

scaffolds

Update on Pest Management
and Crop Development

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

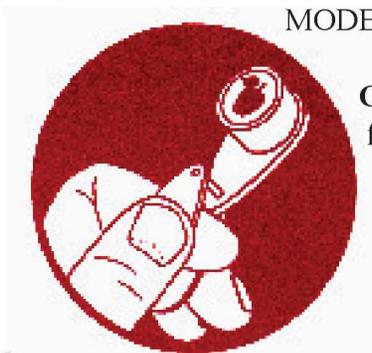
July 28, 2008

VOLUME 17, No. 19

Geneva, NY

GEAR
DOWN

ORCHARD
RADAR
DIGEST



MODEL BUILDING

Codling Moth (Treatment period
for the 2nd generation starts at 1260
DD base 50°F after biofix):

Geneva Predictions:

**Roundheaded Appletree Borer &
Dogwood Borer**

Peak RAB egg hatch roughly: July 9 to July 28.

Peak DWB egg hatch roughly: July 30.

Codling Moth

Codling moth development as of July 28: 2nd
generation adult emergence at 26% and 2nd gen-
eration egg hatch at 3%.

2nd generation CM 7% egg hatch: July 30 (= tar-
get date for first spray where multiple sprays are
needed to control 2nd generation CM).

2nd generation 30% CM egg hatch: August 8 (=
target date where one spray needed to control
2nd generation CM).

White Apple Leafhopper

2nd generation WALH found on apple foliage:
August 3.

<u>Location</u>	<u>Biofix</u>	<u>DD(as of 7/21)</u>
Albion	May 20	1287
Appleton-S	May 28	1159 (as of 7/26)
Clifton Park	May 17	1267
Clintondale	May 11	1285
Geneva	May 12	1293
Knowlesville	May 28	1205
Red Hook	May 14	1574
Sodus	May 14	1165
Waterport	May 20	1330
Williamson	May 12	1231

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- ❖ Orchard Radar Digest
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- ❖ Dock sawfly

INSECT TRAP CATCHES

UPCOMING PEST EVENTS

[NOTE: Consult our mini expert system for arthropod pest management, the Apple Pest Degree Day Calculator:

<http://www.nysaes.cornell.edu/ipm/specware/newa/appledd.php>

Find accumulated degree days between dates with the Degree Day Calculator:

<http://www.nysaes.cornell.edu/ipm/specware/newa/>

[Powered by the NYS IPM Program's NEWA weather data and the Baskerville-Emin formula]



SUNNY SIDE OF
THE STREET
(Art Agnello, Entomology,
Geneva)

❖❖ Now that what remains of this season's crops are heading for the checkered flag, it's only natural to begin paying less attention to the potential pests threatening them, but there are still a few to be aware of, including some that have been covered in previous issues.

European Red Mite

We haven't experienced many mite outbreaks that could have been expected if this period had been typically hot and dry, but we're not quite done yet. Keep an eye on your foliar populations, using the 7.5 motiles-per-leaf threshold that we recommend during August as a hedge against the need for any late season miticide applications (see p. 74 in the Recommends); Acramite, Kanemite, Nexter and Zeal are all good choices for later-season infestations. Twospotted spider mite can also show up at this time of year, and has a tendency to increase in number even more rapidly than ERM. Acramite would be the preferred material of choice in this case, but if Nexter is used, opt for the high end of the rate range (10.7 oz/A).

Apple Maggot

This week (and next) traditionally sees the heaviest flight of this pest in commercial orchards, and the heat plus ample moisture will promote successful adult emergence of adults from their developmental sites in the soil. Diligent attention to either your protective sprays (in blocks that are perennially high-population areas) or monitoring traps (in blocks that are hard to predict) would be advised.

Comstock Mealybug

In pears especially, this is the period of greatest migration of 2nd generation nymphs into the fruit calyx, where they will be concealed until revealed at packinghouse inspections. Blocks with mealybug "issues" should receive a protective spray of Actara, Assail, Diazinon, or Provado; Calypso applied for internal worms should also be effective. In apples, infestations tend to result in blooms of sooty mold, particularly over the bottom half of fruits; choices here are restricted to Assail and Actara, plus whatever incidental control might obtain from Calypso sprays for internal leps.

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Woolly Apple Aphid

If you failed to prevent their migration from the lower trunk areas in June, there could be aerial colonies evident in canopies now. This is a difficult pest to control completely, but now will be better than later in the month. The best material we have available (still) is Diazinon; Thionex is another, albeit less effective, option. Beleaf is also labeled for this pest, but we have no efficacy data on it. Alternatively, if you're not on a captan program, a summer horticultural mineral oil application, using as much water as you can manage, has been shown to be effective.

Oriental Fruit Moth & Codling Moth

The earliest feeding injury from the second generation larvae is starting to become noticeable in problem blocks (apples and peaches). This week, most western NY sites will reach the 1260 DD mark corresponding to the preferred spray window for contacting the first 20% or so of the hatching second brood CM larvae (some sites reached it this past weekend). And OFM 2nd brood emergence continues, so a follow-up application against these larvae is advised in problem sites.

Japanese Beetle

Will they ever stop emerging? Probably not until mid-August, so it's mainly a matter of keeping a diligent eye on your trees to try to stem the amount of damage they can do. In stone fruits, protective insecticides include: Assail, Leverage, Provado, and Sevin; in apples: Assail, Calypso, and Sevin.



SUCKER PUNCH

HOLEY FRUIT
(Art Agnello,
Entomology, Geneva)

❖❖ The dock sawfly always sneaks in during the waning days of summer. Following is a repeat of our annual write-up on this pest:

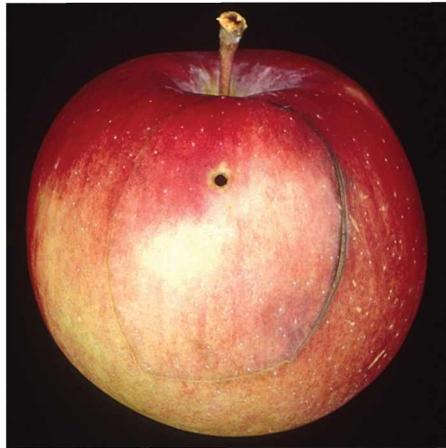
Before and during apple harvest in recent years, a number of growers and fieldmen have been unpleasantly surprised by the appearance of neat little (2 mm) holes bored into the side of their fruit, similar in appearance to those caused by a stem puncture. Although graders sometimes attribute this damage 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

continued...

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.



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. 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".
❖❖

Since the dock sawfly does not feed upon any part of the apple tree, but must live on the above-

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

INSECT TRAP CATCHES (Number/Trap/Day)						
	Geneva, NY				Highland, NY	
	7/21	7/24	7/28		7/21	7/28
Redbanded leafroller	2.9	1.2	3.0	Redbanded leafroller	0.1	0.1
Spotted tentiform leafminer	23.2	15.3	10.3	Spotted tentiform leafminer	39.1	22.4
Oriental fruit moth	0.6	0.2	0.1	Oriental fruit moth	0.8	0.8
American plum borer	0.2	0.3	0.5	Codling moth	1.3	2.4
Lesser peachtree borer	0.0	0.0	0.0	Lesser appleworm	3.6	2.3
Lesser appleworm	0.8	0.2	0.4	Obliquebanded leafroller	0.1	0.3
San Jose scale	85.0	305	925	Tufted apple budmoth	0.0	0.2
Codling moth	0.1	0.0	0.3	Fruittree leafroller	0.0	0.0
Obliquebanded leafroller	0.0	0.0	0.0	Apple maggot	0.4	0.5
Peachtree borer	0.0	0.0	0.0	Lesser peachtree borer	0.1	0.3
Apple maggot	10.7	20.0	6.1	Dogwood borer	0.0	0.4

* first catch

UPCOMING PEST EVENTS

	<u>43°F</u>	<u>50°F</u>
Current DD accumulations (Geneva 1/1–7/28/08):	2192	1468
(Geneva 1/1–7/28/2007):	2140	1437
(Geneva "Normal"):	2174	1430
(Geneva 1/1–8/4 Predicted):	2403	1630
(Highland 3/1–7/28):	2350	1600
<u>Coming Events</u>	<u>Ranges (Normal ±StDev):</u>	
Oriental fruit moth 2nd flight subsides	2067–2533	1379–1771
Apple maggot flight peak	2118–2570	1021–1495
Codling moth 2nd flight begins	1555–2283	999–1529
Codling moth 2nd flight peak	2005–2835	1337–1977
Spotted tentiform leafminer 2nd flight subsides	2022–2436	1339–1697
Spotted tentiform leafminer 3rd flight begins	2286–2668	1531–1881
San Jose scale 2nd flight peak	2102–2513	1422–1764
American plum borer 2nd flight peak	1956–2454	1311–1701
Comstock mealybug 2nd gen. crawlers emerge	2234–2624	1505–1781
Lesser appleworm 2nd flight peak	2197–3217	1471–2233
Obliquebanded leafroller 2nd flight begins	2278–2650	1532–1834
Redbanded leafroller 2nd flight subsides	2190–2706	1485–1875

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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