

# scaffolds

Update on Pest Management  
and Crop Development

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

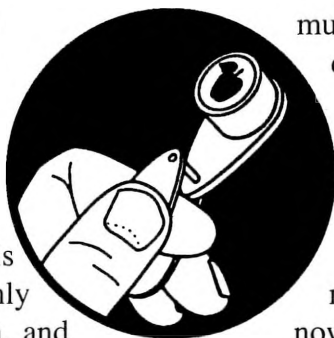
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Geneva, NY

## LOUSY SERVICE?

TIPPING THE  
SCALES  
(Art Agnello,  
Entomology,  
Geneva)



❖❖ The San Jose scale (SJS) is a pest of tree fruit that attacks not only apple, but also pear, peach, plum, and sweet cherry. The minute SJS adult males emerge in the spring from beneath scale covers on the trees, usually during bloom, and mate. The first of this year's adults started showing up on May 8 in our traps at Geneva. The females produce live crawlers within 4–6 weeks of mating; these are bright yellow, very tiny insects resembling larval spider mites. About 24 hours after birth, the crawlers have walked or drifted to new sites and settled in by inserting their mouthparts into the tree and secreting a white waxy covering that eventually darkens to black.

SJS infestations on the bark contribute to an overall decline in tree vigor, growth, and productivity. Fruit feeding causes distinct red-purple spots that decrease the cosmetic appeal of the fruit. Control measures for SJS are recommended when the scale or their feeding blemishes have been found on fruit at harvest during the previous season. Insecticidal sprays are most effective when directed against the first generation crawlers, specifically timed for the first and peak crawler activity, which are usually 7–10 days apart.

The most reliable method of determining first appearance of the crawlers in your specific area is by putting sticky-tape traps on the tree limb near encrusted areas and checking them at least twice a week, starting about the second week of June. Alternatively, a degree-day accu-

mulation of 310 (50°F base) from the date of first adult catch has also been shown to be reliable if the degree-days are known with some accuracy. In the Geneva area, first crawler emergence has tended to occur sometime around mid-June, which should make their appearance due any day now (we've reached 448 degree days as of this writing).

Effective materials for SJS control include Lorsban 50WP, Guthion, and Imidan. These sprays may also variously help in the control of OBLR, apple maggot, and codling moth. Coverage and control are generally better if the pesticide is applied dilute and in every row. SJS is frequently more of a problem in larger, poorly pruned standard size trees that do not receive adequate spray coverage. Dormant or delayed-dormant sprays of oil, or half-inch green applications of Lorsban 4EC or Supracide will have helped prevent populations from getting established. Early season pruning is important for removing infested branches and suckers, as well as for opening up the canopy to allow better coverage in the tree tops where SJS are often concentrated.❖❖

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### PEST FOCUS

### INSECT TRAP CATCHES

### UPCOMING PEST EVENTS

FROM  
"E" TO "Z"

EURO TRASH  
(Art Agnello, Entomology,  
Geneva)

❖❖ Infestations of European Corn Borer (ECB) in orchards are not very common, but when they do appear, as has been the case occasionally in N.Y., they can be quite serious. Considerable feeding damage will be noted in late June in terminals of newly planted apple and cherry trees, and early fruit feeding on apple is often evident by this time of the year. Infestations of this pest on apple are spotty and unpredictable; incidence in an orchard one year has no correlation with its likelihood of occurrence the next season. The ECB is present as two separate strains in N.Y., usually designated by their pheromone chemistry. The univoltine "Z" race (peak flight normally in mid-July), can be found almost continuously from Buffalo to Albany. The bivoltine "Z" race (peak flights in mid-June and mid-August) is present from Buffalo to about Rochester, and the bivoltine "E" race (also with peak flights in mid-June and mid-August) picks up from Rochester to Syracuse or thereabouts. In the Hudson Valley, all 3 races are probably present. What this means to most apple growers is that most places have flights in the middle of June, July AND August. Susceptible orchards (young non-bearing, and others in proximity to sweet corn populations) must therefore be protected almost continuously during the summer, using something that's relatively long-lasting.

Damage to newly planted, non-bearing trees is caused by larval tunneling in the current season's growth. Browning of terminal leaves is a good indication of corn borer larval presence. The feeding will kill the terminal and disfigure the tree. Non-bearing, newly planted orchards normally do not receive the intensive cover spray program bearing orchards do; therefore, corn borer infestations can build up more easily in young orchards. Corn borer

attack on young trees can occur from June through August. Damage to the fruit usually shows up in late summer, when the August flight of the bivoltine strain is active.

Bearing orchards are more likely to show some early corn borer damage on the fruit if growers relax their spray program in June or early July. However, most fruit feeding occurs between the last cover spray (mid-August) and harvest. Weedy sites provide plenty of alternative hosts for this insect, especially those containing broadleaf dock, ragweed, pigweed, smartweed, and barnyard grass. Lannate, Lorsban and Asana can give very good control of ECB larvae, provided application is made before the caterpillars become concealed in the plant tissue. Potential problem plantings should be checked periodically in August for shoot infestations of this caterpillar, which is cream colored with a dark head.❖❖

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**scaffolds** FRUIT JOURNAL

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## LIKE CLOCKWORK

### TIMING IS EVERYTHING

❖❖ Just a brief reminder to help you coordinate your pest control sprays with the right time of the season, to take advantage of recommended efficacy windows for a given pest's developmental stage. For those concerned with codling moth injury, our degree days (base 50°F) since 1st catch currently stands at 328, which is well into the preferred period for a preventive insecticide spray. For OBLR con-

trol using Confirm or a B.t. product, the recommended window for the 1st spray is 200–300 DD (base 43°F) after 1st catch, which corresponds to this week in western N.Y. In orchards where SpinTor or Lorsban are elected, waiting until approximately 350 is appropriate. Also, speaking of timing, we should point out the little-publicized change in the Carzol SP label since the winter, which now makes it illegal to use Carzol after petal fall — another bit of fallout from the FQPA-generated pesticide review. It's not likely that too many orchards are in trouble with mites yet, but this information should be incorporated into seasonal spray programs before the moment when an acaricide might be necessary.❖❖

### INSECT TRAP CATCHES (Number/Trap/Day)

	Geneva, NY				Highland, NY	
	6/12	6/15	6/19		6/12	6/19
Redbanded leafroller	0	0	0	Redbanded leafroller	0	0
Spotted tentiform leafminer	6.8	40.2	174	Spotted tentiform leafminer	27.7	75.6
Oriental fruit moth	0.6	0.3	0.3	Oriental fruit moth	0.1	0.1
Lesser appleworm	0.9	0.5	0.5	Codling moth	1.1	3.4
Codling moth	11.1	9.0	14.1	Pear psylla (eggs/50 leaves)	615	–
San Jose scale	0	0	0.1	Pear psylla (nymphs/50leaves)	100	–
Pandemis leafroller	1.9	1.5	2.1	Lesser peachtree borer	0.2	0.1
American plum borer	0.5	1.3	0.1	Lilac borer	1.0	0.3
Lesser peachtree borer	4.8	1.7	3.6	Dogwood borer	0	0
Peachtree borer	0	0	0	American plum borer	1.4	0.6
Obliquebanded leafroller	3.3	3.8	4.6	Obliquebanded leafroller	1.0	0.6
				Tufted apple budmoth	1.0	0.6

\* first catch

### PEST FOCUS

#### Geneva:

**Spotted tentiform leafminer** 2nd flight began 6/15. **Obliquebanded leafroller** flight began 6/8. Degree days (base 43°F) since then = 293. **Codling moth** flight began 5/19; DD50 since then = 328. Time for 1st CM spray, if you have not done so in the last week.

Highland: **Aphid** numbers increasing rapidly. **Codling moth** flight began 5/8; DD50 since then = 554. **Obliquebanded leafroller** flight began 6/5. Degree days (base 43°F) since then = 330. **Spotted tentiform leafminer** 2nd flight began 6/12. DD43 since then = 170.

## UPCOMING PEST EVENTS

	<u>43°F</u>	<u>50°F</u>
Current DD accumulations (Geneva 1/1-6/19):	1148	654
(Geneva 1999 1/1-6/19):	1172	724
(Geneva "Normal" 1/1-6/19):	1077	704
(Highland 1/1-6/19):	1357	822

<u>Coming Events:</u>	<u>Ranges:</u>	
Obliquebanded leafroller 1st flight peak	869-1548	506-987
Obliquebanded leafroller summer larvae hatch	1076-1513	630-980
Spotted tentiform leafminer 2nd flight peak	1266-2005	775-1355
Apple maggot 1st catch	1045-1671	629-1078
Dogwood borer 1st catch	798-1295	456-812
Peachtree borer 1st catch	565-1557	299-988
American plum borer 1st flight subsides	848-1668	440-1205
Oriental fruit moth 2nd flight begins	1152-1819	772-1215
San Jose scale 1st generation crawlers present	987-1247	569-784

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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.