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Update on Pest Management
and Crop Development

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

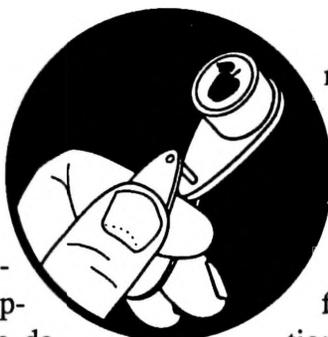
July 21, 1997

VOLUME 6, No. 18

Geneva, NY

24c
YOU
LATER?

LOGIC AT
THRESHOLD
(Art Agnello,
Entomology,
Geneva)



❖❖ As we go to press, the situation regarding mite management options in N.Y. this season must be described as “fluid”. Late last week, we were informed with finality that there were no prospects that Pyramite will be available for use by apple growers in New York this year. We already knew that it would not be an option against pear psylla, but there had been some hope that a 24(c) Special Local Need use would be allowed as a rescue treatment in apples for summer mite infestations, which are already prompting anxious phone calls to a number of agents and consultants around the state.

As disappointing as the outcome of this matter was, it is more disquieting to contemplate the manner in which it was decided. The DEC had initially indicated that it would consider a 24(c) application from the manufacturer, BASF, for just such a use this year, in view of the late timing of Pyramite’s federal label and the lengthy review process mandated by N.Y. to obtain a state registration. However, once they approved Agri-Mek for early season use (and we duly recognize their efforts in this matter), the DEC evidently felt that the mite management issue had been disposed of and all further bets were off. Now, however, with the support of several state legislators and their apple-grower constituents, the DEC has come to reconsider its stand and has stated that it is once again open to the possibility of a 24(c) use, and BASF has stated that they are prepared to apply for one.

Any apple grower knows the admittedly subtle distinctions between early and late-season mite management problems, and state regulators aren’t expected to have sufficient farm background to recognize the realities of this serious challenge to fruit production. Despite the temptation of regulatory agencies to regard this

plea for special consideration as an attempt to circumvent the regulatory process, most agriculturalists believe just as strongly that mechanisms like Special Local Need options exist to address the vagaries of situations like this. We remain optimistic that the Pyramite issue can be salvaged with a minimum of political rancor, and that the DEC has sufficient foresight to come to a conclusion that will provide N.Y. apple growers an effective, threshold-responsive rescue material that will do in one application what might otherwise require several sprays of less active, less predictable, and at times more destructive older miticides to accomplish.

Until and unless Pyramite becomes available, growers who need summer mite control should follow the same advice that most can now recite without thinking: opt for a material you may not have used recently or ever — Kelthane or Vendex are possibilities, despite historical trends toward resistance; adjust the spray water pH to 5-6 for best results with Kelthane. We remind you that it is allowed (until the end of 1997) to use up any leftover stocks of Omite. And Carzol is always an option despite its negative effect on predators, although at this point in the season more than one spray may be needed.

❖❖

WILD AND WOOLLY

MIDSUMMER LOVES
(Art Agnello & Harvey Reissig,
Entomology, Geneva)

Woolly Apple Aphid

❖❖ We are fast approaching the time of the annual woolly hunt. The woolly apple aphid (WAA), *Eriosoma lanigerum*, colonizes both aboveground parts of the apple tree and the roots, and commonly overwinters on the roots. In the spring, nymphs crawl up on apple trees from the roots to initiate aerial colonies. Most nymphs are born alive to unmated females on apple trees during the summer. Colonies initially build up on the inside of the canopy on sites such as wounds or pruning scars and later become numerous in the outer portion of the tree canopy, usually during late July to early August.

Aerial colonies occur most frequently on succulent tissue such as the current season's growth, water sprouts, unhealed pruning wounds, or cankers. Heavy infestations cause honeydew and sooty mold on the fruit and galls on the plant parts. Severe root infestations can stunt or kill young trees but usually do not damage mature trees. Large numbers of colonies on trees may leave sooty mold on the fruit, which annoys pickers because red sticky residues from crushed WAA colonies may accumulate on their hands and clothing.

Water sprouts, pruning wounds, and scars on the inside of the tree canopy should be examined for WAA nymphs. Starting about mid-July, new growth around the outside of the canopy should be examined for WAA colonies. No economic threshold has been determined for treatment of WAA. *Aphelinus mali*, a tiny wasp, frequently parasitizes WAA but is very susceptible to insecticides and thus does not provide adequate control in regularly sprayed commercial orchards. Different rootstocks vary in their susceptibility to WAA. The following resistant rootstocks are the only means of controlling underground infestations of WAA on apple roots: MM.106, MM.111, and Robusta. WAA is difficult to control

with insecticides because of its waxy outer covering and tendency to form dense colonies that are impenetrable to sprays. WAA is resistant to the commonly used organophosphates, but other insecticides that are effective include Lorsban, Thiodan, and Penncap-M.

Codling Moth

Adults from the second or summer generation of CM start to fly about mid-July, and the peak flight in western New York occurs around the first week in August. Larvae from this generation are active in fruit throughout August. Fruit damage by the second generation is generally more serious than that of the first. In New York, the second generation of CM is normally controlled by the same conventional insecticides used on apple maggot so no special sprays are required in most commercial orchards. However, in cases where summer organophosphate sprays have been withheld for more than one season because of low apple maggot pressure, there is a danger that CM will re-establish itself as a primary cause of fruit damage. In these cases, growers should apply preventive pesticide sprays according to the developmental model.

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is published weekly from March to September by Cornell University—NYS Agricultural Experiment Station (Geneva) and Ithaca—with the assistance of Cornell Cooperative Extension. New York field reports welcomed. Send submissions by 3 pm Monday to:

scaffolds FRUIT JOURNAL

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This newsletter available on CENET at: news://newsstand.cce.cornell.edu/cce.ag.tree-fruit
and on the World Wide Web at:
<http://www.nysaes.cornell.edu/ent/scaffolds/>

The model for 2nd generation codling moth larvae predicts that a control spray should be applied in problem orchards 1260 DD (base 50°F) after the start of the *first* flight (5/27 in Geneva, 5/19 in the Hudson Valley). As of today, 7/21, 954DD have accumulated in Geneva and 1161 at Highland. Keep your eye on the thermometer so that you will be timely with any OP applications you should decide to make.

Dogwood Borer

According to Craig Telgheder and Dick Straub, many young trees (between 1–5 years old) in the eastern part of the state from the Champlain Valley down are sporting healthy dogwood borer infestations in the burrknot tissue of clonal rootstocks. The time for protective trunk applications of a residual insecticide is now; check your blocks, and where necessary, use a dilute spray of Lorsban 50WP or Thiodan 50WP for best results.

OBLR

If you haven't inspected terminal growth in your problem blocks for leafroller infestations, do so this week. The developmental model (DD's base 43°F after 1st moth catch) gives the following predictions for the earliest-emerging members of this summer's brood: 720 - median larval development (i.e., early 4th instar) of larvae; 810 - 90% egg hatch; 950 - 100% egg hatch. Our current (7/21) readings follow:

<u>SITE</u>	<u>FIRST CATCH</u>	<u>DD TOTAL</u>
Highland	June 9	1235
Knowlesville	June 16	992 (Waterport)
Geneva	June 17	914
Wolcott	June 19	809 (Sodus)

Check pp. 83, 91–92, 95 and 100 in the 1997 Recommends for guidelines on sampling procedures.❖❖

GRAND DESIGNS

PLANNING FOR POSTHARVEST TREATMENTS ON APPLES

(Dave Rosenberger, Plant Pathology, Highland)

❖❖ The mid-summer lull before harvest is a good time to review the condition of drencher units that are used to apply postharvest treatments to apples. Particular attention should be paid to the agitation system in the holding tank on the postharvest drencher. Thiabendazole (formulated as Mertect 340F) is the only registered and proven fungicide for preventing postharvest decays in apples. Thiabendazole appears to settle out of suspensions much more completely than did Topsin M or Benlate when they were available for postharvest treatments. The first time that a drencher is shut down for the night, thiabendazole settles to the bottom of the tank and stays there unless the tank has an agitation system capable of resuspending the sediment. Drenchers that do not have good agitation systems are totally obsolete and will create more decay problems than they solve.

The simplest agitation system for drench tanks uses a high-volume pump to recirculate drench solutions through "jets" that create turbulence on the bottom of the holding tank. The main line of the agitation system consists of a solid, 2-inch or 3-inch diameter PVC pipe that rests flat on the bottom of the holding tank. The main line is fitted with T's at regular intervals. Openings on the T's are fitted with size-reducers that terminate with 90-degree-turn, half-inch-diameter hose-connector fittings with screw threads. These half-inch hose-connectors act as jets when the main line is pressurized. Usually jets will be needed at 8 to 12 inch intervals along the main PVC line. The entire PVC agitation system should be plumbed into the tank using either quick-disconnect fittings or flexible hose

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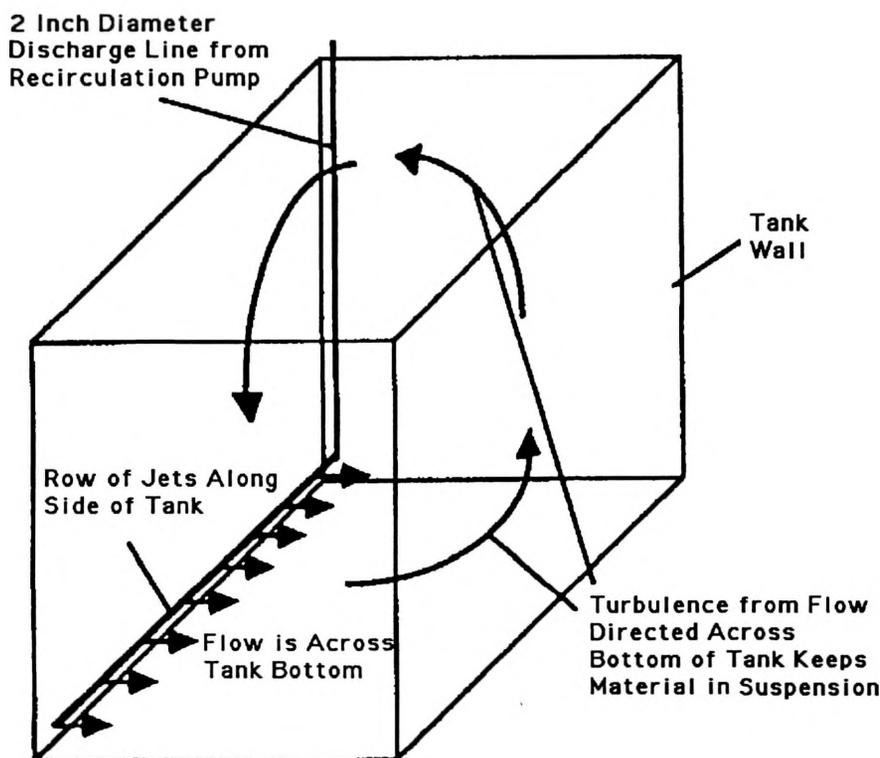
so that the agitation system can be lifted out of the tank when the tank is cleaned.

Because the hose-connectors at the end of each jet are attached with screw-threads, the final angle of the jets can be adjusted to maximize effectiveness after the agitation system is installed. By experimenting with several inches of clean water in the tank, it should be possible to adjust jets so that the turbulence created encompasses the entire bottom of the holding tank. Turbulence will be evident at the surface of the filled tank if the system is working properly.

In most cases, the existing circulator pump used to power the drencher can also serve to run the agitation system because it is not necessary for either the drencher or the agitation system to run constantly. With a good system in place, agitation should be needed only for several minutes every

hour and for perhaps 15–30 minutes before using the system at the start of each day. Thus, the existing plumbing on the drencher can be modified by installing a valve or valves that allow water from the pump to be directed as needed into either the overhead drencher unit or into the agitation system on the bottom of the tank. The most convenient valve system is a two-way PVC valve that has no closed position, thereby eliminating the possibility that someone will inadvertently close all outlets to the pump at the same time.

The simple agitation system described above can make a significant difference in the effectiveness of thiabendazole in postharvest treatments. If fruit are given any postharvest treatment at all, then having a good agitation system in the drench tank should be the number-one priority for improving effectiveness of the postharvest fungicide treatment.❖❖



Agitation System for Rectangular Tank

IT'S A DATE

FIELD DAY, FIRST ANNOUNCEMENT

❖❖ It's not too early to mark your calendar for the annual N.Y. Fruit Pest Control Field Day, which will take place during Labor Day week on Sept. 3 and 4, as dictated by tradition. The Hudson Valley component is on the agenda this year; activities in

the Valley will commence on Wednesday, the 3rd with registration, coffee, donuts, and cider at 8:30 am. Participants will proceed to the orchards to view plots and preliminary data from field trials involving new fungicides, miticides, and insecticides on apples and pears. It is anticipated that the tour of field plots will be completed by noon. On Thursday, the 4th, Geneva participants will register starting at 8:30 in Barton Lab, after which we will view and discuss results from field trials on tree fruits and grapes. Save the dates. ❖❖

PEST FOCUS

Geneva: Spotted tentiform leafminer 2nd flight began 6/23.

DD₄₃ = 784.

Highland: Spotted tentiform leafminer 2nd flight began 6/16.

DD₄₃ = 1046 (from 6/27).

INSECT TRAP CATCHES (Number/Trap/Day)

Geneva NY

HVL, Highland NY

	<u>7/14</u>	<u>7/17</u>	<u>7/21</u>		<u>7/14</u>	<u>7/21</u>
Redbanded leafroller	5.6	4.0	3.0	Redbanded Leafroller	9.1	2.3
Spotted tentiform leafminer	470	732	976	Spotted tentiform leafminer	59.7	46.0
Lesser appleworm	1.0	1.2	1.4	Oriental fruit moth	1.3	0.3
Oriental fruit moth (apple)	3.0	2.5	2.0	Lesser appleworm	0.4	0.9
Oriental fruit moth (peach)	0	0	0	Codling moth	0.6	1.2
San Jose scale	0.1	0	0.3	Fruittree Leafroller	0	0
Codling moth	0.3	4.2	4.5	Tufted Apple Budmoth	0.4	0
American plum borer	0.1	0.2	0.8	Obliquebanded Leafroller	0.2	0.1
Lesser peachtree borer	2.0	5.0	2.9	Sparganothis Fruitworm	0.7	0.1
Peachtree borer	0.6	0.5	0.1	Apple maggot	0.1*	0.9
Pandemis leafroller	0	0	0	Variegated leafroller	0	0.4*
Obliquebanded leafroller	0	0.2	0			
Apple maggot	0.06	0.08	0.1			

* 1st catch

(Dick Straub, Peter Jentsch)

UPCOMING PEST EVENTS

	<u>43°F</u>	<u>50°F</u>
Current DD accumulations (Geneva 1/1- 7/21):	1760	1146
(Highland 1/1-7/21):	2109	1398

<u>Coming Events:</u>	<u>Ranges:</u>	
American plum borer 2nd flight peaks	1648-2612	1037-1840
Apple maggot 1st oviposition	1566-2200	1001-1575
Dogwood borer peak catch	1551-1952	986-1306
Oriental fruit moth 2nd flight peaks	1000-2908	577-2066
STLM 2nd flight peak	1295-2005	824-1355
STLM 2nd gen. tissue feeders present	1504-2086	952-1201
San Jose scale 2nd flight begins	1449-1975	893-1407
Peachtree borer flight peaks	864-2241	506-1494

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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