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FRUIT JOURNAL

Weekly Update on Pest  
and Crop Development

June 1, 1992

VOLUME 1

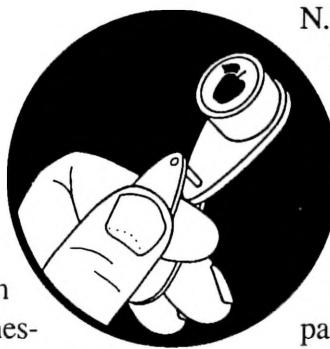
Geneva, NY

**MISC.**INSECT BITES  
(Art Agnello)**Obliquebanded Leafroller**

❖❖ Overwintered larval populations and damaged terminals are heavy in localized areas on both sides of Rochester, as well as in some Hudson Valley blocks, so this should be another favorable year for our most frustrating pest. The first adults could be appearing as soon as a few (i.e., 5-7) more warm days come along. Our recommendations for scouting to determine the need for treatment is to wait 600 degree days (base 43°F) from the date of 1st catch in your area, then scout terminals, using a 3% infestation threshold. We'll do our best to keep you informed of trap and DD progress in the different areas.

**Plum Curculio**

Although it is past the time when a material suitable for plum curculio control should have been included in your petal fall spray, I would remind you that our standard recommendations for this insect have always called for a second spray 10 days later in western N.Y. (plus a third in eastern



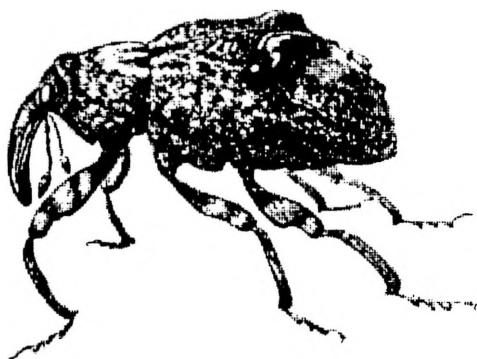
N.Y.) whenever the population pressure is high or if the weather is unsettled. It's safe to say that at least one of these conditions apply this year. Moreover, no actual oviposition had yet been seen in the Geneva research plots as of last Friday, May 29, which means that it will be at least TEN days past petal fall before any curc activity is noted this year. All this adds up to an argument for backing up your petal fall application by including an organophosphate in your first cover spray(s).

**Mites**

Generally not much change from last week—any hot weather that comes along now can be expected to accelerate ERM hatch and development, but so far there seem to be relatively few problems out there; most blocks are still below threshold. We are still using the presence/absence threshold of 62% infested leaves, which corresponds to a mean density of 2.5/leaf. Refer to Table 12 (p. 58) or the sampling chart (p. 185) of the 1992 Cornell Recommends.

**Pear Psylla**

According to all we have been seeing in western N.Y. and in the Hudson Valley regarding pear tree condition and psylla numbers, this week should be the designated time to begin treating orchards with Agri-Mek. The 10-14-day post-petal fall period should fall sometime this week for most of the state's orchards, and there should be few problems if you happen not to make it until early next week, considering that the cool weather we've been experiencing should slow down tree and insect growth somewhat.



## Cherry Fruit Flies

No adults have been reported caught on sticky boards yet, but because of the zero tolerance in cherries for insect damage or presence, this absence does not diminish the need for sprays in your cherries now (for these pests as well as for curculio). The organophosphate materials, or Sevin, the synthetic pyrethroids, or Penncap-M are all effective treatments.

## Leaf Weevil

Every year about this time, a metallic green snout beetle about 1/5" in length appears in apple orchards and strawberry fields, sometimes in considerable numbers. We saw our first in Geneva in mid-May, but not on trees. This weevil is most likely *Polydrusus impressifrons*, also called 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 orchards, the normal cover spray program will take care of this problem. If the weevil appears in great numbers in a nursery, control may be necessary.♦♦

## OIL RESEARCH

Highly-Refined Petroleum Oil to Control Summer Populations of European Red Mites on Apple  
(Art Agnello)

♦♦ Plant-feeding mites, such as the European red mite (ERM), are probably the most serious foliar pests of apples in N.Y. Apple growers have traditionally used petroleum oil sprays in the dormant and delayed dormant period to kill ERM eggs on the trees before much foliage is present. The original "dormant" oils were quite heavy, and contained impurities that made them phytotoxic to

green tissue. Later refining modifications removed many of these impurities and resulted in a so-called "superior-type" oil that can be used until nearly the pink bud stage. Until the 1970's, when a number of highly effective contact miticides became available, it was common for growers to include a low rate (1 qt/100 gal water) of these superior-type oils in their summer sprays to provide constant, although incomplete, suppression of ERM populations by controlling the most susceptible stages—primarily eggs. Higher dosages were avoided to prevent potential foliar damage. However, as mite populations began to develop resistance to conventional miticides, and as more sophisticated oil refining techniques removed even more impurities to produce a grade of oil that is less damaging to green tissue, apple growers have shown a greater interest in these products. The highly refined oil that is currently available has a narrower distillation range, which excludes some of the heavier plant-damaging components without affecting its effectiveness against mite pests.

We conducted field research trials in commercial apple orchards in western N.Y. during 1991 to test the effectiveness of a highly refined oil in a seasonal program to control mites throughout the summer. A post-bloom program using SunSpray Ultra-Fine spray oil (Mycogen Corp.) was tested in

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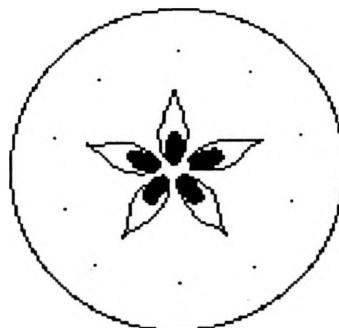
This newsletter available on CENET, in the TNEWS bulletin board under FRUIT.

orchards that had received a pre-bloom application of standard superior oil for early season control. We made 3 applications, on a preventive schedule, immediately after the bloom period, before mite populations had a chance to build. The first application was at petal fall, followed by two additional sprays at 10-14-day intervals. Dosages tested were 1, 2, and 3 gal/100 gal of finished spray solution, and the sprays were applied at a volume of 100 gal/acre. Mite populations were monitored constantly to be sure numbers were within acceptable limits; in one of the orchards, a final application was made in mid-July. Rates of 1 gallon or more effectively controlled mite populations for the entire season under moderate population pressure, and the 2- and 3-gallon rates gave season-long control even under severe pressure.

Some foliar damage was noted in the form of sporadic necrotic spotting, particularly in the plots receiving the higher dosages. This damage has not appeared to be debilitating to the foliage or fruit, but it does occur under conditions of tree stress. Fruit samples were taken at harvest to check for any effects on fruit quality. Four varieties treated—"Ida Red", "Cortland", "Empire", and "Red Rome"—were graded for color according to USDA guidelines, and no differences in fruit coloring trends were found between the oil-treated and untreated apples. Also, there was no evidence of roughened surface, raised lenticels, or finish problems in the treated fruits. The only adverse result that has been noted (in previous trials) was an increase with oil rate in the "Red Romes", of a varietal stippling characteristic in the skin, known as "scarf". Certain other varieties, such as "Stayman", "Jonathan", and some "Red Delicious" strains, exhibit this characteristic to some degree.

Related tests using handgun oil sprays have given encouraging indications that summer oil sprays may be as effective against moving stages of mites as they are on the eggs. This would represent an additional argument for its use in the summer on an as-needed basis, to help control populations of

mixed life stages as they appear (but before they exceed threshold numbers). The primary cautions against using oil in summer sprays concern the fact that oil is still potentially phytotoxic if mis-applied; that is, if mixed with sulfur-containing fungicides (like captan), or if sprayed under conditions of high temperature or moisture stress. Further work will better define use guidelines under standard growing conditions.♦♦



## PHEROMONE TRAP CATCHES

## **Number/Trap/Day, Geneva NY**

## Total Number, HVL, Highland NY

	<u>5/21</u>	<u>5/25</u>	<u>5/29</u>	<u>6/1</u>		<u>5/26</u>	<u>5/28</u>	<u>6/1</u>
Redbanded Leafroller	2.3	2.9	0.1	0.3	Spotted Tentiform Leafminer	22	6	8
Spotted Tentiform Leafminer	133	45	22	12	Redbanded Leafroller	3	3	0
Oriental Fruit Moth (apple)	56	35	2.5	4.2	Lesser Appleworm	-	0	9
Oriental Fruit Moth (peach)	0.5	0.3	0	0.2	Fruittree Leafroller	3	0	2
Lesser Appleworm	0.5	0.1	0.5	0	Oriental Fruit Moth	1	0	0
Codling Moth	13.7	28.4	7.1	31.2	Codling Moth	17	1	13
San Jose Scale	2.8	6.1	0.1	2.0				
Lesser Peachtree Borer (cherry)	0.2	3.3	0.8	2.2				
Lesser Peachtree Borer (peach)	0	1.5	0	1.5				
Peachtree Borer	0	0	0	0.2				

## UPCOMING PEST EVENTS

#### Current DD accumulations (Geneva 1/1-6/1):

43°F      50°F  
551      292

#### **Coming Events:**

Codling moth 1st flight peak	547-1326	307-824
Obliquebanded leafroller pupae present	612-860	330-509
Pear psylla hard shell nymphs present	536-628	286-325
San Jose scale 1st flight peak	612-761	348-449
Tarnished plant bugs present in strawberries	573-720	322-408

Note: For current information in your area of the state, check PEST STATUS under FRUIT on CENET.

## PHENOLOGIES (Geneva)

### Peach: fruit set (shucks off)

**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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