

# scaffolds

Update on Pest Management  
and Crop Development

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

June 7, 2010

VOLUME 19, No. 12

Geneva, NY

I  
N  
S  
E  
C  
T  
S

## OUTLOOK

ORCHARD  
RADAR  
DIGEST



### Roundheaded Appletree Borer

Peak egglaying period roughly: June 13 to June 30.

First RAB eggs hatch roughly: June 10.

### Codling Moth

Codling moth development as of June 7: 1st generation adult emergence at 88% and 1st generation egg hatch at 45%.

### 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 13.

### Oriental Fruit Moth

2nd generation OFM flight begins around: June 18.

### San Jose Scale

1st generation SJS crawlers appear: June 5.



## IN THIS ISSUE...

### INSECTS

- ❖ Orchard Radar
- ❖ Model Building
- ❖ Current insect situation

### DISEASES

- ❖ Apple scab fungicide resistance survey update

### GENERAL INFO

- ❖ Fruit Field Day reminder

### INSECT TRAP CATCHES

### UPCOMING PEST EVENTS

## MODEL BUILDING

Following are the available readings as of today.  
Insect model degree day accumulations:

**Codling Moth** (targeted spray application at newly hatching larvae, predicted at 250–360 DD base 50°F after biofix):

Location (Weather Sta.)	Biofix	DD (as of 6/7)
Highland	May 7	443
Burnt Hills (Glens Falls)	May 7	420
Marlboro	May 10	426
Modena (Cliftondale)	May 10	375
Newfield (Cornell Orch)	May 11	394
Waterport	May 19	378
Hilton (Waterport)	May 19	378
Lincoln (Farmingdale)	May 19	339
Lyndonville	May 19	319
Granville (Clifton Park)	May 21	293
Altamont (Guilderland)	May 21	322
Lafayette	May 25	200
Sodus	May 27	186
Wolcott (Sodus)	May 27	186
Chazy	May 31	125
Peru	May 31	87
Alton (Williamson)	June 3	58

**Obliquebanded Leafroller** (estimated start of egg hatch in DD base 43°F after biofix - 360 DD):

Location (Weather Sta.)	Biofix	DD (as of 6/7)
Highland	May 26	341
Waterport	May 28	271
Newfield (Cornell Orch)	June 1	153
Geneva	June 1	151
Lafayette	June 1	100
Wolcott (Sodus)	June 2	115
Lincoln (Farmingdale)	June 3	133
Sodus	June 3	115
Alton (Williamson)	June 3	86
Hilton (Waterport)	June 4	73
Lyndonville	June 4	24

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

[http://newa.nrcc.cornell.edu/newaModel/apple\\_pest](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]

## 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  
Geneva, NY 14456-1371

Phone: 315-787-2341 FAX: 315-787-2326  
E-mail: ama4@cornell.edu

Editors: A. Agnello, D. Kain

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

## STRANGE BREW

LOOKING BOTH WAYS  
(Art Agnello, Entomology,  
Geneva, & Debbie Breth,  
CCE LOFT, Albion)

❖❖ Evidently it's safe to assume that all of the region's late spring cold cells have finally worked their way out of the system for the year, and this week's forecast stretch of higher temperatures should do a decent job of collecting all of the straggling, out-of-sync insect populations and putting them onto a somewhat comparable (not to say "normal") time schedule heading into early summer. We still seem to be running at least a week ahead of most seasons regarding pest and crop development, but things in one part of the state are generally starting to resemble those in another part.

Firstly, plum curculio, which previously looked to be heading for a long visitation, should now have finished progressing through its orchard-immigration and egg-laying activity and might now safely be referred to in the past tense. It seems that a majority of the 1st cover sprays were applied by last week, if not earlier, so that should effectively end the need for any further protection against this year's PC population.

Internal leps are somewhat of a different story. Codling moths have been flying since mid-May and we saw the first peak trap catch with this week's counts. We hit the target spray window of 250 DD 50°F on May 31 in orchards where growers are using only insecticides for control of high populations of CM, or are in the first season of using mating disruption and moths have already been caught. The first CM flight began May 3–5, but the cool weather that followed May 6–13 did not allow much mating activity. Research in Washington and Michigan has shown that CM mating and egg laying activities take place primarily during a 4-hr period, beginning around dusk if temperatures are above 60°F during that period. Temperatures below 60°F impede

male activity and prevent mating. We really did not have good weather for CM activity until May 16. If we start the biofix on May 16 (when we did have temperatures >60°F for a few hours around dusk) for high pressure sites, we have accumulated about 250 DD 50°F as of Jun 1. We should reach about 350 DD 50°F by Friday this week for those of you with low pressure who are planning only one spray for the first generation. This would be appropriate timing for orchards with a history of high pressure if mating disruption has been used for at least two seasons and there was no damage last season.

In low pressure CM sites: we have set biofix for low pressure sites as late as May 25 in inland sites, and June 1 for lake sites. Sprays in these locations can be targeted later. If you have low pressure, don't jump the gun, because if the trap counts do get high later with a "B" peak in flight for the first generation, more insecticide applications will be necessary. Trap network data and biofix dates can be seen in the Model Building section of this issue and at <http://www.fruit.cornell.edu/lof/>.

Those growers who have been using mating disruption for 2–3 years, or have low pressure sites in general, can wait until we hit 350 DD (65% of egg hatch occurs by this time.). Under conditions of low pressure this will provide adequate control as it did in the good old days when CM populations were not as bad. Timing the first spray will depend on which chemistry you plan to use and the pressure on your farm. For those who used Rimon at petal fall, you will still need to follow up with another spray between the 250–350 DD mark after biofix. Intrepid or neonicotinoids, including Calypso and Assail, should be applied at peak egg-laying and prior to egg hatch at 150–220 DD; granulosis virus such as Cyd-X, Virosoft, or Carpovirusine, at first generation egg hatch, 220–250 DD; Delegate or Altacor at first egg hatch, 220–250 DD. The older chemistries such as pyrethroids and OPs should be applied at first egg hatch, 220–250 DD. Pyrethroids have not worked

continued...

for control of CM in some orchards, so if you have a history of this experience, it would be best to rely on other insecticide classes. If using pyrethroids, do not stretch the intervals to 14 days during these critical egg hatch periods.

Oriental fruit moth trap counts are subsiding for now, but the next flight will likely begin by next week. If you plan to use mating disruption primarily for OFM, mid-June would be a good application timing in peaches and apples. The second flight is usually not as heavy as the first generation, but it will contribute to the population that can haunt you in September. Lesser appleworm moths are flying now and are non-target “contaminants” in our OFM traps. Mating disruption for OFM will also disrupt LAW, and insecticides timed for CM will control LAW.

What about obliquebanded leafroller? We hung traps a couple of weeks ago, thinking the early season would bring them out earlier than the normal June 10 date. In scouting last week, we found plenty of empty leafroller nests, but did not expect to see so many moths in the traps over the weekend. So the biofix is set for the OBLR timing model at May 28 across the region (check the Model Building table above for biofixes in specific locations). The recommended treatment time in high pressure orchards is at first egg hatch, which occurs around 350 DD base 43°F. First egg hatch is normally around June 20, but since flight started 10 days early, egg hatch will also be advanced. However, most orchards have low OBLR pressure and can wait until about 600 DD, when scouting will show if populations are an issue.

Other arthropods of note include aphids and mites, both of which have been noted in localized places in WNY; these should be showing their beady little eyes very soon given a little heat. Some foliar inspection for green peach and black cherry aphids in stone fruit blocks would be advised. When you get a chance, please take a moment to have a look for all these up-and-comers, so that you won't be surprised when they start doing what comes naturally. ❖❖

SEND US  
YOUR  
SCAB

APPLE SCAB  
FUNGICIDE  
RESISTANCE SURVEY  
2010 UPDATE  
(Kerik Cox,  
Plant Pathology, Geneva)

❖❖ Scab is showing up all over NY and surrounding states and we're already testing orchards. If you want to participate in the 2010 apple scab fungicide resistance survey, please prepare to make a sample submission. Go here: <http://www.nysaes.cornell.edu/pp/extension/tfabp/smor.htm>

Fresh young scab lesions on cluster leaves are suitable, but fresh terminal leaf scab (coming later) is even better. If you want to send cluster leaf scab in the near future and terminal leaf scab later, that's fine with us. There are a lot of potential sources of attrition with this test, and it doesn't hurt to have an extra set of leaves to fall back on in case the first ones fail. We have only a limited number of slots open for testing in 2010, so be the first to get your scab samples in.

When you are ready to submit, go to our website and download the instructions and sample submission form. If you don't have internet access, contact a local Cornell Cooperative Extension support specialist, and have them provide you with a copy of the instructions and submission form. ❖❖

D  
I  
S  
E  
A  
S  
E  
S

WE  
REPEAT

## EVENT REMINDER

**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](mailto:dib1@cornell.edu). ❖❖

**Regional Trap Numbers****Week Ending 6/7, Avg No./trap**

Location/County	Date	STLM	OFM	LAW	CM	OBLR
Lyndonville/Orleans	6/4	4.3	1.3	66.3	6.3	6.0
Waterport/Orleans	6/4	3.3	5.3	35.0	2.0	2.3
Hilton/Monroe	6/4	2.3	0.3	54.0	4.3	4.3
Lincoln/Wayne	6/3	4.0	0.3	45.7	8.7	6.3
Sodus-Lakesite/Wayne	6/3	1.0	1.0	8.0	3.3	5.7
Sodus-Inland/Wayne	6/3	2.0	0.0	1.7	0.7	22.3
Alton/Wayne	6/3	4.3	0.0	9.7	1.0	7.3
Wolcott/Wayne	6/2	1.0	0.3	4.0	3.0	0.3
Newfield/Tompkins	6/1	95.7	0.0	0.3	27.0	13.7
Lafayette/Onondaga	6/1	19.7	0.3	41.0	4.7	0.7
Chazy/Clinton	5/31	40.3	0.0	25.7	0.7	0.0
Valcour/Clinton	5/31	49.7	4.7	37.0	0.3	0.0
Peru/Clinton	5/31	21.3	0.0	13.3	0.0	0.0
Granville/Washington	6/7	65.7	0.0	269	8.7	41.5
Burnt Hills/Saratoga	6/7	281	1.0	28.5	98.5	–
Altamont/Albany	6/7	216	0.0	4.0	34.0	61.0
Modena/Ulster	6/1	3.0	0.3	0.0	16.0	53.0
Marlboro/Ulster	6/1	370	0.5	5.3	23.5	66.5
Accord/Ulster	5/27	143	0.0	4.2	15.2	–

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

	Geneva, NY				Highland, NY	
	<u>6/1</u>	<u>6/3</u>	<u>6/7</u>		<u>6/1</u>	<u>6/7</u>
Redbanded leafroller	0.0	0.5	0.3	Redbanded leafroller	0.0	0.1
Spotted tentiform leafminer	0.3	0.0	0.3	Spotted tentiform leafminer	25.0	46.8
Oriental fruit moth	1.3	1.5	0.3	Oriental fruit moth	0.0	0.0
Lesser appleworm	0.0	0.5	0.4	Lesser appleworm	0.4	0.5
American plum borer	0.1	0.0	0.4	Codling moth	1.6	0.7
Lesser peachtree borer	0.0	1.0	0.1			
San Jose scale	5.5	5.5	1.0			
Codling moth	0.0	0.0	0.0			
Pandemis leafroller	0.3	0.5	0.3			
Obliquebanded leafroller	0.3*	0.5	0.0			

## UPCOMING PEST EVENTS

	<u>43°F</u>	<u>50°F</u>
Current DD accumulations (Geneva 1/1–6/7/10):	1087	681
(Geneva 1/1–6/7/2009):	821	465
(Geneva "Normal"):	818	461
(Geneva 1/1–6/14 predicted):	1202	755
(Highland 3/1–6/7/10):	1233	721
<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
Codling moth 1st flight peak	574–1008	313–597
Obliquebanded leafroller 1st flight peak	843–1139	491–707
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
Oriental fruit moth 1st flight subsides	834–1120	485–695
Pear psylla 2nd brood nymphs hatch	967–1185	584–750
Spotted tentiform leafminer 2nd flight begins	982–1152	582–718
Pandemis leafroller flight peak	863–1147	493–695

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.