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 can go a long way toward minimizing this injury, and the 0-day PHI is compatible with any harvest schedule.

Mites

Although mites have not been much of an issue so far this season, they are extremely good at exploiting any high temps that occur, in order to crank out a few more generations before they quit for the winter; twospotted spider mites are also favored under dry conditions, including in stone fruit plantings. A periodic 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. 77 in the Recommends) would be appropriate starting at the beginning of August; we remain at 5.0 mites/leaf until the end of this month.

Obliquebanded Leafroller

The second summer flight of OBLR isn't due to start until the next 1–2 weeks, but 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 plan to cast a judicious eye on your fruits while you're in there checking the leaves for mites, to determine whether a late application of Altacor, Delegate, Exirel, Minecto Pro, Proclaim, Rimon or a B.t. material such as Dipel, Deliver or Biobit might be of use in heading off late-season feeding damage.

continued...

scaffolds

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

A couple of reminders...

- Review the comments in the June 4 issue regarding management options for woolly apple aphids, in case their numbers take a sudden jump in the next couple of weeks.

- Japanese beetles are still to be found feeding on apple foliage. An application (or two) of a product such as Assail, Imidan, Sevin, Voliam Xpress/Besiege or Endigo may be needed to curtail their damage.

Notes from the Field

A report from a local consultant (Peck Babcock) informs us of reduced field life of several insecticides resulting from recent high temperatures in the region. Periods of residual efficacy for Belt, Altacor and Delegate have been observed to be 8-9 days, which could impact management efforts against codling moth and oriental fruit moth for growers accustomed to relying on a 2-week spray interval.

SPOTTED WING DROSOPHILA UPDATE IN TART CHERRIES

(Julie Carroll, NYS IPM Program, Geneva;
jec3@cornell.edu)

We have caught SWD at all but one of the tart cherry sites we are monitoring. Counts are still low and it is likely that the hot and dry weather, as well as insecticide protection, has held things in check. Weather has turned cooler and rains have brought needed water to crops – SWD will like this, too. First trap catch of SWD signals that it's time for insecticide protection in tart cherries. Most berry sites in the statewide SWD monitoring network are now at sustained catch!

- Three tart cherry sites close to Lake Ontario in Wayne County:
 - Two at continuous catch – third week in a row.
 - One has had discontinuous catch – SWD caught three times, but with intervening weeks with zero catch.

- Four tart cherry sites inland in Wayne and Ontario Counties:

- One is at sustained catch.
- Two are at first catch.
- One has had zero SWD catch to date.

Fruit is ripe and soft and harvests are getting under way. Orchards in Western NY that have been harvested or will be harvested soon should escape SWD infestation without significant insecticide expense. If harvest won't occur for another week or more, insecticide protection on the crop needs to be maintained at 7-day intervals, immediately reapplying after rain wash off. A 50-fruit sample was collected this week from all the orchard blocks in which we have traps and checked via salt flotation. One of the samples had evidence of SWD eggs, all the others had no SWD in them.

The insecticide quick guide for tree fruit can be found on the Spotted Wing Drosophila Management page:

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

A recap of efficacy (days-to-harvest):

Excellent – Exirel (3 days), Minecto Pro (21 days), Danitol (3 days), Mustang Max (14 days), Imidan (7 days)

Good to Excellent – Entrust 80WP 2ee (7 days), Entrust 2SC 2ee (7 days), Asana XL 2ee (14 days), Lambda-Cy EC 2ee (14 days)

Moderate – Delegate WG (7 days)

Fair to Poor – Grandevo (zero days) This biological may prove useful in close rotation (3 days) with excellent materials, such as Entrust to bring you up to harvest. This is how it is being used in commercial blueberry production in NJ.



BIFENTHRIN SECTION 18 APPROVED FOR BMSB

The US Environmental Protection Agency has granted New York State a FIFRA Section 18 Specific Exemption for the use of Bifenture 10DF Insecticide/ Miticide (EPA Reg. No. 70506-227), Bifenture EC Agricultural Insecticide (EPA Reg. No. 70506-57), and Brigade WSB (EPA Reg. No. 279-3108) to control brown marmorated stink bug on apples, peaches, and nectarines in Columbia, Dutchess, Monroe, Niagara, Orange, Orleans, Ulster, and Wayne Counties in New York State. Please note the following:

- The Section 18 labels restrict use to Columbia, Dutchess, Orange, Ulster, Monroe, Orleans, and Wayne Counties, as well as (new this year) Niagara County. Use in any other counties is prohibited.
- The exemption is valid through October 15, 2018.
- Bifenture 10DF, Bifenture EC, and Brigade WSB are all restricted-use pesticides. REI: 12 hrs; PHI: 14 days.
- Aerial application is prohibited.

Users must have a copy of the appropriate Section 18 exemption in their possession at the time of use. Users must also follow all applicable directions, restrictions, and precautions on the primary product label. Copies of the approved Section 18 labels are available at the DEC's [NYSPAD](#) product registration website. ❖❖



EVENT ANNOUNCEMENT

NEXTGEN YOUNG FRUIT GROWER STUDY TOUR, Adams Co., PA

Online Registration is Now Open for NextGen Young Fruit Grower Study Tour in PA, August 2-4. The 3rd annual NextGen Young Fruit Farmer Study Tour will be held in the Adams County region of Pennsylvania August 2nd-4th. The Young Growers Alliance (YGA) of Pennsylvania, the LOF team, the Future Fruit Growers of Lake Ontario, along with Matt Wells (New York Apple Sales), have organized an excellent itinerary. The study tour is focused on helping next generation growers develop the knowledge and skills needed to take their family farms into the future.

Final deadline for registering for the event is Wednesday July 25th! Online registration is now open! Register for this event here:

<https://lof.cce.cornell.edu/event.php?id=957>

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.

NUT PRODUCTION SURVEY

Farmers of NYS, do you think growing tree nuts (chestnuts, hazelnuts, walnuts, etc.) is a nutty idea, or worth considering? Please take a few minutes to fill out this [brief survey](#) for a Cornell PhD project. Thanks!

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ORCHARD RADAR DIGEST [H = Highland; G = Geneva]:

Roundheaded Appletree Borer

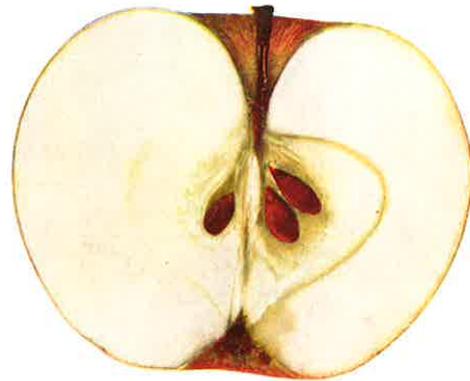
Peak RAB egg hatch roughly: July 4-22 (H)/
July 11-28 (G).

Codling Moth

Codling moth development as of July 23:
2nd generation adult emergence at 53%
(H)/26% (G) and 2nd generation egg hatch at
16% (H)/3% (G).

White Apple Leafhopper

2nd generation WALH found on apple foliage:
July 27 (H)/Aug 5 (G).



BEN DAVIS

UPCOMING PEST EVENTS

	43°F	50°F
Current DD* accumulations (Geneva 1/1–7/23):	2039.5	1408.5
(Geneva 1/1–7/23/2017):	2006.9	1301.6
(Geneva "Normal"):	2064.3	1378.5
(Geneva 1/1-7/30, predicted):	2246.5	1566.5
(Highland 1/1–7/30):	2390.3	1668.6

<u>Coming Events:</u>	<u>Ranges (Normal ±StDev):</u>	
Apple maggot peak flight	2127-2642	1426-1824
American plum borer 2nd flight peak	2005-2575	1351-1777
Codling moth 2nd flight peak	1954-2684	1300-1854
Comstock mealybug 2nd gen crawlers emerge	2234-2624	1505-1781
Lesser appleworm 2nd flight peak	2144-3071	1433-2129
Obliquebanded leafroller 2nd flight start	2219-2628	1489-1817
Oriental fruit moth 2nd flight subsides	2026-2524	1344-1756
Redbanded leafroller 2nd flight subsides	2166-2707	1458-1863
San Jose scale 2nd flight subsides	1998-2354	1318-1625
Spotted tentiform leafminer 3rd flight start	2240-2629	1499-1824
White apple LH 1st brood adults subside	2195-2521	1564-1792

*all DDs Baskerville-Emin, B.E.

INSECT TRAP CATCHES (Number/Trap/Day)

Geneva, NY

Highland, NY

	7/16	7/20	7/23		7/9	7/16	7/23
Redbanded leafroller	2.5	2.5	1.0	Redbanded leafroller	60.5	75.0	24.5
Spotted tentiform leafminer	13.5	2.5	4.5	Spotted tentiform leafminer	65.5	57.0	21.0
Oriental fruit moth	81.0	48.5	23.5	Lesser appleworm	0.0	0.0	0.0
Codling moth	16.5	15.0	26.0	Oriental fruit moth	1.5	0.0	0.0
Lesser peachtree borer	8.5	1.0	1.0	Codling moth	7.5	34.5	45.5
Obliquebanded Leafroller	0.5	0.0	0.0	San Jose scale	7.0*	269.0	445.5
Dogwood borer	0.0	-	0.5	Obliquebanded leafroller	17.0	0.0	0.0
Peachtree borer	25.0	10.0	5.5	Dogwood borer	1.0	2.5	-
Apple maggot	0.0	0.0	0.0	Tufted apple budmoth	4.5	1.5	0.0
				Sparganothis fruitworm	7.5	3.5	0.0
				Apple maggot	4.3	3.0	3.8

* first catch

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.

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