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Update on Pest Management and Crop Development

FRUIT JOURNAL

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INSECTS

FLIGHT PLAN

ORCHARD RADAR DIGEST

Geneva Predictions:

Roundheaded Appletree Borer

RAB adult emergence begins: May 31; Peak emergence: June 14.

RAB egglaying begins: June 9. Peak egglaying period roughly: June 29 to July 16.

Codling Moth

Codling moth development as of May 22: 1st generation adult emergence at 1% and 1st generation egg hatch at 0%.

1st generation 3% CM egg hatch: June 11 (= target date for first spray where multiple sprays needed to control 1st generation CM).

1st generation 20% CM egg hatch: June 20 (= target date where one spray needed to control 1st generation codling moth).

Lesser Appleworm

1st LAW flight, peak trap catch: May 25.

Mullein Plant Bug

The *most accurate time* for limb tapping counts, but possibly after MPB damage has occurred, is when 90% of eggs have hatched.

90% egg hatch date: May 25.

Obliquebanded Leafroller

1st generation OBLR flight, first trap catch expected: June 12.

Oriental Fruit Moth

Optimum 1st generation second treatment date, if needed: May 30.

San Jose Scale

First adult SJS caught on trap: May 18.

Spotted Tentiform Leafminer

1st generation sapfeeding mines start showing: May 22. Optimum sample date is around May 25, when a larger portion of the mines have become detectable.

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GENERAL INFO

SKINNY ON THINNING

UPDATED HORTICULTURAL INFORMATION IN THE RECOMMENDS
(Art Agnello, Entomology, Geneva)

❖❖ I'd like to note once again that we did not receive all of the revisions to the "2006 Pest Management Guidelines for Commercial Tree-Fruit Production" in time to include them in the printed version of the "Recommends". These revisions (which pertain to the thinning and growth regulator recommendations) are correct in the online versions, and can be printed out easily enough by going to the website pdf version and printing off the following pages:
Pages 144-154 and p. 160:
(all at http://www.nysaes.cornell.edu/ent/treefruit/pdf/2006TF10.pdf)
Page 172: (at http://www.nysaes.cornell.edu/ent/treefruit/pdf/2006TF11.pdf)
Page 197: (at http://www.nysaes.cornell.edu/ent/treefruit/pdf/2006TF13.pdf)
Page 203: (at http://www.nysaes.cornell.edu/ent/treefruit/pdf/2006TF14.pdf)
Page 210: (at http://www.nysaes.cornell.edu/ent/treefruit/pdf/2006TF15.pdf)
and page 235 (http://www.nysaes.cornell.edu/ent/treefruit/pdf/2006TF17.pdf). ❖❖

PHENOLOGIES

Geneva:

Apple(McIntosh):	fruit set
Apple(Red Delicious):	petal fall
Apple(Empire):	petal fall
Tart cherry	fruit set, shucks off
Plum:	fruit set, shucks off
Peach:	fruit set, shucks on

DISEASES

LET'S TEST SCAB

APPLE SCAB AND FUNGICIDE RESISTANCE
(Wolfram Koeller and Diana Parker, Plant Pathology, Geneva)

❖❖ What started out as an 'easy' scab season in our Station orchards here in Geneva turned around to be a serious problem. Following a heavy three-day infection period at tight cluster, 90% of clusters had scab lesions at petal fall, and the performance of fungicides in our orchard trials confirmed previous experiences.

Starting the scab program at half-inch green rather than at green tip and responding to the infection at tight cluster with a post-infection spray provided no or poor control of cluster leaf scab. Dithane at its low mixture rate, but also when mixed with Captan, failed to control cluster leaf scab. As expected for an orchard with resistance to the SI fungicides, Nova, even in combination with Dithane, performed poorly.

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The performance of the strobilurin Flint was also poor, showing one more time that the strobilurins Flint and Sovran are starting to lose their post-infection edge. Both Scala and Vangard provided adequate post-infection activity, but we will have to wait until harvest to find out whether and how this post-infection advantage can be carried over to good control of fruit scab at harvest.

We have continued our sensitivity testing of the apple scab fungus during the 2005 season, and the not so 'pretty' picture we found a year earlier has been confirmed. Resistance to the SIs Nova, Procure and Rubigan is by now quite common rather than a rare occasion here and there. Resistance to Syllit is unpredictable. We found that once an orchard had developed resistance to dodine, this resistance was stable for more than 30 years, even after orchards had been replanted. We have not yet discovered an orchard totally immune to the strobilurins Flint and Sovran. But, sensitivity shifts toward resistance are obvious. These sensitivity shifts have eroded the post-infection power of the strobilurins. They remain very effective in a protective mode.

The APs Scala and Vangard remain a 'hard nut to crack'. We found that in SI-resistant orchards their potency was diminished before they ever were used. We also found that their post-infection advantage in the early scab season provided little advantage in the control of fruit scab at harvest.

Where do we go from here ? With financial aid provided by the North-East IPM Program, we will be able to test the resistance level of scab lesions found on leaves of commercial orchards 'for free'. How many orchards can we test ? About 25, on a 'first come, first served' basis. We also will not accept samples after 15 July.

How to submit leaves with scab lesions to be tested ? Easy. Contact Diana Parker, Cornell University, Department of Plant Pathology, 630 West North Street, Barton Laboratory, New York State Agricultural Experiment Station, Geneva, NY 14456. (Telephone 315-787-2400; dmp2@nysaes.cornell.edu). The procedure for collecting and shipping the leaves can be found on our Geneva web site (http://www.nysaes.cornell.edu/pp/extension/tfabp/index.html) or from your regional Cornell Cooperative Extension agents. Each shipment of leaves must be accompanied by the name, the address and the telephone/e-mail number of the submitter, and a summary of the orchard's fungicide history. Please contact Diana Parker prior to a shipment (Telephone 315-787-2400; dmp2@cornell.edu). ❖❖

INSECT TRAP CATCHES (Number/Trap/Day)

Geneva, NY

	5/15	5/18	5/22
Redbanded leafroller	1.6	2.3	0.3
Spotted tentiform leafminer	9.9	3.3	0.5
Lesser appleworm	0.0	0.0	0.0
Oriental fruit moth	0.1	0.2	0.0
Codling moth	0.0	0.0	0.0
San Jose scale	0.0	0.0	0.0
American plum borer	0.6	0.2	0.0
Lesser peachtree borer	0.4*	0.0	0.0

Highland, NY

	5/15	5/22
Spotted tentiform leafminer	6.4	1.1
Oriental fruit moth	3.4	0.9
Codling moth	0.2	0.2
Obliquebanded leafroller	0.0	0.0
Fruit tree leafroller	0.0	0.1
Tufted apple budmoth	0.1*	0.1
Variegated leafroller	0.0	0.0
Lesser peachtree borer	0.1*	0.1
Dogwood borer	0.0	0.1*
Lesser appleworm	0.4*	0.0

* first catch

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PEST FOCUS

Highland:
Plum curculio, tarnished plant bug, European apple sawfly, and **caterpillar** damage observed on apple. Low levels of **leafhopper** damage observed.1st **dogwood borer** trap catch. **Pear psylla** 2nd generation adults, egg numbers increasing.

UPCOMING PEST EVENTS

	43°F	50°F
Current DD accumulations (Geneva 1/1–5/22/06):	547	257
(Geneva 1/1–5/22/2005):	437	219
(Geneva "Normal"):	535	296
(Geneva 1/1–5/29 Predicted):	660	327
(Highland 3/1-5/22/06):	585	300

Coming Events:	Ranges(Normal±StDev):	
Lesser appleworm 1st flight peak	384–696	189–387
Spotted tentiform leafminer sap-feeders present	343–601	165–317
American plum borer peak catch	569–837	279–495
Mirid bugs 90% hatch	467–615	240–322
Mirid bugs hatch complete	489–639	252–350
Pear psylla hardshell present	493–643	271–361
San Jose scale 1st catch	377–597	186–324
European red mite 1st summer eggs	447–555	237–309
Obliquebanded leafroller pupae present	601–821	328–482

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