

SB
608
.F8
S265
v.2
m.22

scaffolds

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

Update on Pest Management
and Crop Development

I
N
S
E
C
T
S

August 11, 2003

VOLUME 12, No. 22

Geneva, NY

DOG
DAYS

ORCHARD
RADAR
DIGEST



MODEL
BUILDING

Geneva Predictions:

Dogwood Borer

Peak hatch roughly: August 8.

Codling Moth

2nd generation 30% CM egg hatch: August 17
(= single spray date where one spray needed to control 2nd generation codling moth).

White Apple Leafhopper

2nd generation WALH found on apple foliage:
August 13.

Highland Predictions:

Codling Moth

2nd generation 30% CM egg hatch: August 12
(= single spray date where one spray needed to control 2nd generation codling moth).

White Apple Leafhopper

2nd generation WALH found on apple foliage:
August 10.

N.Y.S. AGRICULTURAL

AUG 14 2003

EXPERIMENT STATION
LIBRARY

❖❖ **Oriental Fruit Moth.** Most problem orchards should have received a second spray against this brood last week (or as soon as the weather permits this week). According to the provisional PA model, we should be finished with the hatch of this brood, and not yet at the start of the 3rd brood hatch. The accumulated DD's (base 45F) from the season's first biofix as of 8/10 are:

SITE	BIOFIX	CUM DD-45
Highland	4/21	2428
Geneva	5/1	1978
Lyndonville	5/4	1958
N. Appleton	5/6	1873
Williamson	5/8	1850
Albion	5/5	1940

continued...

IN THIS ISSUE...

INSECTS

- ❖ Orchard Radar Digest
- ❖ Insect pest models update
- ❖ Summer insect pest roundup

HORTICULTURE

- ❖ Timing RETAIN applications

UPCOMING PEST EVENTS

PEST FOCUS

INSECT TRAP CATCHES

Codling Moth. In orchards not receiving protective sprays for apple maggot or oriental fruit moth and with potentially high codling moth pressure, the first application against the 2nd brood of this species is advised at 1260 DD (base 50F) after the season's first biofix. Geneva is at 1377 as of August 10, so other sites in western NY would be due this week, and Highland reached this mark on July 27.



calendar (this takes you to August 13). Now mark the calendar from that date through the next seven days. In my example this would be August 13-20. This is your application window for McIntosh; watch for good spray conditions and a six-hour drying time within that week and apply the material at the first opportunity. Congratulations! Your ReTain is on at the right time. Now mark your calendar for three weeks after the spray was applied. This is the preharvest interval.

Repeat the same thought process for later varieties, but keep in mind that later varieties are usually less affected by seasonal variation than McIntosh. Don't add the three days to account for a later season for Empire and later varieties.

Other questions:

Q: I'm planning to use ethephon (Ethrel, Ethepron II) to color my Macs. How does this affect the timing of the ReTain spray?

A: It doesn't. Figure the timing of the ReTain as above and get it applied, then worry about ethephon.

continued...

scaffolds

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
Dept. of Entomology
NYSAES, Barton Laboratory
P.O. Box 462
Geneva, NY 14456-0462
Phone: 315-787-2341 FAX 315-787-2326
E-mail: ama4@cornell.edu

Editors: A. Agnello, D. Kain

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

H
O
R
T
I
C
U
L
T
U
R

HOLD
ON
THAR!

TIMING *RETAIN*
APPLICATIONS FOR
BEST RESULTS
(Jim Schupp,
Horticultural Sciences,
Highland)

❖❖ The label recommends applying ReTain four weeks before anticipated harvest. This can cause confusion, as the grower is timing the spray relative to some future, unknown date! A more scientific basis for timing would be to state that ReTain should be applied four weeks before the natural climacteric rise in fruit ethylene, but this is still a future event with an element of uncertainty. The good news is that there is a fairly wide window when ReTain can be applied with optimal results, and a fairly easy way to determine when to apply it.

Start by estimating when you would normally expect to begin harvesting the variety if no ReTain or ethephon were used. As an example, for McIntosh in the lower Hudson Valley this might be on or about September 7. Now take into consideration the season. The 2003 bloom date, the ripening pattern of summer varieties, and the Blanpied model all suggest that this season is a bit later than normal in the lower Hudson. The Blanpied model suggests that maturity is three days later than average, so let's use that number, and estimate that harvest of untreated Macs would commence on or about September 10. Count back four weeks on the

Q: With this stalled front, we never know when it's going to rain next. What if I spray ReTain and it rains before we get six hours of drying?

A: If the coverage was good and the ReTain spray was on the trees with a full rate of Silwet for at least an hour before it rained, you probably got most of the benefit of the spray; just keep a close eye on it. If it gets rained off in less than an hour, then don't depend on getting much benefit — be prepared to treat the block as an untreated one.

Q: With all this humidity, we've got slow drying conditions and high dew points. What about spraying ReTain on wet foliage?

A: Spraying ReTain on wet foliage can result in a loss of performance, due to the material dripping off before it can be absorbed. Wait until the foliage dries. If you need to apply ReTain to slightly damp foliage, reduce the rate of Silwet to 6 fluid ounces instead of 12 to reduce the sheeting action and possible runoff. Another tactic that can work on a limited scale if time is running out is to first drive slowly through the block to be sprayed with just the fan on.

Q: Speaking of Silwet and other 100% organosilicone surfactants, I hate the way that stuff foams when I use the full 12-ounce rate, not to mention the expense! Can't I get by with a cheaper surfactant?

A: No. The rate of active ingredient in ReTain is the limiting factor. We need every molecule we apply to be absorbed and do its duty.

Q: What about split applications? Wouldn't that enhance the performance of ReTain, as it does with other PGRs?

A: Nope. Pomologists tested this thoroughly. A single well-timed spray always gave the best delay in maturity and best control of preharvest drop. Besides, you have enough to do this time of year — don't make ♦♦♦

WET ONE

SODDENLY
MID-AUGUST
(Art Agnello, Entomology,
Geneva)

♦♦♦ Most of the season's pest control decisions have been made by now, and as growers prepare to make what will probably be their last turn through the orchard for crop protection purposes before seriously addressing harvest activities, we can't help but be struck by how many insects have either failed to be a big concern this year or else are so incredibly delayed by climatic factors that none of the conventional wisdom applies. At any rate, in absence of any good arguments to the contrary, here's a quick rundown of some of the more important players to keep in mind for these dog day duties.

Apple Maggot

Catches of adults have been perplexingly low around the state, so this reinforces the value of block-specific monitoring for spray decisions. Mid-August is traditionally still fair game for a decent number of flies to be out and laying eggs, although numbers would normally begin tapering off a bit soon. This is yet another of those seasons when localized trapping can pay off in the event that some blocks are under greater pressure than others, even on the same farm, so please continue to monitor traps in representative blocks.

Internal Lepidoptera

We have doggedly attempted to keep tabs on adult catches and larval infestations this summer, following last year's problematic late-season fruit damage counts, but this complex of OFM, CM and LAW has been very elusive so far. Trap counts for the 2nd flight of oriental fruit moth have tapered off from their unexpectedly low levels, and we've yet to see whether the 3rd brood will make its presence felt in the western

continued...

orchards (both apple and peach). In our eastern demonstration blocks (Champlain Valley, Capital District, and Hudson Valley), the same scenario is playing out with lesser appleworm as the primary pest. Pheromone disruption results have been encouraging so far, but the edges of disrupted blocks are always susceptible to some problematic fruit infestations. For now, we're recommending that problem sites be kept covered with at least another spray, and we'll see what the tail end of the pre-harvest period looks like. Options include Guthion or Imidan or Asana in peaches. In apples and pears, you can use Guthion, Imidan, Avaunt, or Danitol; the last two materials will additionally give control of white apple leafhopper. For control of OFM, alternate row middle applications will not be as effective as whole orchard sprays in high pressure blocks. Assess the pressure in your specific situations, check the pre-harvest intervals, and determine whether a full or border spray might be in order.

European Corn Borer

Recall that these moths have a final flight that extends to the middle of September, and that the offspring can inflict last-minute fruit feeding damage to later varieties. One or two late sprays of a B.t. product like Dipel can go a long ways toward minimizing this injury, and the 0-day PHI is compatible with any harvest schedule. Also, SpinTor applied against late season leafrollers will also provide corn borer control (PHI = 7 days).

Dock Sawfly

The appearance of neat little (2 mm) holes bored into the side of apples in the late summer and early fall, similar in appearance to those caused by a stem puncture, may indicate an infestation of this relatively sporadic pest. Although this insect is a relative of the European apple sawfly, its appearance is quite different; the larva is a bright green worm with a light brown head, as contrasted with the EAS, which is whitish and feeds on young apples during the petal fall period. Dock sawfly confines its feeding almost entirely to plants belonging to the buckwheat family (Polygonaceae), including numerous docks and sorrels, the knotweeds and bind-

weeds, or else wild buckwheat or alfalfa.

The injury to apples consists externally of the small round holes bored by the larvae, which after a few days show a slightly sunken, brownish ring around them and occasionally may be surrounded by a larger discolored halo. These holes may occur anywhere on the surface, but are most numerous around the calyx and stem ends, or at a point where the apple touches a leaf or another apple, since it is easier for the larva to obtain a foothold here. Since the dock sawfly must live on the above-mentioned weeds, it becomes an apple pest only where these plants are growing in or around the orchard. There is little danger from this insect in orchards where the food plants don't exist. Now would be a good time to assess the weed situation in your orchard and make plans for such mowing or selective herbicide applications as may be appropriate regarding this insect. ♦♦♦

PEST FOCUS

Geneva:

Dogwood borer trap catch increasing. Spotted tentiform leafminer 2nd flight began 6/23. The first sample of sap-feeding mines should have been taken at 690 degree days (base 43°F) following this event. If necessary, resample at 840 and 1150 DD43°F. DD43°F to date = 1361.

Highland:

Rose leafhopper and **white apple leafhopper** nymphs present on apple foliage. **Green apple aphid** numbers increasing. **Apple maggot** damage evident in some blocks.

UPCOMING PEST EVENTS

	<u>43°F</u>	<u>50°F</u>
Current DD accumulations (Geneva 1/1–8/11):	2371	1566
(Geneva 1/1–8/11/2002):	2592	1790
(Geneva "Normal"):	2498	1748
(Geneva 8/18 Predicted):	2579	1725
(Highland 8/11):	2876	2012

Coming Events:

	Ranges:
Oriental fruit moth 2nd flight peak	1000–2908
Oriental fruit moth 2nd flight subsides	1806–2783
Oriental fruit moth 3rd flight begins	2172–2956
Redbanded leafroller 2nd flight subsides	1927–3045
American plum borer 2nd flight peak	1648–2688
Comstock mealybug crawlers emerging	2106–2768
Obliquebanded leafroller 2nd flight begins	2091–3040
San Jose scale 2nd flight peak	1934–2591
Spotted tentiform leafminer 3rd flight begins	2208–2783
Apple maggot flight peak	2033–2843
Codling moth 2nd flight peak	1471–3103
Obliquebanded leafroller 2nd flight begins	2091–3040

INSECT TRAP CATCHES (Number/Trap/Day)

Geneva, NY**Highland, NY**

	<u>7/31</u>	<u>8/4</u>	<u>8/7</u>		<u>7/28</u>	<u>8/4</u>
Redbanded leafroller	0.5	0.4	0.5	Redbanded leafroller	0.5	0.0
Spotted tentiform leafminer	17.2	9.8	24.8	Spotted tentiform leafminer	44.4	41.9
Oriental fruit moth	1.3	0.5	0.8	Oriental fruit moth	0.3	0.9
Lesser appleworm	0.2	0.3	0.3	Lesser appleworm	2.0	2.4
San Jose scale	2.7	2.0	4.7	Codling moth	0.9	0.6
Codling moth	0.2	1.2*	0.2	Obliquebanded leafroller	0.6	1.0
Obliquebanded leafroller	0.0	0.0	0.2	Fruittree leafroller	0.0	0.0
American plum borer	0.3	0.9	0.7	Sarganothis fruitworm	0.0	1.0
Lesser peachtree borer	0.8	0.3	0.0	Tufted apple budmoth	0.0	0.0
Peachtree borer	1.0	0.3	1.0	Variegated leafroller	0.0	0.3
Dogwood borer (N. Huron)	0.2	—	1.4	Dogwood borer	0.4	0.0
Apple maggot	0.3	0.3	0.3	Apple maggot	0.7	0.8

* first catch

scaffolds

Dept. of Entomology
NYS Agricultural Exp. Sta.
Barton Laboratory
Geneva, NY 14456-0462

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.

This material is based upon work supported by Smith Lever funds from the Cooperative State Research, Education, and Extension Service, U.S. Department of Agriculture. Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the U.S. Department of Agriculture.

FRANK LEE LIBRARY
JORDAN HALL

NYSAES