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Update on Pest Management and Crop Development

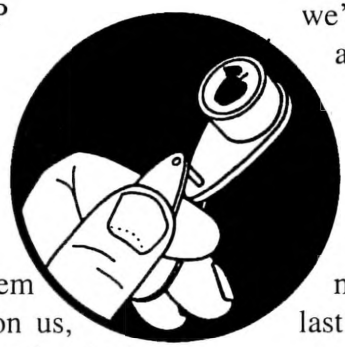
FRUIT JOURNAL

August 2, 1999 VOLUME 8, No.20 Geneva, NY

INSECTS

HOME STRETCH

TAKE A DEEP BREATH... (Art Agnello, Entomology, Geneva)



❖❖ Before the general mayhem of the harvest season descends on us, now is a good time to take an almost-last look at the insect and mite situation in your orchards, to help ensure that the summer doesn't end with an unexpected sting when you thought everything was in good shape. Various weather irregularities always stir up potential trouble-makers, so you might make an informal accounting of what's going on with some of the following players:

Apple Maggot - We had been under the impression that catches were as light around the region as they seem to be in Geneva, but the few spotty showers we've gotten have caused nominal catches in some localized spots, and the first half of August is historically the time of peak flight. Moreover, a few sudden showers can come through to soften the soil and allow more of the population to emerge. Be diligent in checking any traps you have out, and get sprays on susceptible varieties if you're catching sufficient numbers of flies throughout this month.

Spotted Tentiform Leafminer - We're past the prime control window for the 2nd flight, but trees with more than 2 tissue-feeding mines per leaf might have plenty of time and good weather to be susceptible to a 3rd brood attack. Make a note of which blocks fall into this category now, because the 3rd flight has just begun in Geneva. This usually takes place about August 8 or so, but we've been ahead of schedule all season, and although there's apparently some cooling off in the short-term forecast, we may not return to normal timing for some of these events. This could be a year when certain orchards will benefit from an assessment and treatment against the season's last population of this pest.

European Red Mite - Once again, a strange year for mites. The early summer heat generated healthy ERM outbreaks in blocks that weren't adequately protected, and some bronzed trees were seen by late June. Then, a lot of populations seemed to subside (and in some cases were replaced by either twospotted spider mites or apple rust mites), and things seem fairly quiet right now. However, in view of the moisture stress evident in many orchards, a careful foliar inspection should be conducted now if you haven't had one in the past 7–10 days, at least in your problem blocks, to be sure a rescue treatment of

continued...

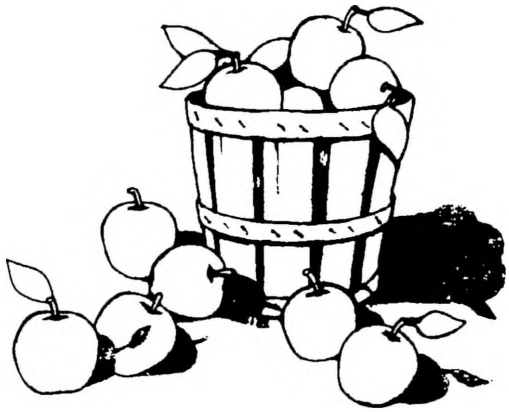
IN THIS ISSUE...

some sort isn't needed where populations surpass this month's 7.5/leaf threshold. Pyramite is available, among the regular standbys, so there's no excuse not to avail yourself of a remedy where needed.

European Corn Borer - To repeat some words from an earlier issue, corn borer attack on young trees can occur from June through August. Damage to the fruit usually shows up in late summer, when the August flight of the bivoltine strain is active. Bearing orchards are more likely to show some early corn borer damage on the fruit if growers relax their spray program in June or early July. However, most fruit feeding occurs between the last cover spray (mid-August) and harvest. Weedy sites provide plenty of alternative hosts for this insect, especially those containing broadleaf dock (see following article), ragweed, pigweed, smartweed, and barnyard grass. Penncap-M, Lannate, and Lorsban can give very good control of ECB larvae, provided application is made before the caterpillars become concealed in the plant tissue. Potential problem plantings should be checked periodically in August for shoot infestations of this caterpillar, which is cream colored with a dark head.

Borers - Eggs of both peachtree borer species are still able to hatch and get into your stone fruit trees. American plum borer moths are approaching their 2nd generation flight peak and will also be laying eggs. Therefore, it's not too late to treat orchards that are on a seasonal control program of trunk sprays: cherries - Asana, Lorsban, Ambush, or Pounce; peaches - add Penncap-M and Thiodan to the above list (do not spray fruit). This is also prime time to treat susceptible apple trees (e.g., interstem plantings with burrknots) for dogwood borer or American plum borer larvae. A coarse spray of Lorsban or Thiodan to the trunks now will help deter egglaying moths.

Leafrollers - Some growers are fairly satisfied with the program they used to take care of the 1st summer brood of OBLR this year, and some are not sure there's anything that can do the job properly (a possibility we've considered ourselves). However, I've been seeing enough fruit damage to indicate that the 2nd summer brood larvae could easily become a real problem in some orchards this year, and early enough that PHI's might not even be an issue for some materials. The second flight started a good week ahead of schedule in Geneva, and new larvae could start showing up in favored varieties (Cortland, Idared, even Delicious) soon enough to consider nearly any option on the shelf. This assumes treatment of the small caterpillars, which might start hatching out as early as next week. Add this one to the list of trouble-makers to check on as you inspect your trees in the next 7–10 days.❖❖



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NO PIER

WHAT THE DOCK SAW FLY

(Art Agnello, Entomology, Geneva)

❖❖ 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, 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 only 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 is 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. 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.)❖❖

INSECT TRAP CATCHES (Number/Trap/Day)

Geneva, NY

	7/26	7/29	8/2
Spotted tentiform leafminer	7.1	20.5	135
Redbanded leafroller	0.1	0.2	0
Oriental fruit moth	7.6	3.5	7.3
Lesser appleworm	10.5	2.5	9.9
Codling moth	7.4	14.5	3.0
American plum borer	1.4	1.7	1.5
Lesser peachtree borer	1.1	1.7	1.0
Obliquebanded leafroller	0	0.2	0
San Jose scale	0	0	3.3
Peachtree borer	2.8	3.3	1.8
Dogwood borer	0.3	0.5	0.3
Apple maggot	0.4	0.8	0.3

* first catch

Highland, NY

	7/26	8/2
Spotted tentiform leafminer	4.9	5.9
Redbanded leafroller	0.3	0.4
Oriental fruit moth	0	0
Codling moth	4.8	3.9
Lesser appleworm	0.2	-
European red mite (#/leaf)	0	0
Two-spotted spider mite (#/leaf)	8.4	0.8
Fruittree leafroller	0	0
Obliquebanded leafroller	0.4*	0.4
Tufted apple budmoth	0.1	1.4
Variegated leafroller	0.8	2.1
Sparganothis fruitworm	0.1	0.2
Apple maggot	0	0.1*

UPCOMING PEST EVENTS

	43°F	50°F
Current DD accumulations (Geneva 1/1–7/26):	2481	1725
(Geneva 1998 1/1–7/26):	2492	1686
(Geneva "Normal" 1/1–7/26):	2191	1577
(Highland 1/1–7/26):	2878	2045

Coming Events:	**Ranges:**	
American plum borer 2nd flight peak	1648–2612	1037–1840
Redbanded leafroller 3rd flight begins	2389–3113	1722–2209
Apple maggot flight peak	2033–2688	1387–1804
Obliquebanded leafroller 2nd flight begins	2124–3040	1412–2076
Oriental fruit moth 2nd flight subsides	1806–2783	1164–1963
Oriental fruit moth 3rd flight begins	2172–2956	1448–2013
STLM 3rd flight peak	2415–3142	1728–2231
Codling moth 2nd flight peak	1587–3103	1061–2212

PEST FOCUS

Geneva:
Apple maggot trap catch increasing. **Spotted tentiform leafminer** 3rd flight underway. Degree day accumulation for the year has surpassed even the 1998 season, and is about 10 days ahead of normal, in terms of degree days.

Highland:
1st **apple maggot** trap 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.

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