

scaffolds

Update on Pest Management
and Crop Development

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

June 14, 2010

VOLUME 19, No. 13

Geneva, NY

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LOOK
OUT

ORCHARD
RADAR
DIGEST



Roundheaded Appletree Borer

Peak egg-laying period roughly: June 14 to June 30.

Dogwood Borer

First DWB egg hatch roughly: June 15.

Codling Moth

Codling moth development as of June 14: 1st generation adult emergence at 90% and 1st generation egg hatch at 49%.

Obliquebanded Leafroller

Where waiting to sample late instar OBLR larvae is not an option (= where OBLR is known to be a problem, and will be managed with insecticide against young larvae): Early egg hatch and optimum date for initial application of B.t., Delegate, SpinTor, Proclaim, Intrepid, Rimon, Altacor, pyrethroid or other insecticide effective against OBLR (with follow-up applications as needed): June 18.

Oriental Fruit Moth

2nd generation OFM flight begins around: June 19.

Redbanded Leafroller

2nd RBLR flight begins around: June 21.



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PEST FOCUS

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MODEL BUILDING

Following are the available readings as of today.

Insect model degree day accumulations:

Codling Moth (1st targeted spray application at newly hatching larvae, predicted at 250–360 DD base 50°F after biofix; 2nd targeted spray 14–21 days later):

<u>Location (Weather Sta.)</u>	<u>Biofix</u>	<u>DD (50°F)</u>		<u>Date</u>	
		<u>June 14</u>		<u>250 DD reached</u>	<u>360 DD reached</u>
Highland	May 7	494		May 28	June 3
Burnt Hills (Glens Falls)	May 7	441		May 30	June 5
Marlboro	May 10	510		May 29	June 3
Modena (Cliftondale)	May 10	448		May 31	June 5
Newfield (Cornell Orch)	May 11	472		May 30	June 4
Waterport	May 19	475		May 31	June 5
Hilton (Waterport)	May 19	475		May 31	June 5
Lincoln (Farmingdale)	May 19	476		June 2	June 6
Lyndonville	May 19	379		June 1	June 8
Granville (Clifton Park)	May 21	410		June 2	June 9
Altamont (Guilderland)	May 21	413		June 2	June 8
Lafayette	May 25	300 (thru 6/13)		June 9	(NA)
Sodus	May 27	213		-	-
Wolcott (Sodus)	May 27	213		-	-
Chazy	May 31	166		-	-
Peru (South Hero, VT)	May 31	142		-	-
Alton (Williamson)	June 3	90		-	-

Obliquebanded Leafroller (estimated start of egg hatch in DD base 43°F after biofix — 360 DD; 25% egg hatch — 450 DD):

<u>Location</u> <u>(Weather Sta.)</u>	<u>Biofix</u>	<u>DD</u> <u>(as of 6/14)</u>
Highland	May 26	426
Waterport	May 28	417
Newfield (Cornell Orch)	June 1	276
Geneva	June 1	281
Lafayette	June 1	238
Wolcott (Sodus)	June 2	232
Lincoln (Farmingdale)	June 3	287
Sodus	June 3	207
Alton (Williamson)	June 3	213
Hilton (Waterport)	June 4	219
Lyndonville	June 4	126

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This newsletter available online at: <http://www.nysaes.cornell.edu/ent/scaffolds/>

[NOTE: Consult our insect pest predictions on the NEWA Apple Insect Models web page:

http://newa.nrcc.cornell.edu/newaModel/apple_pest

Find accumulated degree days for the current date with the

Degree Day Calculator:

<http://newa.nrcc.cornell.edu/newaLister/dday>

Powered by the NYS IPM Program's NEWA weather data and ACIS, Northeast Regional Climate Center]

THE HORROR

RETURN OF THE FLY
(Art Agnello and
Harvey Reissig,
Entomology, Geneva)

❖❖ It is once again the time we anticipate the first appearance of apple maggot (AM) flies in wild apple trees and abandoned orchards, particularly in eastern N.Y.; western N.Y. could be about a week later (or not, depending on what kind of temperatures we get over the next week or so). Crop scouts and consultants have been using traps to monitor AM populations for a long time, but this tactic, useful as it is, nevertheless is not recommended in all cases. Some orchards have such high or such low AM populations that monitoring for them is not time-efficient. That is, in some blocks, sprays are needed predictably every season, and on a calendar basis; conversely, they are rarely needed at all in other blocks. However, most commercial N.Y. orchards have moderate or variable pressure from this pest, so monitoring to determine when damaging numbers of them are present can reduce the number of sprays used in the summer with no decrease in fruit quality.

Sticky yellow panels have been in use for over 40 years, and can be very helpful in determining

when AM flies are present. These insects emerge from their hibernation sites in the soil from mid-June to early July in New York, and spend the first 7–10 days of their adult life feeding on substances such as aphid honeydew until they are sexually mature. Because honeydew is most likely to be found on foliage, and because the flies see the yellow panel as a “super leaf”, they are naturally attracted to it during this early adult stage. A few of these panels hung in an orchard can serve as an early warning device for growers if there is a likely AM emergence site nearby.

Many flies pass this period outside of the orchard, however, and then begin searching for fruit only when they are ready to mate and lay eggs. That means that growers don't always have the advantage of this advance warning, in which case the catch of a single (sexually mature) fly indicates that a spray is necessary immediately to adequately protect the fruit. This can translate into an undesirable risk if the traps are not being checked daily and produce an immediate response, something that's not always possible during a busy summer.

To regain this time advantage, researchers have developed traps that have the form of a “super apple” — large, round, deep red, and often accompanied by the smell of a ripe apple — in an attempt to catch that first AM fly in the orchard. Because this kind of trap is so much more efficient at detecting AM flies when they are still at relatively low levels in the orchard, the traps can usually be checked twice a week to allow a 1–2-day response period (before spraying) after a catch is recorded, without incurring any risk to the fruit. In fact, research done in Geneva over a number of years indicates that some of these traps work so well, it is possible to use a higher threshold than the old “one fly and spray” guidelines recommended for the panel traps. Specifically, it has been found that sphere-type traps baited with a lure that emits apple volatiles attract AM flies so efficiently that an insecticide cover spray is not required until a threshold of 5 flies per trap is reached.

continued...

The recommended practice is to hang three volatile-baited sphere traps in a 10- to 15-acre orchard, on the outside row facing the most probable direction of AM migration (towards woods or abandoned apple trees, or else towards the south). Then, periodically check the traps to get a total number of flies caught; divide this by 3 to get the average catch per trap, and spray when the result is 5 or more. Be sure you know how to distinguish AM flies from others that will be collected by the inviting-looking sphere. There are good photos for identifying the adults on the Apple Maggot IPM Fact Sheet (No. 102GFSTF-I8); check the web version at: <http://www.nysipm.cornell.edu/fact-sheets/treefruit/pests/am/am.asp>. In home apple plantings, these traps can be used to “trap out” local populations of AM flies by attracting any adult female in the tree’s vicinity to the sticky surface of the red sphere before it can lay eggs in the fruit. Research done in Massachusetts suggests that this strategy will protect the fruit if one trap is used for every 100–150 apples normally produced by the tree (i.e., a maximum of three to four traps per tree in most cases), a density that makes this strategy fairly impractical on the commercial level.

A variety of traps and lures are currently available from commercial suppliers; among them: permanent sphere traps made of wood or stiff plastic, disposable sphere traps made of flexible plastic, and sphere-plus-panel (“Ladd”) traps. The disposable traps are cheaper than the others, of course, but only last one season. Ladd traps are very effective at catching flies, but are harder to keep clean, and performed no better than any other sphere trap in our field tests. Brush-on stickum is available to facilitate trap setup in the orchard. Apple volatile lures are available for use in combination with any of these traps. These tools are available from a number of orchard pest monitoring suppliers, among them:

- Gempler’s Inc., 100 Countryside Dr., PO Box 328, Belleville, WI 53508; 1-800-382-8473, Fax, 1-800-551-1128 <<http://www.gemplers.com/>>
- Great Lakes IPM, 10220 Church Rd. NE, Vestaburg, MI 48891; 800-235-0285, Fax 989-268-5311

<mailto:glipm@greatlakesipm.com> <<http://www.greatlakesipm.com>>

- Harmony Farm Supply, 3244 Hwy. 116 N, Sebastopol, CA 95472; 707-823-9125, Fax 707-823-1734 <mailto:info@harmonyfarm.com> <<http://www.harmonyfarm.com>>

- Ladd Research Industries Inc., 83 Holly Court, Williston, VT 05495; 800-451-3406, Fax 802-660-8859 <mailto:sales@laddresearch.com> <<http://www.laddresearch.com>>

- Olson Products Inc., PO Box 1043, Medina, OH 44258; 330-723-3210, Fax 330-723-9977 <<http://www.olsonproducts.com/>>

- Suterra-Scenturion, 213 SW Columbia, Bend, OR 97702-1013; 866-326-6737, Fax 541-388-3705 <<http://www.suterra.com>>

By preparing now for the apple maggot season, you can simplify the decisions required to get your apples through the summer in good shape for harvest. ❖❖

WE DON'T
WANT ANY

THEY’RE WITH THE
BAND, TOO
(Art Agnello,
Entomology, Geneva)

❖❖ Speaking of fruit flies, we have heard from Jim Eve that he has begun catching black cherry fruit flies in an abandoned cherry block in Wayne Co., so it’s safe to declare that the season is now open on this species and its cousin, the (regular) cherry fruit fly. We generally don’t hear reports of serious pressure from this complex, but because of the zero tolerance in cherries for the maggots’ damage or presence, it’s prudent to begin sprays in your cherries now. OPs such as Guthion, Imidan (in tart cherries only), Lorsban, and Diazinon are all effective treatments. Alternatives that will offer varying levels of control include Assail, Delegate, and the pyrethroids. ❖❖

WILD AND WOOLLY

NOT SPINNING ANY YARN (Art Agnello, Entomology, Geneva)

DON'T YOU FORGET IT

EVENT REMINDER

GENERAL INFO

❖❖ We noted a couple of weeks ago that water sprouts, pruning wounds, and scars on the inside of the tree canopy should be examined for colonies of woolly apple aphid nymphs in June, and that prompt remedial action should follow the detection of any colonies. Debbie Breth reports that these are showing up in pruning cuts now, so please consider this as your word to the wise. WAA is resistant to the commonly used OPs, but other insecticides are effective against WAA, including Diazinon and Thionex. Movento is another good choice, if you have some on hand, and some newer products such as Assail (plus 1 qt. of oil per 100 gal) and Beleaf may offer suppression. Good coverage to soak through the insects' woolly coverings is integral to ensuring maximum efficacy. ❖❖

Cornell Fruit Field Days, July 28-29

❖❖ Cornell University will host the 2010 Fruit Field Days at the New York State Agricultural Experiment Station in Geneva, NY, on Wednesday and Thursday, July 28 & 29, from 8:00 a.m. to 5:00 p.m. each day. Grapes and berry fruits will be the focus on July 28, and tree fruits will be covered on July 29.

Pre-registration is required, and can be done either online (via credit card) or by mailing in a check plus the registration form. Both registration methods, as well as tentative presentation titles, are available through the NYSAES web page (<http://www.nysaes.cornell.edu/>) and the Cornell Fruit web page (<http://www.fruit.cornell.edu/>). The cost of registration is \$15 per person for single-day attendance and \$25 for both days; lunch will be provided each day. For sponsorship and exhibitor information, contact Debbie Breth at 585-798-4265 or dib1@cornell.edu. ❖❖

PEST FOCUS

Geneva: **Spotted tentiform leafminer** 2nd flight began today.

Highland: **Rose leafhopper** nymph emergence on apple predicted June 18. **San Jose scale** white cap observed June 7, fruit damage observed June 14. **Green aphids** building on apple terminal shoots.

Regional Trap Numbers**Week Ending 6/14, Avg No./trap**

<u>Location/County</u>	<u>Date</u>	<u>STLM</u>	<u>OFM</u>	<u>LAW</u>	<u>CM</u>	<u>OBLR</u>
Lyndonville/Orleans	6/11	7.0	1.0	16.3	1.0	2.7
Waterport/Orleans	6/11	11.3	2.0	27.3	1.0	1.0
Hilton/Monroe	6/11	594	0.0	6.0	2.3	6.3
Lincoln/Wayne	6/10	4.3	0.0	13.7	1.3	1.0
Sodus-Inland/Wayne	6/10	0.7	0.0	0.0	0.3	10.0
Alton/Wayne	6/10	7.3	0.0	2.3	0.0	4.7
Wolcott/Wayne	6/10	2.3	0.0	5.0	4.7	1.3
Newfield/Tompkins	6/8	277	0.3	0.0	2.3	2.0
Lafayette/Onondaga	6/8	14.3	1.0	19.5	12.3	1.7
Chazy/Clinton	6/7	13.3	0.7	17.3	0.0	-
Valcour/Clinton	6/7	0.7	2.0	18.3	0.0	-
Peru/Clinton	6/7	17.0	0.0	15.3	0.0	-
Granville/Washington	6/11	69.3	0.3	7.0	0.0	4.0
Burnt Hills/Saratoga	6/11	231	0.0	1.0	8.5	2.5
Altamont/Albany	6/11	232	0.0	0.5	2.5	6.5
Modena/Ulster	6/10	114	0.0	1.7	2.3	53.5
Marlboro/Ulster	6/10	380	0.0	2.5	6.0	46.0
Accord/Ulster	6/14	196	0.0	0.0	1.0	22.0

INSECT TRAP CATCHES**(Number/Trap/Day)****Geneva, NY****Highland, NY**

	<u>6/7</u>	<u>6/11</u>	<u>6/14</u>		<u>6/7</u>	<u>6/14</u>
Redbanded leafroller	0.3	0.0	0.0	Redbanded leafroller	0.1	0.0
Spotted tentiform leafminer	0.3	0.7	2.5*	Spotted tentiform leafminer	46.8	28.1
Oriental fruit moth	0.3	0.0	0.0	Oriental fruit moth	0.0	0.0
Lesser appleworm	0.4	0.0	0.0	Lesser appleworm	0.5	0.5
American plum borer	0.4	0.2	0.0	Codling moth	0.7	0.3
Lesser peachtree borer	0.1	0.0	0.0			
San Jose scale	1.0	0.0	0.0			
Codling moth	0.0	0.0	0.0			
Pandemis leafroller	0.3	0.3	0.4			
Obliquebanded leafroller	0.0	0.0	0.0			
Peachtree borer	-	0.0	0.0			

* first catch

UPCOMING PEST EVENTS

	<u>43°F</u>	<u>50°F</u>
Current DD accumulations (Geneva 1/1–6/14/10):	1201	752
(Geneva 1/1–6/14/2009):	972	567
(Geneva "Normal"):	982	585
(Geneva 1/1–6/21 predicted):	1376	879
(Highland 3/1–6/14/10):	1364	803
<u>Coming Events:</u>	<u>Ranges (Normal ±StDev):</u>	
Lesser appleworm 1st flight subsides	990–1466	604–932
San Jose scale 1st flight subsides	842–1232	499–763
San Jose scale 1st gen. crawlers present	1033–1215	619–757
Obliquebanded leafroller summer larvae hatch	1038–1460	625–957
Cherry fruit fly 1st catch	755–1289	424–806
Peachtree borer 1st catch	779–1347	444–830
Pear psylla 2nd brood nymphs hatch	967–1185	584–750
Spotted tentiform leafminer 2nd flight begins	982–1152	582–718
Spotted tentiform leafminer 2nd flight peak	1360–1790	846–1190
Apple maggot 1st catch	1234–1640	788–1044
American plum borer 1st flight subsides	1208–1410	749–907
Codling moth 1st flight subsides	1280–1858	811–1225
Comstock mealybug 1st adult catch	1308–1554	809–1015
Oriental fruit moth 2nd flight begins	1277–1487	785–965
Redbanded leafroller 2nd flight begins	1240–1580	761–1031

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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