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Update on Pest Management
and Crop Development

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

July 2, 2001

VOLUME 10, No. 16

Geneva, NY

LOOK
WHAT JUST
CRAWLED
IN

COMSTOCK
MEALYBUG
(Art Agnello,
Entomology,
Geneva)



❖❖ The first adult males of the season should begin to appear soon in pheromone traps, so it shouldn't be long before we start seeing some adult females in pear foliage, followed by their invasive crawler offspring. The crawlers are the most susceptible stage for chemical control, which we expect sometime during the next couple of weeks, especially in the Hudson Valley. The following information is adapted from the Comstock Mealybug IPM Fact Sheet, No. 22:

There are two generations of Comstock mealybug in New York, each taking 60–90 days to complete, depending on seasonal temperatures. The egg is generally thought to be the primary overwintering stage, but some nymphs and adult females from the second (summer) generation may also overwinter, with eggs being laid in the spring rather than the previous fall. Adult females and males emerge at the same time, from late June to mid-July for the first (overwintering) generation, and late August to mid-September for the second (summer) generation. Adult females are present for a total of 4–6 weeks, and oviposit for about one week after mating. Males survive for only a few days after emerging.

The elongate, orange-yellow eggs are laid in jumbled masses along with waxy filamentous secretions in protected places such as under bark crevices, near pruning cuts, and occasionally in

the calyx of fruit. The summer-generation eggs are laid from mid-June through late July, and the overwintering eggs from mid-August into October. The early larval instars of the CMB are similar to adult females (wingless and elongate-oval in shape, with a many-segmented body) except that they are smaller, more oval-shaped, lack the long body filaments, and are orange-yellowish because they have less wax covering. Later instars are similar in appearance, but become progressively browner and redder.

The overwintered eggs hatch from mid-April through May and the nymphs (crawlers) migrate from the oviposition sites to their feeding sites on terminal growth and leaf undersides of trees and shrubs. This hatch is completed by the petal fall stage of pears. Nymphs that hatch from these overwintered eggs are active from roughly early May to early July. As the nymphs approach the

continued...

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CHEM NEWS

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adult stage, they tend to congregate on older branches at a pruning scar, a node, or at a branch base, as well as inside the calyx of pears. Second- (summer) generation nymphs are present from about mid-July to mid-September.

The Comstock mealybug poses two major concerns for the pear processing industry of New York: First, the emergence of crawlers and adult females from the calyx of pears at the packinghouse creates a nuisance to workers. Second, pears to be made into puree typically are not peeled or cored by New York processors, so infestations can potentially result in unacceptable contamination of the product.

Another problem, of concern to apple growers in the 1930s and 1940s, and again in the Hudson and Champlain Valleys in the early 1980s, is that the honeydew secreted by the crawlers is a substrate for sooty molds growing on the fruit surface. This type of damage has also been noted on peaches in Niagara Co. and in Ontario, Canada. These molds result in a downgrading of the fruit, and are therefore an additional cause of economic loss.

To date, the Comstock mealybug has been a problem to growers of processing pears because of the contamination and aesthetic reasons noted. An infestation generally requires one or more insecticide sprays during the growing season, directed against the migrating crawlers. Examine the terminal growth for crawler activity periodically throughout the summer. Crawler and adult female activity can also be monitored by wrapping double-sided tape such as white carpet tape around low scaffold branches and inspecting for crawlers that have been caught by the tape. They can be recognized with a hand lens or, with some experience, by the unaided eye.

Sometime in early August, when we detect crawlers in some problem blocks we are monitoring, we'll advise an application of a material such as Provado, Diazinon, or Lannate to control this insect. ❖❖

JUST
WHAT
THE
DOCTOR
ORDERED

LORSBAN APPROVED
FOR POSTBLOOM USE
AGAINST APPLE
BORERS

❖❖ We have just received word that on June 28 the New York State Department of Environmental Conservation registered supplemental labels for Lorsban 4E (EPA Reg. No. 62719-220) and 50W (EPA Reg. No. 62719-221) allowing postbloom application to the trunks of apple trees for borer control.

Please contact Dow Agro Sciences or the Cornell Pesticide Management Education Program (607-255-1866) if you need additional information.

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...AND AVOID THE BITE

MIND THE BARK
(Dave Kain & Art Agnello,
Entomology, Geneva)

❖❖ Dogwood borers should be laying eggs in susceptible apple orchards now (those with succulent burrknot tissue or suckers). The larva of this clearwing moth feeds on apple trees, primarily on burrknot tissue on clonal rootstocks. Burrknobs are aggregations of root initials that can develop on the above-ground portion of the rootstock; all commercial dwarfing and semi-dwarfing rootstocks have a tendency to develop burrknots. Some chemicals with hormone effects, such as NAA, can increase the expression of burrknots, as will failure to keep the area around the trunk weed-free and open to sunlight. White latex paint brushed on the exposed portion of the rootstock will prevent new infestations of the borers, and also protect against southwest injury to the bark. Dilute trunk applications of an insecticide with good residual activity can provide control of established infestations. Lorsban 4E or 50W may now be used postbloom as a directed

trunk spray in N.Y. for borer control in apples (See CHEM NEWS) We feel that Lorsban is the best tool we presently have for this use, and mid-July would be a good time to take advantage of this welcome opportunity to use it on apples to control both dogwood borer and the second generation of American plum borer. Another option at this point in the season is an application of Thiodan 50WP applied once during this first week of July, and again one month later at the beginning of August. We would also note that, in case you didn't follow the strategy of using Lorsban as a prebloom trunk spray for American plum borer, these treatments will also serve as the last opportunity for a control measure against these pests.

Additionally, this is the time of the season when a second trunk application of a pesticide should be made against peachtree borers in cherries and peaches. A coarse spray directed at the trunk and scaffold branches gives the best protection against ovipositing adults; shutting off all but the bottom nozzles on a speed sprayer won't do an effective job. Use Lorsban 4EC, Thiodan, or a pyrethroid (Ambush, Asana, Pounce); do not spray the fruit.❖❖

UPCOMING PEST EVENTS

	43°F	50°F
Current DD accumulations (Geneva 1/1-7/2):	1462	949
(Geneva 1/1-7/2/2000):	1471	886
(Geneva 1/1-7/2 "Normal"):	1405	940
(Highland 1/1-7/2):	1700	1139
(Hudson 1/1-7/2):	1562	1025
Coming Events:	Ranges:	
Codling moth 1st flight subsides	1112-2124	673-1412
Apple maggot oviposition punctures present	1566-2200	1001-1575
Comstock mealybug 1st adult catch	1270-1673	756-1105
Lesser appleworm 2nd flight begins	1152-2302	778-1531
Spotted tentiform leafminer 2nd flight peak	1219-2005	701-1355
STLM 2nd gen. tissue feeders present	1504-2086	952-1201
San Jose scale 2nd flight begins	1449-1975	893-1407

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PEST FOCUS

Geneva: **Oriental fruit moth** and **redbanded leafroller** 2nd flights began today. 1st **apple maggot** caught 6/29 in Geneva.

1st **obliquebanded leafroller** caught 6/8. DD₄₃ accumulated since 6/8 in Geneva = 661. (Sample larvae now) **Codling moth** model is at 616 DD₅₀. (2nd spray date at 1260–1370 DD₅₀) **Spotted tentiform leafminer** 2nd flight began 6/14. DD₄₃ accumulated since then = 531. (Sample at 690–840 DD₄₃)

Highland: Apples damaged by frequent hail. **Potato leafhopper** and **rose leafhopper** nymphs present in apple. **Predatory mite** numbers increasing, keeping European red mites in check. **Two-spotted spider mite** numbers increasing.

Codling moth model is at 788 DD₅₀. **Spotted tentiform leafminer** 2nd flight began 6/11. DD₄₃ accumulated since then = 630.

INSECT TRAP CATCHES (Number/Trap/Day)

	Geneva, NY				Highland, NY	
	6/21	6/25	7/2		6/25	7/2
Redbanded leafroller	0	0	0.5	Redbanded leafroller	2.9	4.0
Spotted tentiform leafminer	285	120	112	Spotted tentiform leafminer	46.1	44.5
Oriental fruit moth	0.5	0.3	3.2	Oriental fruit moth	0.4	0.4
Lesser appleworm	0.2	0.1	0.7	Codling moth	5.4	2.7
Codling moth	6.7	6.9	3.4	Lesser appleworm	1.4	0.5
San Jose scale	0	0.8	–	Variegated leafroller	0.9	0.7
American plum borer	0.3	0.3	0	Obliquebanded leafroller	5.6	0.5
Lesser peachtree borer	6.5	11.1	9.7	Tufted apple bud moth	0.9	0
Peachtree borer	0	0.9	0.8	Apple Maggot	0	0.1
Dogwood borer	0	0	0	Dogwood borer	0	0
Pandemis leafroller	0.7	1.0	0			
Obliquebanded leafroller	2.8	0.3	0.3	Hudson, NY (Steve McKay)	6/25	7/2
				American plum borer	0	0
				Oriental fruit moth	0	0

* first catch

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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