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Update on Pest Management
and Crop Development

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

June 1, 2004

VOLUME 13, No. 11

Geneva, NY

IN
SIGHT

ORCHARD
RADAR
DIGEST



Spotted Tentiform Leafminer

2nd STLM flight begins around: June 16.

Highland Predictions:

Roundheaded Appletree Borer

RAB peak emergence: June 2.

RAB egg laying begins: May 25. Peak
egg laying period roughly: June 18 to
July 3.

Geneva Predictions:

Roundheaded Appletree Borer

RAB peak emergence: June 12.

RAB egg laying begins: June 8. Peak egg laying
period roughly: June 27 to July 12.

Codling Moth

1st generation, first sustained trap catch biofix
date: May 17.

Codling moth development as of June 1: 1st
generation adult emergence at 29% and 1st gen-
eration egg hatch at 0%.

1st generation 3% CM egg hatch: June 8
(= target date for first spray where multiple
sprays needed to control 1st generation CM).

1st generation 20% CM egg hatch: June 16
(= single spray date where one spray needed to
control 1st generation codling moth).

Codling Moth

Codling moth development as of June 1: 1st
generation adult emergence at 63% and 1st gen-
eration egg hatch at 9%.

1st generation 3% CM egg hatch: May 25
(= target date for first spray where multiple
sprays needed to control 1st generation CM).

1st generation 20% CM egg hatch: June 5
(= single spray date where one spray needed to
control 1st generation codling moth).

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Obliquebanded Leafroller

1st generation OBLR flight, first trap catch ex-
pected: June 10.

If using BT insecticide, optimum date to begin 2
to 4 weekly low-rate applications for small OBLR
larvae is roughly: June 26.

Oriental Fruit Moth

Optimum 1st generation - second treatment date,
if needed: May 30.

San Jose Scale

1st generation SJS crawlers appear: June 19.

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- ❖ Insect model update

PEST FOCUS

UPCOMING PEST EVENTS

INSECT TRAP CATCHES

Obliquebanded Leafroller

1st generation OBLR flight, first trap catch expected: June 1.

If using BT insecticide, optimum date to begin 2 to 4 weekly low-rate applications for small OBLR larvae is roughly: June 17.

San Jose Scale

1st generation SJS crawlers appear: June 11.

Spotted Tentiform Leafminer

2nd STLM flight begins around: June 8.



IN THE
WINGS

BUGABOO

(Art Agnello, Entomology,
Geneva)

❖❖ Not much remains of our anticipation that this season might be a little different from last year, as the recent rainy stretches and cool temperatures seem intent on recreating the semi-summer weather of 2003. Nonetheless, insect and mite populations are less picky about having ideal conditions under which to go about their business, and most of them are continuing along their regularly scheduled developmental paths. If there's such a thing as a normal schedule, they're probably a bit behind it, but that doesn't eliminate those points in time, like about now, when a lot of them might pop up all at once. The following are updates on some of the more noteworthy participants in this drama. Dates in parentheses, where present, are the mean date of occurrence according to our recent records.

Obliquebanded Leafroller (June 10)

We have yet to catch the first obliquebanded leafroller adult in western N.Y., but it won't be too much longer before the first moths start showing up. Depending on the location, larvae can be found now

in many stages of development, from the relatively small to the pupal stage in some of the more advanced sites. This would therefore be an advisable time to hang a 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, as it's likely that our "normal" first sampling date of July 5 won't turn out to be necessarily appropriate this year.

Stone Fruit Aphids

Although green peach aphids are not always a serious pest every year, colonies of these greenish, smooth-looking aphids may have already started showing up in peach blocks. They cause curled leaves that may turn yellow or red in severe cases, and more importantly, they are vectors of Plum Pox Virus, which still has not been documented in N.Y., fortunately. The young aphids begin to hatch about the time of peach bloom and remain on the trees for 2–3 generations, until early summer, when they seek
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other hosts (mainly vegetable truck crops). Green peach aphids suck the sap from the new fruits and twigs, and are also found on plum, apricot, cherry, and many ornamental shrubs. These insects are difficult to control; fortunately, Provado did obtain a federal stone fruit label, which was approved also in NY, and this would be our recommended option, where needed. Lannate and Thiodan are alternatives, but are possibly less effective. Applications are recommended before excessive leaf curling occurs, in order to maximize the spray's effectiveness. Also, keep an eye out for black cherry aphid in your cherry trees after shuck fall. If colonies are building up on the foliage, recommended materials include Provado, Sevin and Imidan (tart cherries only).

Cherry Fruit Flies (June 16)

No adults have been reported caught on sticky board traps yet, but because of the zero tolerance in cherries for insect damage or presence, it's prudent to begin sprays in your cherries now (for this pest as well as for curculio). Guthion, Imidan (tart cherries only), Sevin, Diazinon or the pyrethroids are all effective treatments. Sevin and Imidan will also control black cherry aphid.

Lesser Peachtree Borer (May 25)

The first adult was caught on May 20 in Geneva. Remember to get your trunk and scaffold sprays on peaches and cherries during the first 10 days of June if borers are a problem in your blocks. If you're planning to use Isomate-L pheromone disruption this year, this product also finally got registered in NY last year. Because of the delayed season, now would not be too late to hang the ties (100–150/acre will disrupt both species — Peachtree Borer appears about mid-month — in our region). This pest increases the severity of Cytospora canker infections in peaches and is often found within the canker; by feeding in the callous tissues, it interferes with the tree's natural defenses against the disease. Infestations can be determined by the presence of the insect's frass, which resembles sawdust, in the gum exuded from the wound. In peaches, you can use Lorsban 4E, Thionex, Asana, Ambush, Pounce, or Warrior for this application. In cherries, use Thionex

50WP, Asana, Pounce, Ambush, Warrior or Lorsban 50WP (tarts only) or 4E, as a trunk spray ONLY; do not spray the fruit.

Summer Oil for European Red Mite

Mite populations have been slow to build so far this season, but adults have been noted in some orchards, which means that they'll be laying summer eggs that will hatch into potential problems before long. In situations where European red mite pressure or the crop's sensitivity to them haven't necessarily justified an early season treatment with Agri-Mek, Apollo or Savey (or if you didn't get a chance to spray during the brief prebloom window), this is the time of year when a summer oil program might be considered as an alternative preventive approach, particularly considering this species' slow start from our cool spring weather. Field research trials conducted in commercial and experimental apple orchards in western N.Y. have shown the effectiveness of using a highly refined oil in a seasonal program to control mites throughout the summer. Some examples of these products are PureSpray Spray Oil 10E (Petro Canada), Sunspray Ultra Fine Spray Oil (Sun Refining & Marketing, Philadelphia), Stylet-Oil (JMS Flower Farms), and Omni Supreme (an ExxonMobil product formulated using Orchex 796 and distributed in our area by Helena); others are labeled, although we haven't tested all brands.

Our approach is to make three applications, on a preventive schedule, immediately after the bloom period, before mite populations have a chance to build. The first application can be any time from petal fall to 1–2 weeks later, followed by two additional sprays at 10–14-day intervals. The oil is not concentrated in the tank, but rather mixed on the basis of a rate per 100 gallons of finish spray solution; in most cases, we recommend 100 gal. per acre. A rate of 1–2 gal/100 should maintain control of most moderate populations. Don't apply without leaving at least a 10–14-day interval before or after a captan spray.

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San Jose Scale (June 19)

Minute SJS adult males emerge in the spring from beneath scale covers on the trees, usually during bloom, and mate. We caught the first adult males in our traps on 5/17. The females produce live crawlers within 4–6 weeks of mating; these make their way to new sites and insert their mouthparts into the tree, secreting a white waxy covering that eventually darkens to black. SJS infestations on the bark contribute to an overall decline in tree vigor, growth, and productivity. Fruit feeding causes distinct red-purple spots that decrease the cosmetic appeal of the fruit. Insecticidal sprays are most effective when directed against the first generation crawlers, specifically timed for the first and peak crawler activity, which are usually 7–10 days apart.

The most reliable method of determining first appearance of the crawlers in your specific area is by putting sticky-tape traps on the tree limb near encrusted areas and checking them at least twice a week, starting about the second week of June. Alternatively, a degree-day accumulation of 310 (50°F base) from the date of first adult catch has also been shown to be reliable if the degree-days are known with some accuracy. In the Geneva area, first crawler emergence has tended to occur sometime around mid-June. The Orchard Radar predictions are for this to occur June 11 in the Hudson Valley and June 19 in the Geneva area. Lorsban used to be the standard recommended treatment for scale, and since it's no longer labeled for summer use, we're fortunate to have Esteem 35WP available, which is quite effective against this pest. It should be applied at 4–5 oz/acre at first crawler emergence; a low rate (0.25% or 1 qt/100) of a highly refined summer oil (see above) has been shown to improve penetration and, therefore, control. The remaining OP's such as Guthion and Imidan, as well as Provado, are alternative options. ❖❖

(BEST) GUESS
WHO'S
COMING TO
DINNER

MODEL
BUILDING

Plum Curculio. There hasn't been much movement toward the 340 DD (base 50°F) spray cutoff for this pest. However, the 10-day forecast calls for uniform highs in the 70's, so these can add up fast (we hope). Some sample numbers:

Albion (May 17 PF estimate) - 109
 Appleton/Niagara Co. (May 20 PF estimate) - 67
 Clifton Park/Capital District (May 15 PF estimate) - 246
 Geneva (May 17 PF estimate) - 145
 Highland (May 10 PF estimate) - 261
 Lyndonville (May 17 PF estimate) - 114
 Sodus (May 17 PF estimate) - 135
 Williamson (May 17 PF estimate) - 112

Oriental Fruit Moth. This pest's development is tracked using a 45°F DD model from biofix, defined as the first sustained moth catch. Peach growers should be somewhere between their first (at PF) and second (14 days later) applications of a pyrethroid for this insect (plus plum curculio).

SITE	BIOFIX	CUM DD-45	APPROX. % HATCH
Appleton	4/30	356	56%
Albion	5/4	351	55%
Geneva	5/7	398	68%
Lyndonville	4/30	395	67%
Williamson	5/3	377	62%

Codling Moth. Also relatively behind recent years. With 250 DD (base 50°F) as a first spray date, we currently have:

Geneva (1st catch May 17) - 145
 Highland (1st catch May 10) - 340
 Albion (1st catch May 17) - 109
 Williamson (1st catch May 18) - 95

❖❖

INSECT TRAP CATCHES (Number/Trap/Day)

Geneva, NY

Highland, NY

	<u>5/24</u>	<u>5/27</u>	<u>6/1</u>		<u>5/24</u>	<u>6/1</u>
Redbanded leafroller	1.5	0.0	0.0	Redbanded leafroller	0.5	0.0
Spotted tentiform leafminer	9.0	23.3	5.6	Spotted tentiform leafminer	6.1	1.6
Oriental fruit moth	1.3	0.7	0.3	Oriental fruit moth	0.1	0.0
Lesser appleworm	0.3*	0.5	0.0	Codling moth	0.6	0.1
Codling moth	1.5	0.3	0.1	Lesser appleworm	6.7	1.9
San Jose scale	4.3	1.3	0.6	Obliquebanded leafroller	0.0	0.4*
American plum borer	2.4	3.0	0.8			
Lesser peachtree borer	3.3	3.7	1.0			
Peachtree borer	0.3*	0.0	0.0			

* first catch

PEST FOCUS

Highland:
1st **obliquebanded leafroller** caught over the weekend

UPCOMING PEST EVENTS

	<u>43°F</u>	<u>50°F</u>
Current DD accumulations (Geneva 1/1–6/1):	787	462
(Geneva 1/1–6/1/2003):	617	321
(Geneva "Normal"):	698	378
(Geneva 6/7 Predicted):	919	546
(Highland 1/1–6/1):	1017	621

Coming Events:

Ranges:

Lesser appleworm 1st flight peak	372–851	181–483
Obliquebanded leafroller pupae present	612–860	330–509
Plum curculio oviposition scars present	448–670	232–348
San Jose scale 1st flight peak	457–761	229–449
Rose leafhopper adults on multiflora rose	668–916	336–519
Rose leafhopper adults on apple	736–1104	384–658
Black cherry fruit fly first catch	686–985	392–636
Codling moth first flight peak	547–1326	307–824
European red mite summer eggs hatch	773–938	442–582
Pandemis leafroller first catch	749–955	423–509
Obliquebanded leafroller first catch	686–1104	392–681
Spotted tentiform leafminer 2nd flight begins	795–1379	449–880

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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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