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Weekly Update on Pest
and Crop Development

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

May 4, 1992

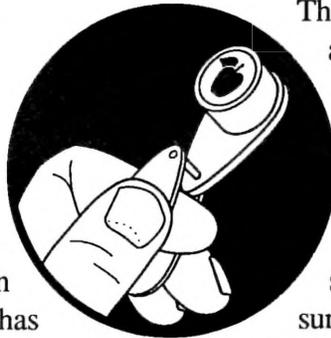
VOLUME 1

Geneva, NY

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AGRI-MEK IS
LABELLED
(Art Agnello)



❖❖ On April 30, I received notification from the EPA that the FIFRA Section 18 Specific Exemption for use of Agri-Mek on pears for the control of pear psylla has been approved in New York for 1992. This approval is subject to the following conditions and restrictions:

1 - The NYS DEC is responsible for ensuring that all provisions of this specific exemption are met.

2 - The product Agri-Mek 0.15 EC, manufactured by Merck and Co., may be applied. All applicable directions, restrictions and precautions on the EPA-registered product label must be followed.

3 - A maximum of ONE application per season by ground applicator will be observed. A rate of 10-20 fl. oz. of product per acre will not be exceeded. A 21-day PHI will be observed.

4 - A maximum of 2,800 acres may be treated in NYS.

5 - To reduce the risk to aquatic organisms, a 100-yard buffer zone must be maintained from ALL water bodies containing aquatic life.

6 - Livestock may not be grazed in treated orchards.

7 - This specific exemption expires September 30, 1992.

In accordance with our use patterns and observed effectiveness of this product last year, we are advising that the material be applied 10-14 days after petal fall, in order to contact the foliage when it is in the best condition to absorb the chemical.

This may be a little before psylla numbers actually build up to the 1 nymph/leaf suggested threshold, but it will assure maximum control of the "front end" of the summer population. Most growers will probably need to make 1-2 applications of another material, such as Mitac, towards the end of the summer, if it turns out to be another one of those true problem years, in order to attain season-long control.

The following points shouldn't need to be stated, but I've already begun to hear talk that indicates otherwise. The EPA conditions above (specifically, No. 3) explicitly state that a maximum of ONE application is permitted. This does not mean deciding how much you ultimately want to apply and then dividing it into TWO half applications 10-14 days apart. That's two applications, which is more than one application, and regardless of who has had success using it in this way, each one of them is half the recommended rate on the label, which even if it *were* legal, would be a great strategy for spending a lot of money just to see how badly you can compromise the effectiveness of a pretty good product. Also, the label requires that the Agri-Mek be mixed with a minimum of 1 gallon per acre of highly refined paraffinic oil, which in our region means UltraFine Oil. The purpose of including oil is to increase absorption of the active ingredient into the leaf tissue. I have been asked whether good ol' (i.e., cheap) Sunspray 6E wouldn't achieve the same result, and I suppose it would; however, 1) it contains heavier petroleum fractions, which pose more of a threat of phytotoxicity, and 2) it's not labelled.

continued next page...

MORE-STAN

❖❖ As a postscript to a reference I made about Morestan a few issues back, I have been informed that it is **NOT** legal to use up leftover product that was bought when pears were still on the label. Use Mitac or a pyrethroid at white bud, and save the Morestan for your apples. ❖❖

THIODAN

❖❖ There have been some label changes that I was not previously aware of. You'll need to look carefully at the label of any new product you buy, because I don't have a summary of all the changes, but some of the more important ones are:

- Pears have been taken off the 3EC label; they now appear on the label of a new (to us) formulation called 2 C.O. EC, which contains 2 lbs active per gallon. Rates look to have been adjusted accordingly. It is apparently OK to use up leftover 3EC product that is labelled for pears.

- Apples now have a label for use of the 3EC to control STLM adults. N.Y. previously had a Special Local Need (24C) label for the use of both 3EC and 50WP for this purpose, but it expired last May. If you elect to try controlling STLM with this strategy (which we don't particularly recommend, because the long flight period makes effective control difficult), you may now use the 3EC formulation. ❖❖

PEARS

PEAR LEAF MIDGE (Art Agnello)

❖❖ It always comes as a surprise to discover some "new" insect problem that turns up in a presumably stable production system. The surprise usually deepens, though, when the newcomer is actually found to be an old member of the community who was simply not noticed for a number of years. Such may be the case with pear leaf midge (*Dasyneura pyri*), a gnat-like insect that has been responsible for increasing amounts of damage in Eastern New York pear orchards the past few years.

This insect occurs in Europe, the United Kingdom, New Zealand, and New Brunswick; however, its first reported U.S. occurrence was actually in the Hudson Valley in 1932. It has 3-4 generations per year, which are overlapping and variable in their timing. The adult is a dark brown fly, 1.5-2.0 mm in length; this small size, plus the fact that it lives for only 1-3 days, makes it difficult to observe in the orchard. The first generation adults begin to fly in late April, but this date can vary from mid-April to early May; the flight lasts until late May to early June. Eggs, which are reddish in color, are laid within the rolled margins of only undeveloped leaves, as soon as the leaves emerge from the bud. Several eggs, up to as many as 35, may be laid per leaf. The maggots (which are white to yellow-red in color) hatch out in 4-6 days and feed on the leaf surface for 10-12 days; this damage prevents the normal unrolling of the leaf. After the feeding period, some of the maggots drop to the soil and pupate close to the surface, while others pupate inside the rolled leaves. The entire life cycle takes 25-30 days, except that maggots of the last one or two generations of the season remain in the soil over the winter and pupate the following spring. The number of generations per year is probably determined by the length of the period during which there is new shoot growth in the summer.

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Damage caused by pear leaf midge infestations can take a number of forms. This insect attacks only the foliage, which causes the edges of leaves to roll tightly upwards and inwards towards the midrib. Heavy infestations may cause shortening of extension shoots, an effect that is probably more important in nursery stock than in mature trees. During the early stages of an infestation, there is a slight, irregular puffiness or "lumpiness" to the rolled portion of the leaf, which may become reddened and brittle. Eventually the leaf curves downward like a sickle, and the red areas turn black; leaf drop may follow. Early in the season, infested leaves occur only at the tips of shoots. As the shoot extends, however, the young leaves at the tip may in turn be attacked by later generations, so that affected leaves may be found at several levels along the shoot.

At the present time, we can give only generalized guidelines for the control of pear leaf midge. Presumably, conventional management practices using insecticides had been controlling this insect, but economically damaging infestations have begun to occur because of either missed or poorly timed sprays, or because of an emerging pesticide tolerance in local populations. Successful control has been reported in New Hampshire using standard organophosphate compounds (i.e., azinphosmethyl, phosmet) to kill maggots rolled inside the leaves. In European orchards, diazinon also has been reported to be successful. In general, the best strategy appears to be spraying a known infestation in the late spring, after the first generation adults have laid eggs, but before pupation begins. Insecticide persistence is important; in problem orchards, 2-3 post-bloom applications are markedly better than 1-2. It may be necessary to examine the leaves regularly to determine the proper timing. However, to be practical, it is probably best to spray as soon as symptoms of an infestation are found (mid-May to early June).

Very little supplementary information is available about this pest. In New Zealand apple orchards, the use of the synthetic pyrethroid fenvalerate has been correlated with outbreaks of a

closely related species (apple leaf midge). Bosc pears are slightly less susceptible than are Bartlett's and Clapps. The prospects for natural control are uncertain, although two species of parasitic wasps have been recorded from the apple leaf midge. If insecticide resistance is the root cause of these infestations, and if they start to become more noticeable in commercial orchards, we may ultimately need to re-evaluate our pesticide use patterns in pears and begin looking for different approaches to this problem.❖❖

CORRECTION: In last week's article about Pink Bud, I made the statement that Lannate can be effective against STLM when applied at pink (but should preferably be used at petal fall). Although we may have suspected this to be true, we have never actually documented it in the field. For best results, it's best to defer this material's use to petal fall, and stick to the other products listed in the Recommendations (pyrethroids or Vydate) for the pink period.❖❖

Hudson Valley Lab, Highland (Dave Rosenberger, Dick Straub):

Phenologies, May 3:

Apple (McIntosh)	Tight cluster
Stanley Plums	White bud
Sweet Cherry	Full bloom

Apple scab ascospore maturity, Highland, NY, from leaves collected noon on April 28:

<u>Date</u>	<u>Immature</u>	<u>Mature</u>	<u>Discharged</u>	<u>Tower shoot</u>
4/28	54%	33%	13%	376 spores

INSECT TRAP CATCHES - Pheromone Traps

	<u>4/23</u>	<u>4/24</u>	<u>4/27</u>	<u>4/30</u>	<u>5/4</u>
Green Fruitworm	0	0	0	1	0
Spotted Tent. Leafminer	15	5	4	94	110
Redbanded Leafroller	4	1	1	10	2.8
Lesser Appleworm	0	2	0	1	0
Oriental Fruit Moth	0	0	0	0	11
European Apple Sawfly	0	0	0	0	1

Sticky Board Traps

S. punctum (yellow)	1	0	0	2	2
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First pear psylla nymph observed on 5/1.

FIELD NOTES

PHENOLOGIES (Geneva)

Apple: early tight cluster
 Pear, Tart Cherry: advanced bud burst
 Peach: pink / Apricot: bloom / Plum: bud burst
 Sweet Cherry: early white bud

PHEROMONE TRAP CATCHES

Number/Trap/Day, Geneva NY

	4/23	4/27	4/30	5/4
Green Fruitworm	1.0	0.1	0	0
Redbanded Leafroller	1.0	0.8	5.7	4.6
Spotted Tentiform Leafminer	2.5	33	476	632

UPCOMING PEST EVENTS

	43°F	50°F
Current DD accumulations (Geneva 1/1-5/4):	198	85
Coming Events:	Ranges:	
Comstock mealybug 1st gen nymphs hatch	220-425	82-242
European red mite egg hatch complete	157-358	74-91
Lesser peachtree borer 1st adult catch	224-946	110-553
Obliquebanded leafroller larvae active	159-369	54-196
Oriental fruit moth 1st adult catch	208-587	79-338
Redbanded leafroller 1st flight peak	180-425	65-216
San Jose scale 1st adult catch	189-704	69-385
Spotted tentiform leafminer 1st flight peak	180-352	65-184
White apple leafhopper nymphs present	236-708	123-404
Apples (McIntosh) at tight cluster	217-279	88-138
Apricots at bloom	182-237	68-117
Peaches at pink	152-269	68-119
Pears, plums at green cluster	223-279	83-138
Sweet cherries at bloom	187-326	83-150
Tart cherries at bud burst	185-279	76-138

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

PEST FOCUS**Tuesday, April 28:**

❖ Harvey Reissig found a 2nd instar OBLR larva active and feeding in some Ida Reds in Orleans Co. (Eagle Harbor); trees were at half-inch green.

❖ Joe Kovach found nymphs of Rosy Apple Aphid, Apple Aphid, and Apple Grain Aphid in various research plantings in the Geneva area. He also noticed apple rust mites and pear thrips in the buds.

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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