

scaffolds

Update on Pest Management
and Crop Development

F R U I T J O U R N A L

July 31, 2017

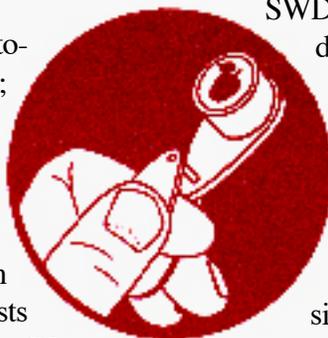
VOLUME 26, No. 19

Geneva, NY

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SOME
LIKE IT
HOT

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



❖❖ As harvest preparations are being made, it's worth keeping in mind the late season arthropod pests that can still pop up and complicate life during the (even if they're not so much) hot and dry days of August. Take some time to ensure that your pest management program is not overlooking the following potential problems during this period:

Spotted Wing Drosophila

We've received the following report from Jim Eve (Eve Farm Services, Naples, NY), which describes a newly occurring problem regarding SWD in cherries:

"The insect pest, Spotted Wing Drosophila (SWD), has established a devastating presence in tart cherry crops in Western NY. Many containers of harvested fruit in Wayne County that I visited Saturday can have SWD detected in the fruit. Orchards were also visited and SWD can readily be found in the field by inspecting fruits collected from trees.



SWD can complete its life cycle in our conditions in as little as 8 days with ideal weather. Less favorable conditions will prolong the length of the life cycle to a few weeks.

At this stage, insecticides are useful in containing SWD. Perfect control will not likely be attained but significant improvement could be expected. Fruit that is infested will not be impacted. Protection needs to be provided on a 7-day schedule where adult populations are present. A "Quick Guide" product reference is provided by Cornell research and extension workers (<https://blogs.cornell.edu/newfruit/files/2016/11/TreeFruitGrapeSWDinsecticidesJune2017-1gt2z-tx.pdf>) . It lists various insecticides approved for SWD control in stone fruits. Note that use restrictions can vary from crop to crop for a given insecticide.

I am concerned for those other stone fruit crops besides tart cherries, i.e. – peaches, nectarines, plums, prunes, and apricots. Clearly there is a significant population of SWD adults in our fruit growing region. An aggressive program to protect these orchards will most likely be necessary!

continued...

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GENERAL INFO

- ❖ Wayne Co. Fruitgrower Tour

MODEL BUILDING

ORCHARD RADAR DIGEST

TRAP CATCHES

UPCOMING PEST EVENTS

Apple Maggot

We typically get the highest trap captures during the first week of August, and have been steadily catching adults in our network traps in Wayne Co. Monitor your traps carefully this week, and be ready to apply a preventive spray if necessary. Options include: Imidan, Assail, Altacor, Avaunt, Delegate, Exirel, Endigo, Leverage, Voliam Xpress/Besiege.

Internal Lepidoptera

Healthy adult numbers are being seen in traditional high-pressure blocks; 2nd brood codling moth egg hatch is in progress, and the 3rd flight of oriental fruit moth is due to start soon, if it hasn't already. Recommended options in apples include Altacor, Assail, Belt, Delegate, Exirel, or Voliam Xpress/Besiege. In peaches, you can use Altacor, Assail, Delegate, or Voliam Xpress/Besiege. Pyrethroids and OPs may be less suitable because of locally resistant populations. This is also a suitable time for Cyd-X or Carpovirusine granulosin virus applications against codling moth, or Madex HP against both OFM and codling moth.

European Corn Borer

This late season moth can be active until the middle of September, so larvae can be a threat particularly to later varieties. Delegate is a good option for control, and 1-2 sprays of a B.t. product can also be a useful alternative.



Mites

Our moderate temperatures and wet conditions are not likely to promote flare-ups of mites. However, should conditions change, the 7.5 mites/leaf threshold (sampling chart on p. 76 in the Rec-

ommends) would apply at this point in the season. There are several good rescue materials available, if needed; check the acaricide efficacy table on p. 65 of the Recommends for ratings against TSSM vs ERM.

Woolly Apple Aphids

Colonies in the canopy are still present and can always increase. It's probably too late for a Movento application to be effective, but Assail (plus a non-ionic surfactant) or Admire Pro could be of use. For fruit not intended for European markets, baby food, or any of the eco/sustainable fruit program buyers, Diazinon remains the best option on the market.

San Jose Scale

This old-timer refuses to fade away, and together with white Prunicola scale, represents an increasing challenge to fruit quality during the late summer. Esteem and Centaur are the go-to choices for problem blocks; for more moderate pressure situations, Assail or Admire Pro (as noted for WAA above) are appropriate and will serve double duty if they're already being used for apple maggot and/or leafhoppers, etc. ❖❖

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Dept. of Entomology
NYSAES, Barton Laboratory
Geneva, NY 14456-1371
Phone: 315-787-2341
FAX: 315-787-2326
E-mail: ama4@cornell.edu

Editor: A. Agnello

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**SEE-
SAWFLY**

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

The dock sawfly always creeps in during this general period of the season. Following is a rerun of our annual write-up on this pest:

Before and during apple harvest in recent years, a number of growers and fieldmen are sometimes unpleasantly surprised by the appearance of neat little (2 mm) holes bored into the side of their fruit, similar in appearance to those caused by a stem puncture. Although graders sometimes attribute this damage to apple maggot or European corn borer, cutting open these apples reveals a bright green worm with a light brown head, 3 pairs of true legs and 7 pairs of prolegs, not feeding but lying inactive, in the burrow extending in from each hole. These are larvae of the dock sawfly, *Ametastegia glabrata*, a highly sporadic but nonetheless well documented apple pest that has been known to show up in our area since 1908.

Dock sawfly probably confines its feeding almost entirely to plants belonging to the buckwheat family (*Polygonaceae*), including numerous docks and sorrels, the knotweeds and bindweeds, or else wild buckwheat or alfalfa. In feeding on any of these plants, the larvae devour the leaf tissue and the smaller veins, eating out irregular holes in the leaves. Ordinarily, the midribs and the larger veins are untouched. This insect should not be



confused with the related European apple sawfly, *Hoplocampa testudinea*, which has a whitish larva that lives and feeds in young apples, particularly prevalent in the eastern apple regions of N.Y.

Injury to apples by the dock sawfly is known to occur generally in the late summer and early fall, when the fruit is approaching maturity and the sawfly is searching for an overwintering site. The greater hardness of immature apples probably deters the larvae from burrowing into these, so although 4 generations per year have been identified, only the last one or two are of concern to apple growers. The injury to apples consists externally of the small round holes bored by the larvae, which after a few days show a slightly sunken, brownish ring around them and occasionally may be surrounded by a larger discolored halo. These holes may occur anywhere on the surface, but are most numerous around the calyx and stem ends, or at a point where the apple touches a leaf or another apple, since it is easier for the larva to obtain a foothold here. Inside, the injury is usually more serious, since the larva often burrows to the core and usually hollows out a pupal cell somewhat larger than itself. Apples may have three or four, or sometimes even eight, holes in them of varying depths, but contain only one or two worms.

Since the dock sawfly does not feed upon any part of the apple tree, but must live on the above-mentioned succulent weeds, it becomes an apple pest only where these plants are growing in or around the orchard. There is little danger from this insect in orchards where the food plants don't exist. Likewise, the possibility of the larvae coming into the orchard from neighboring meadows, ditch banks, or roadsides is slight, for the larvae are incapable of finding their way over any extent of bare soil. The adults, though active, are not strong fliers, and it is not possible for the insect to travel far in this stage. Now would be a good time to assess the weed situation in your orchard and make plans for such selective herbicide applications as may be appropriate regarding this insect.

continued...

Even though common wisdom says this sawfly is a pest only every 10–12 years, this is only an average estimation, and it's not a bad idea to anticipate the unexpected when hardly any season is considered to be "average". ❖❖

(Information adapted from Newcomer, E. J. 1916. The dock false-worm: An apple pest. USDA Bull. 265, 40 pp.)

ORCHARD RADAR DIGEST

[H = Highland; G = Geneva]:

Codling Moth

Codling moth development as of July 31:

2nd generation adult emergence at 69% (H)/33% (G) and 2nd generation egg hatch at 30% (H)/5% (G).

2nd generation 7% CM egg hatch = target date for first spray where multiple sprays needed to control 2nd generation CM: July 31 (G).

White Apple Leafhopper

2nd generation WALH found on apple foliage: August 8 (G).

EVENT ANNOUNCEMENT

WAYNE COUNTY FRUITGROWER TOUR

Wednesday, August 2, from 9:30 am
Registration and 1st stop at G&G Farms,
6680 Tuckahoe Rd, Williamson, NY
(GPS: N 43.240679, W 77.199981)

Sponsored by agr.assistance, this large, informative and entertaining tour is in its 19th year, and will feature presentations on pre- and postharvest PGR use, apple thinning results, native pollinators, this season's disease control challenges, and tips for establishing new plantings, plus much more. Door prizes, lunch, some comic relief, 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@agrassistance.com) for RSVP pre-registration and tour information. ❖❖



INSECT TRAP CATCHES (Number/Trap)								
Geneva, NY				Highland, NY				
	<u>7/24</u>	<u>7/28</u>	<u>7/31</u>		<u>7/17</u>	<u>7/24</u>	<u>7/31</u>	
Redbanded leafroller	0.5	1.5	1.5	Redbanded leafroller	15.5	11.5	14.5	
Spotted tentiform leafminer	42.0	93.5	109.5	Spotted tentiform leafminer	193.5	180.5	188.0	
Oriental fruit moth	6.0	4.0	2.0	Oriental fruit moth	3.5	6.5	6.5	
Codling moth	10.5	6.5	8.0	Lesser appleworm	0.0	14.5	12.5	
Lesser peachtree borer	1.5	0.5	23.5	Obliquebanded leafroller	4.5	1.5	6.0	
Peachtree borer	1.0	2.5	0.0	Codling moth	10.0*	16.5	42.5	
Dogwood borer	2.0	1.5	2.0	San Jose scale	53.0	1597	598.0	
Obliquebanded leafroller	0.5	1.0	3.0	Sparganothis fruitworm	0.0	1.0	1.0	
Apple Maggot	0.0	0.0	0.0	Variegated leafroller	0.0	1.5	0.0	
				Tufted Apple Bud Moth	0.0	1.5	2.5	
				Dogwood Borer	0.5	24.5	16.0	
				Apple Maggot	4.3	3.3	2.8	

* first catch

UPCOMING PEST EVENTS			
		<u>43°F</u>	<u>50°F</u>
Current DD*	(Geneva 1/1-7/17/31):	2191.9	1377.6
accumulations	(Geneva 1/1-7/31/16):	2276.8	1541.3
	(Geneva "Normal"):	2286.3	1547.1
	(Geneva 1/1-8/7, predicted):	2393.4	1530.1
	(Highland 1/1-7/31/17):	2675.0	1812.0
<u>Coming Events: Ranges (Normal ±StdDev):</u>			
American plum borer 2nd flight peak		2005-2575	1351-1777
Apple maggot flight peak		2118-2638	1420-1824
Codling moth 2nd flight peak		1948-2693	1298-1863
Comstock mealybug 2nd gen crawlers increasing		2012-2638	1292-1811
Lesser appleworm 2nd flight peak		2144-3071	1433-2129
Obliquebanded leafroller 2nd flight start		2235-2634	1505-1821
Oriental fruit moth 3rd flight start		2263-2821	1531-1958
Redbanded leafroller 2nd flight subsides		2160-2711	1455-1868
San Jose scale 2nd flight peak		2137-2493	1440-1742
Spotted tentiform leafminer 3rd gen flight start		2255-2634	1513-1828
White apple leafhopper 1st brood adults subside		2195-2521	1564-1792

*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.

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