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Update on Pest Management and Crop Development

August 13, 2018

COMING EVENTS

	43°F	50°F
Current DD* accumulations		
(Geneva 1/1-8/13):	2624.8	1850.5
(Geneva 1/1-8/13/2017):	2532.4	1680.1
(Geneva "Normal"):	2639.1	1806.9
(Geneva 1/1-8/20, predicted):	2845.3	2022.0
(Highland 1/1-8/13):	2884.0	2043.8
Upcoming Pest Events – Ranges (Normal +/- Std Dev):		
Apple maggot subsides.....	2772-3258	1907-2283
Codling moth		
2nd flight subsides	2846-3462	1923-2447
Lesser appleworm		
2nd flight subsides	2794-3488	1918-2422
Obliquebanded leafroller		
2nd flight peak	2588-3007	1750-2092
Oriental fruit moth		
3rd flight peak.....	2650-3200	1822-2216
Redbanded leafroller		

3rd flight start	2517-2950	1710-2048
Redbanded leafroller		
3rd flight peak.....	2704-3174	1867-2201
San Jose scale		
2nd gen crawlers emerging	2746-2852	1916-2104
Spotted tentiform leafminer		
3rd flight peak.....	2554-2995	1735-2088
White apple leafhopper		
2nd gen adults 1st catch	2770-3098	1948-2252
*[all DDs Baskerville-Emin, B.E.]		

TRAP CATCHES (Number/trap)

Geneva

	8/3	8/6	8/10	8/13
Redbanded Leafroller	0.5	0.0	2.5	1.5
Spotted Tentiform LM	76.0	93.0	91.5	111.0
Oriental Fruit Moth	26.5	38.5	46.0	35.5
Codling Moth	32.5	32.5	44.0	34.5
Lesser Peachtree Borer	2.0	4.0	11.0	6.0
Obliquebanded Leafroller	0.5	0.5	1.0	0.0
Dogwood Borer	0.0	0.0	0.0	-
Peachtree Borer	5.0	4.5	5.5	2.0
Apple Maggot	3.0	1.7	0.7	0.0

Highland (Peter Jentsch)

	7/23	7/30	8/6	8/13
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Redbanded Leafroller	24.5	11.5	8.5	9.5
Spotted Tentiform LM	21.0	86.0	140.0	114.0
Lesser Appleworm	0.0	0.5	0.5	0.5
Oriental Fruit Moth	0.0	1.5	1.0	1.0
Codling Moth	45.5	45.5	26.0	1.5
San Jose Scale	445.5	1328	1655	-
Obliquebanded Leafroller	0.0	1.0	0.0	1.0
Dogwood Borer	-	-	4.5	3.5
Tufted Apple Bud Moth	0.0	0.0	0.0	0.0
Sparganothis Fruitworm	0.0	0.0	.0	0.5
Apple Maggot	3.8	10.3	7.5	10.0

ORCHARD RADAR DIGEST

[H = Highland; G = Geneva]:

Codling Moth

Codling moth development as of August 13:

2nd generation adult emergence at 100% (H)/91% (G)
and 2nd generation egg hatch at 88% (H)/66% (G).

[Section: INSECTS]

SUMMER CODA

(Art Agnello, Entomology, Geneva; ama4@cornell.edu)

[Box text: AGAIN, WITH FEELING]

Like most seasons, this one has had its inconsistencies, getting off to a very delayed start, progressing into a dry early and mid-season, and rounding things off with some typical hot, muggy, stormy weather patterns. As in the past, the impact on arthropod pests has varied accordingly, with our normal pests there, although not always at the normal levels, plus a few head-scratching breakouts that may have stopped short of actual crisis mode, but with most of this year's problems having been met appropriately by NY growers. Now, with harvest approaching, there may be just a few remaining pest management duties worth mentioning.

Of greatest potential concern are the **internal leps**, which have been noticeable, as usual, but not overwhelming in the normal trouble spots; however, there are still oriental fruit moths and even codling moths flying in problem sites. Therefore, to be cautious, we shouldn't rule out the possibility that blocks with a history of internal worm problems might need a last-minute application of an appropriate-length PHI material to help stave off the final feeding injury caused by young larvae. Before the harvest period begins in earnest, a fruit examination could help determine whether the last brood of any of the likely

species needs a final deterrent before the sprayer is put away. Potential choices (and PHIs) include Altacor (5/10 days, pome/stone fruits, respectively), Assail (7 days), a B.t. (0 days), Delegate (1 day, peaches; 7 days, apples/pears/plums), Exirel (3 days), Voliam Xpress/Besiege (21/14 days, pome/stone fruits, respectively), Minecto Pro (28/21 days, pome/stone fruits, respectively), a pyrethroid (PHI varies), or a sprayable pheromone (0 days), as applicable. **Apple maggots** are also continuing to emerge, often in sporadic numbers; possible late-season options include Assail, Imidan (7 days), Altacor, Avaunt (14 days), Delegate, Exirel, and various premixes and pyrethroids.

A couple of less common last-minute pests can surface in certain cases. One is **western flower thrips**, particularly in nectarines growing in drought-stressed areas. Adults move from alternate weed or crop hosts to fruit just prior to and during harvest, feed on the fruit surface in protected sites, such as in the stem end, the suture, under leaves and branches, and between fruits. This results in silver stippling or patches; injury is particularly obvious on highly colored varieties. An application of Delegate or Entrust immediately before the first harvest may prevent subsequent losses; however, an additional application may be needed if

pressure is severe. The PHI varies from 1 day (peaches and nectarines) to 7 days (plums and prunes) to 14 days (apricots). Other options include Besiege, Endigo, and Voliam Flexi.

The **black stem borer** ambrosia beetle can still be found playing out its final few weeks of flight, although the literature indicates that this brood is probably not responsible for new infestations, so any direct treatments for this species should be deferred until next spring. However, it's not too early to begin removing any dead and dying trees having confirmed infestations, to eliminate them as a potential source of attacks next year. Pull out the roots as well, and burn all affected wood.

Another season-end problem that may deserve consideration now is **pearleaf blister mite**, a sporadic pest of pears that shows up in a limited number of commercial pear orchards and is a fairly common problem in home plantings. The adults are very small and cannot be seen without a hand lens; the body is white and elongate oval in shape, like a tiny sausage. The mite causes three distinct types of damage. During winter, the feeding of the mites under the bud scales is believed to cause the bud to dry and fail to develop.

This type of damage is similar to and may be confused with bud injury from insufficient winter chilling. Fruit damage is the most serious aspect of blister mite attack. It occurs as a result of mites feeding on the developing pears, from the green-tip stage through bloom, causing russet spots. These spots, which are often oval in shape, are usually depressed with a surrounding halo of clear tissue. They are 1/4–1/2 inch in diameter and frequently run together. A third type of injury is the blistering of leaves; blisters are 1/8–1/4 inch across and, if numerous, can blacken most of the leaf surface. Although defoliation does not occur, leaf function can be seriously impaired by a heavy infestation.

For those plantings that might be suffering from this errant pest, a fall spray is recommended sometime in early October, when there is no danger of frost for at least 24–48 hr after the spray. Options include Sevin XLR Plus (1.5–3 qt/A) or 80S (1.88–3.75 lb/A); alternatively, next spring during the dormant period you can use Diazinon 50WP (1 lb/100 gal) plus 1–1.5% oil.

Note from Peter Jentsch

The **brown marmorated and native green stink bugs** continue to cause damage to peach, pear and apple rows bordering woodlands and hedgerows. Increasing numbers of nymphs ranging from 2nd to 5th instar of both species have been observed feeding on fruit. Maintain scouting and trapping efforts along woodland and hedgerows, using a conservative presence and trap threshold on through harvest.

[Section: GENERAL INFO]

EVENT ANNOUNCEMENTS

CORNELL FRUIT PEST CONTROL FIELD DAYS & *Networking Lunch with Industry*

The Cornell Fruit Pest Control Field Days will take place during Labor Day week on Sept. 6-7 this year, with the Geneva portion taking place on Thursday Sept. 6, and the Hudson Valley installment on the second day, Friday, Sept. 7 (yes, that's a day later in the week than we usually hold it, but we've decided to push it back to accommodate some of our presenters' teaching schedules). Activities will commence in Geneva on the 6th, with registration, coffee, etc., in the lobby of Barton Lab at 8:30 am. The tour will proceed to the orchards to view plots and preliminary data from field

trials involving new fungicides, bactericides, miticides, and insecticides on tree fruits and grapes. It is anticipated that the tour of field plots will be completed before noon.

This year, we are inviting all of our Geneva-based graduate students (not just fruit people) to join the tour, to give them an opportunity to observe industry product efficacy in the field, showcasing the latest pest management materials and techniques, and to meet and network with the consultants and agrichemical industry representatives in attendance. Following the field presentations, lunch will be served to all attendees at Barton Lab. While the field tour will be fruit-oriented, representatives and consultants attend from a wide range of companies and businesses, relevant to many sectors of agriculture. They will each have an opportunity to give a brief overview at lunch about their business and what they look for in prospective employees. This will be an excellent networking opportunity for ALL graduate students.

On Sept. 7th, participants will register at the Hudson Valley Laboratory starting at 8:30, after which they will view and discuss results from field trials on apples and

other fruit crops. No pre-registration is required for either event.

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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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