scaffolds Update on Pest Management and Crop Development

FRUIT JOURNAL

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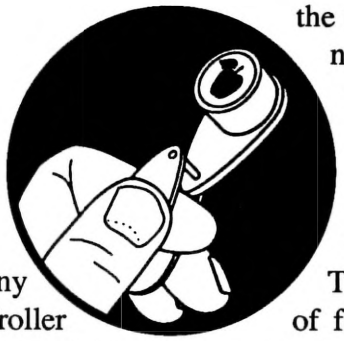
INSECTS

BUG SOUP

OBLIQUE PROSPECTS (Art Agnello, Entomology, Geneva)



❖❖ We haven't yet received any reports of adult Obliquebanded Leafroller catches in the Hudson Valley or western N.Y., but it won't be too much longer before the first moths start showing up, despite this spring's cool trend. As usual, larvae can be found now in many stages of development, from the very tiny to the quite large, and pupae should certainly be present in some of the more advanced sites, such as the eastern regions of the state. This would be an advisable time to hang a wing-type pheromone trap in problem apple blocks, to fix the date of first emergence in your specific area. Recall that we recommend sampling at 600 DD (base 43°F) after the first adult catch, to determine the need and timing for treatment. It pays to keep an eye on the daily highs and lows for your area if you are doing your own trapping, in case our "normal" sampling date of July 5 turns out not to be accurate this year.

Larvae of the first OBLR summer brood cause two kinds of damage — foliar feeding injury and rolling of the leaves, and more importantly, injury caused by feeding on the surface of the developing fruits. This fruit damage is usually more serious than the spring feeding by overwintered larvae, because more of the fruit injured late in the season remains on the tree at harvest. Despite the rather extreme measures some growers wage in the spring against the early generation larvae, you should remember that even an excellent control program against the overwintered brood does not eliminate the possibility of a problem summer population. To maximize the effectiveness of any sprays against the first summer generation OBLR infestation, you should sample leaf and fruit clusters at the proper time. The value of knowing the precise date of first adult flight on your own farm cannot be emphasized too strongly, and maintaining a few pheromone traps is not terribly difficult or time consuming. Check traps two or three times a week until the first adult is caught. Wait for 600 degree-days (43°F base) after this date to begin sampling for 2nd- or 3rd-instar larvae. Degree-day (DD) values can be obtained for some locations from NEWA (Northeast Weather Association) or from Cooperative Extension service letters. Most conveniently, you can also just look them up in the DD charts that appear on pp. 108–111 in the 1997 Recommends by using the daily high and low temperatures, or else estimate them each day by using the following formula:

Degree Days for 1 Day =
1/2 x [Daily Max. + Daily Min. Temp.] - 43.

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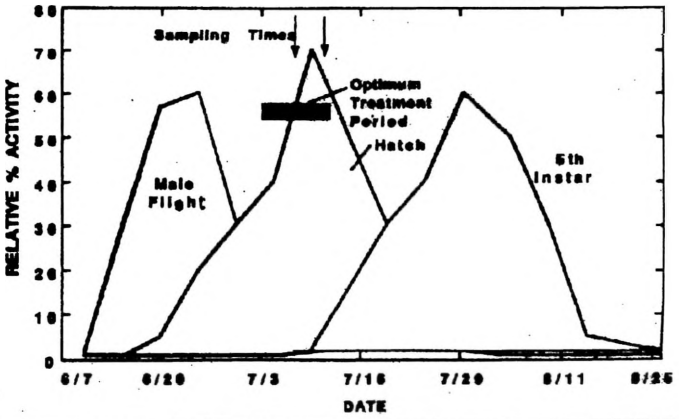
Optimum Timing of Sampling and Control of Summer OBLR



If you do not have access to any of this information, use July 5 as an estimated first sample date in a "normal" year.

Guidelines for sampling can be found on pp. 83, 91–92, 95 and 100 of the Recommends. Sample from random trees that are representative of the entire block, examining 10 expanding leaf terminals per tree. It is not necessary to pick the terminals. Record the number of samples infested with live larvae; do not count actual numbers of larvae in an infested terminal, and do not count damaged terminals that have no OBLR in them, or those containing only dead OBLR. To minimize bias, choose half of your samples from inside the tree canopy, including some watersprouts, and the other half from near the outside of the canopy. If the tree is more than 10 ft tall, try to include some clusters from the mid- to upper canopy area. Use the 3% infestation threshold for fresh fruit, and 10% for processing fruit. A "Stop Sampling and Treat" decision means that a spray to control OBLR is recommended at this time. A "Stop Sampling, Don't Treat" decision indicates that you should return in 3–5 days, after 100 more degree-days have accumulated, and repeat the sample. Recommended materials include a B.t. product (such as Dipel, Biobit, Javelin, Agree, etc.), Lorsban, Lannate, or possibly Asana or Penncap-M, depending on the population pressure, field history, and resistance/tolerance particulars of your orchards. We are still awaiting word on a Section 18 request for the use of the insect growth regulator, Confirm, as discussed last week.

BEETLE BITS

Plum Curculio

Other concerns to keep in mind at this time have to do with plum curculio, which you will recall is highly responsive (or not) to the weather patterns. We've had few warm days and many cool ones, so our guess is that most of the curcs are not about to get flushed from their cover in one great mass, but will likely trickle out over a more prolonged period. The unfavorable petal fall conditions mean that many people may feel they are/were a little late getting into the orchards with this spray, but it might actually work out acceptably for purposes of plum curculio control, since they don't tend to start working until a few days after petal fall. However, this is another season (much like last year) when many growers might consider the benefits of a 1st cover backup spray for curculio, because they'll almost surely still be around and laying eggs at that time, unless a tropical front happens to come through.

Leaf Weevil

This is about the time of year that a bright metallic green snout beetle about 1/5" in length appears in apple orchards and strawberry fields, sometimes in considerable numbers. This weevil is most likely *Polydrusus impressifrons*, also called simply the leaf weevil. It is of European origin and was first reported in New York in 1906. The larvae live in soil, where they feed on roots of various plants. The adult weevils feed on the foliage of many host plants, including birch, poplar, and willow, but also apple, pear, and strawberry. Leaf feeding is usually not extensive enough to justify special sprays. In commercial

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orchards, the normal cover spray program will take care of this problem. If the weevil appears in great numbers in a nursery, control using an OP may be necessary.

PSYLLA WATCH

Pear psylla seems not to be taking off too quickly in most areas, so this would probably be the designated week to begin applying Agri-Mek if you're using it this year. If psylla numbers are still quite low (much less than an average 1–2 nymphs per leaf), waiting a week longer probably won't cause any major problems.❖❖

DISEASES

SPRING PEEPERS

DISEASE UPDATE
(Dave Rosenberger, Plant Pathology, Highland)

Frog-Eye Leaf Spot

❖❖ Frog-eye leaf spot has appeared in some orchards in the Hudson Valley. Frog-eye leaf spot is caused by *Botryosphaeria obtusa*, the black rot fungus, and appears as circular, dark brown spots on the older cluster leaves and early terminal leaves. Leaf spots are usually found in a cone pattern beneath a mummified fruit or fruitlet that provided spores for infection. Infections occurred during several lengthy wetting periods in mid-May. In unsprayed trees, infections with frog-eye can be so extensive that many of the affected leaves will defoliate. In most sprayed orchards, spotting is usually limited to the area immediately adjacent to a fruit mummy where the inoculum load was extremely high, and most leaves show only a few lesions.

The presence of frog-eye leafspot in an orchard does not necessarily mean that fruit will be affected by black rot. Frog-eye leafspot can be an indicator that mummified fruit are carrying over-wintering inoculum and that the potential for fruit infection exists in the orchard. However, the leaf infections do not produce many spores and therefore contribute relatively little to further spread of black rot. Infections currently showing up on leaves probably occurred during bloom when fungicide sprays may have been stretched. However, the peak period for fruit infections occurs between petal fall and second cover. Thus, application of appropriate fungicides after bloom should be adequate to protect fruit from black rot, even in orchards where some frog-eye is present on leaves. Mancozeb applied alone may not be adequate to control black rot on fruit if fruit mummies are present in trees. Captan and Topsin M are the best fungicides for controlling black rot in early cover sprays.

Fire Blight

According to the MaryBlyt model for fire blight, the lower Hudson Valley had back-to-back "high risk" days for blossom blight infections on May 18 and 29. The afternoon of the 19th was especially warm and humid, but the epiphytic infection potential predicted by the model only reached 70% of the level required to trigger an infection. If any infections occurred May 18–19, blossom blight symptoms should show up later this week.

Established trees are now several weeks past petal fall, but newly planted trees on M.9 or M.26 rootstocks may currently be in bloom. The MaryBlyt predicted high-risk for blossom blight infections for May 29–31, and an infection period was triggered for June 1. Newly planted trees of blight-susceptible cultivars that have open flowers should have been protected with a copper spray late last week or should have received a streptomycin spray immediately after the June 1 infection period.❖❖

INSECT TRAP CATCHES (Number/Trap/Day)

Geneva NY

	5/27	5/30	6/2
Green fruitworm	0	-	-
Redbanded leafroller	0.8	1.0	2.3
Spotted tentiform leafminer	439	485	131
Lesser appleworm	4.8	14.0	13.7
Oriental fruit moth (apple)	0.6	1.8	0.5
Oriental fruit moth (peach)	0	0.2	0
San Jose scale	0	0.2*	0
Codling moth	0.4*	9.0	3.7
American plum borer	0.1	0.3	1.3

HVL, Highland NY

	5/27	6/2
Redbanded Leafroller	0.4	0.4
Spotted tentiform leafminer	3.5	5.6
Oriental fruit moth	0.4	1.1
Lesser appleworm	1.1	1.3
Codling moth	1.6	1.6
Fruittree Leafroller	-	0
Tufted Apple Budmoth	-	0
Obliquebanded Leafroller	-	0
Sparganothis Fruitworm	-	0

* 1st catch

(Dick Straub, Peter Jentsch)

PEST FOCUS

Geneva: 1st **San Jose scale** trap catch. 1st **codling moth** trap catch was 5/27. Degree days$_{50°F}$ since then = 53.

Highland: 1st **codling moth** trap catch was 5/19. Degree days$_{50°F}$ since then = 139.
Pear psylla adults (2nd gen.) observed.
1st **white apple leafhopper** nymphs on apple.

PHENOLOGIES

Geneva:
Apple(Mac) - petal fall
Apple(Red Delicious) - 75% petal fall
Pear (Bartlett) - fruit set
Tart cherry (Montmorency) - petal fall
Plum - fruit set 5/30
Peach - shuck split

UPCOMING PEST EVENTS

	43°F	50°F
Current DD accumulations (Geneva 1/1- 6/2):	518	245
(Highland 1/1–6/2):	763	391

Coming Events:	Ranges:	
White apple leafhopper nymphs on apple	236–708	123–404
Oriental fuit moth 1st flight peak	259–606	96–298
STLM sap-feeders present	295–628	130–325
Lesser appleworm 1st flight peak	372–851	181–483
Pear psylla hardshells present	463–651	259–377
McIntosh at fruit set	467–648	242–339

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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