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Update on Pest Management
and Crop Development

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

August 17, 1992

VOLUME 1

Geneva, NY

FIELD DAY

N.Y. FRUIT PEST
CONTROL FIELD
DAY



❖❖ This annual event, sponsored by the Departments of Plant Pathology and Entomology (Geneva), has been scheduled for September 8-9 this year. All those interested are invited to attend this preliminary presentation of results of field trials on the control of diseases and insects attacking N.Y. fruit crops. These trials include chemical and biological controls as well as resistance management strategies. Results will be discussed from experiments on apples, stored fruits, grapes, and small fruits. Registration begins at 8:30 a.m. at the Hudson Valley Laboratory, Highland (Tuesday, Sept. 8) and at Barton Laboratory, NYSAES, Geneva (Wednesday, Sept. 9). ❖❖

An agitation system for postharvest treatment tanks could be modeled after a design developed by Richard Gilbert, president of Skibbe Manufacturing, Sodus, Mich., for use in tanks storing pesticide waste water. A high-volume pump is used to recirculate solution through "jets" that direct water flow across the bottom of the tank and create turbulence within the tank. The "jets" are

made by plumbing hose connector fittings into a 2-inch PVC line. The 2-inch PVC line has a closed end and is pressurized by the high-volume recirculator pump. The angle of the hose connectors can be adjusted to direct flow toward and/or across the bottom of the tanks. Gilbert designed this system for resuspending chemical sediment in waste pesticide reservoir tanks. We think the same system should work for postharvest drench tanks, but some experimentation will be required to determine the optimum number and angle of jets for each size and shape of tank. We suggest that a square, continuous loop of 2-inch PVC pipe be placed about 8-12 inches from the side walls of a flat-bottom tank, jets faced inward and some faced toward the corners of the tank. The agitation system would have to be easily removable from the tank so that it would not be in the way when the tanks are cleaned. It might be possible for growers to use the existing circulator pumps already installed in the tanks if they put in a valve that would direct water either into the overhead drencher unit when apples are being treated, or into the agitation system. If the existing pump proved adequate to run the agitation system, then growers could activate the agitation system for several minutes every hour and perhaps for an hour in the morning before they start using the drench system.

APPLICATION EQUIPMENT

IMPROVING THE
PERFORMANCE
OF POSTHARVEST
DRENCHING
EQUIPMENT

(Dave Rosenberger and Jim Bartsch)

❖❖ The equipment used to apply postharvest drenches to apples varies considerably from farm to farm in New York State. However, nearly all of the systems we have seen could benefit from improved agitation and from filtering systems that would remove dirt collected in the treatment tanks. The variation in tank designs makes it impossible to recommend a single system that would be appropriate for all drench tanks. The following ideas may be useful.

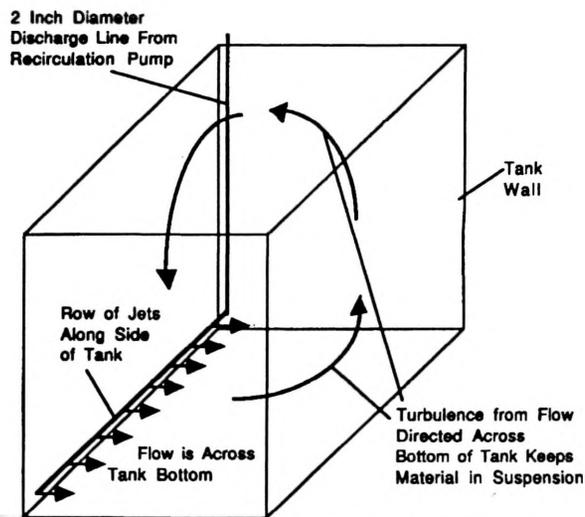
continued...

Filtration systems are available for removing soil particles from drench solutions. Rush Consultants from Wanatchee, Wash., sells filtration systems in various sizes. They report good results where their filtration systems have been used with postharvest apple drenchers in Washington State. Ken Silsby, harvest management and marketing specialist on the Western N.Y. Fruit Team, reports that storage operators in a Michigan apple storage have also reported good results with one of the filtration systems.

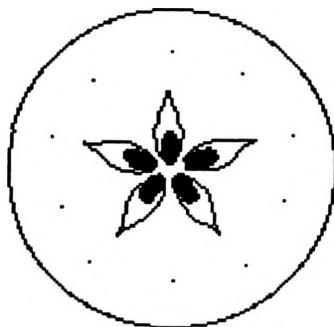
It is important to realize that the cleaning systems will remove soil and debris from drench solutions, but they cannot remove spores of fungal decay organisms. Thus, filtering the solution and using it for longer periods of time could actually result in higher levels of decay inoculum in drench tanks than are currently found in tanks where solution is changed regularly. However, removing soil from drench solutions will prevent the settling soil from trapping fungicide in the mud that tends to accumulate on the tank bottom.

To be effective, the filtration systems must be coupled with good tank agitation and with sanitation measures that minimize the amount of soil that is allowed to enter the tank. When used properly, the filtration systems should pay for themselves by reducing the amount of spent drench solution that must be discarded and replaced each year.

For more information on the filtration systems, contact Rush Consultants at 509-663-6368.❖❖



Agitation System for Rectangular Tank



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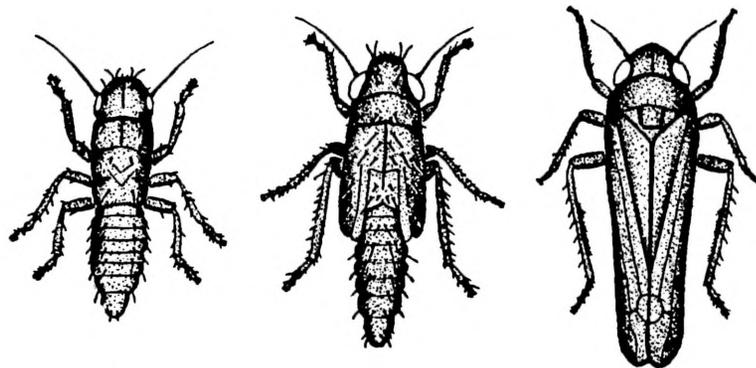
This newsletter available on CENET, in the TNEWS bulletin board under FRUIT.

LEAFHOPPERS

LEAFHOPPER
REVIEW
(Art Agnello)

❖❖ This was covered in the July 13 issue, but the timeliness of this information about a confusing insect warrants its repeating now. In the past (e.g., 1980, when the White Apple Leafhopper Fact Sheet was written), we firmly believed that WALH exhibited 2 generations in New York apples (after petal fall and in mid- to late August), and that potato leafhopper showed up at some unpredictable time in between these broods, just to make life interesting. Pretty soon thereafter, Rick Weires began pointing out what seemed to be strong evidence for an additional brood, which appeared, at least in Eastern N.Y., from mid-July through early August. This brood sometimes tended to overlap into the late August population, so that it was often possible to find various stages of WALH continuously on leaves throughout the entire summer. After this trend seemed to be repeated a couple of times, we tentatively began revising our party line about its biology.

More recently, work by Mark Brown in Kearneysville, W.V., shows that many of the leafhoppers seen in apples later in the season may actually be another closely related species, the rose leafhopper. This complex bit of biology is still being examined, and we hope it will be straightened out eventually, but the new information does not make it any easier for growers or scouts trying to determine when to stop worrying about hoppers. Nevertheless, whichever species or brood it may be, we do know that now is a good time to monitor your orchards (especially in the Hudson Valley) to determine the need for a treatment against this pest. Look especially on older fruit cluster leaves inside the tree, counting adults and nymphs on each of 10 clusters from 5-10 trees. An average of 1 or more adults or nymphs per leaf is suggested as a treatment threshold.❖❖



PHEROMONE TRAP CATCHES									
Number/Trap/Day, Geneva NY					Number/Trap, HVL, Highland NY				
	8/6	8/10	8/13	8/17		8/3	8/10	8/17	
Redbanded Leafroller	4.0	2.6	1.8	2.3	Spotted Tentiform Leafminer	93	121	199	
Spotted Tentiform Leafminer	761.2	91.4	56.5	28.6	Redbanded Leafroller	0	0	0	
Oriental Fruit Moth (apple)	1.8	2.0	0.8	2.1	Obliquebanded Leafroller	0	1	0.5	
Oriental Fruit Moth (peach)	0.2	0	0	0.1	Lesser Appleworm	6	1	1	
Lesser Appleworm	0.2	0.3	0.3	0	Oriental Fruit Moth	3.5	3.5	3.5	
Codling Moth	18.3	18.3	16.3	21.5	Codling Moth	18	25	10	
San Jose Scale	6.0	11.1	13.2	7.6	Apple Maggot	0	8.5	0	
Lesser Peachtree Borer (cherry)	5.0	2.4	6.3	1.5	Variegated Leafroller	0	7	5	
Lesser Peachtree Borer (peach)	0.3	1.0	0.7	0	Sparganothis Fruitworm	1	0.5	0.5	
Peachtree Borer	4.0	2.4	3.0	1.0					
Obliquebanded Leafroller	0	0	0	0					
Apple Maggot	0.4	0.1	0.8	0.9					

(Dick Straub)

UPCOMING PEST EVENTS

Current DD accumulations (Geneva 1/1 - 8/17): 43°F
2197 50°F
1401

Coming Events:

Ranges:

Apple maggot adult peak flight	2168-2607	1495-1762
Comstock mealybug 2nd generation crawlers peak	2350-2505	1642-1706
Obliquebanded leafroller 2nd flight starts	2330-3040	1526-2076
Peachtree borer flight subsides	2230-3253	1497-2309
Spotted tentiform leafminer 3rd flight starts	2331-2783	1603-1963

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

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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