

scaffolds

Update on Pest Management
and Crop Development

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

June 9, 2008

VOLUME 17, No. 12

Geneva, NY

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HEAT INDEX

ORCHARD
RADAR
DIGEST



MODEL BUILDING

Geneva Predictions:

Roundheaded Appletree Borer

Peak emergence: June 9.

RAB egg laying begins: June 7. Peak egg laying period roughly: June 23 to July 7.

Codling Moth

Codling moth development as of June 9: 1st generation adult emergence at 50% and 1st generation egg hatch at 2%

1st generation 3% CM egg hatch: June 10 (= target date for first spray where multiple sprays needed to control 1st generation CM).

1st generation 20% CM egg hatch: June 15 (= target date where one spray needed to control 1st generation codling moth).

Obliquebanded Leafroller

1st generation OBLR flight, first trap catch expected: June 8.

San Jose Scale

1st generation SJS crawlers appear: June 15.

Spotted Tentiform Leafminer

2nd STLM flight begins around: June 13.



❖❖ We've been getting some unexplained inconsistencies in our degree day values when calculated using different methods using the temperature data on the NEWA website. For some reason, the values obtained using the Apple Pest DD Calculator are some 14–18% higher than

the results from pasting the daily raw temperature and accumulated DD values into Excel and summing them manually. Until we can determine the reason for this anomaly, below are the Codling Moth values obtained as of 6/9 using each method. Remember, these are only intended as a guideline, but our aim is to provide information that anyone would expect to get by going through this exercise themselves:

continued...

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PEST FOCUS

UPCOMING PEST EVENTS

INSECT TRAP CATCHES

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

<u>Location</u>	<u>Biofix</u>	<u>Apple Pest DD Calculator</u>	<u>Excel Spreadsheet</u>
Albion (Orleans Co.)	May 20	275	238
Appleton-S (Niagara Co.)	May 28	210	185
Brockport	May 15	---	257
Clifton Park (Saratoga Co.)	May 17	254	
Clintondale (Ulster Co.)	May 11	319	
Geneva	May 12	325	
Knowlesville (Orleans Co.)	May 28	220	
Red Hook (Dutchess Co.)	May 14	379	
Sodus (high-pressure site)	May 14	285	282
Sodus (low-pressure site)	May 20	---	260
Waterport (Orleans Co.)	May 20	281	245
Williamson	May 12	304	257

Plum Curculio (spray coverage required until 308 DD base 50°F after biofix; i.e., McIntosh petal fall):

<u>Location</u>	<u>Biofix</u>	<u>DD (as of 6/9)</u>
Albion	May 16	292
Appleton-S	May 23	255
Clifton Park	May 10	315
Clintondale	May 8	339
Geneva	May 14	313
Highland	May 14	288
Knowlesville	May 16	285
Red Hook	May 9	410
Sodus	May 16	273
Williamson	May 21	267

continued...

[NOTE: Consult our mini expert system for arthropod pest management, the Apple Pest Degree Day Calculator:

<http://www.nysaes.cornell.edu/ipm/specware/newa/appledd.php>

Find accumulated degree days between dates with the Degree Day Calculator:

<http://www.nysaes.cornell.edu/ipm/specware/newa/>

Powered by the NYS IPM Program's NEWA weather data and the Baskerville-Emin formula]

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PLAYING
CATCH-
UP

MADE GLORIOUS
SUMMER
(Art Agnello and Dave
Kain, Entomology,
Geneva)

❖❖ 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 the solid stretch of 90-degree temperatures should have done a decent job of collecting all of the straggling, out-of-sync insect populations and putting them somewhat onto a comparable (not to say "normal") time schedule heading into early summer. We still seem to be running about a week ahead of most seasons regarding pest and crop development, but at least things in one part of the state are starting to resemble those in another part.

Firstly, plum curculio, which previously looked to be heading for a long entrenchment, should now progress very rapidly through whatever portion of its orchard-immigration and egg-laying activity is still remaining to be expended. According to the heat unit models, most western NY sites will get to the oviposition cutoff date this week, and in the Hudson Valley, most have already passed it. It seems that a majority of the 1st cover sprays will have been applied by the end of the week, 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. Preventive sprays against our earlybird OFM populations should have gone on by now, and moth catches from the first generation are already starting to decline. Codling moth emergence was a bit fragmented as a result of the prolonged cool temperatures during the middle of May, so their 1st brood egg hatch is just getting under way now. This means that those growers specifically targeting this species should probably spray this week and then follow up in about 10-14 days, placing this window

squarely in between the ones for plum curculio and obliquebanded leafroller. This moves us distinctly back towards the practice of applying bi-weekly cover sprays, but that's the way things have turned out so far this season.

Other arthropods of note include aphids, leafrollers and mites, none of which have I noted specifically yet, but all of these should be showing their beady little eyes very soon given the continuing heat. Jim Eve notes that aphids are beginning to appear in Wayne Co., including green peach and black cherry aphids, so some foliar inspection in stone fruit blocks would be advised. We had our first OBLR moth catch in Geneva today (the Hudson Valley recorded theirs last week), and weather like this can't help but boost mite numbers, so please take a moment to have a look for these up-and-comers, so that you won't be surprised when they do what comes naturally. ❖❖

SUPER!

DELEGATE APPROVED
FOR NY USE
(Art Agnello, Entomology,
Geneva)

❖❖ Last Friday, the NYS DEC approved the Dow AgroSciences application for a Section 24(c) Special Local Need (SLN) label for the use of Delegate 25WG (EPA Reg. No. 62719-541) to control codling moth and oriental fruit moth on apples. This product contains the active ingredient spinetoram, which is a new member of the spinosyn class of insecticides; this class also includes spinosad, the a.i. in Spintor and Entrust. It is derived from the fermentation of a naturally occurring soil bacterium, *Saccharopolyspora spinosa*. Spinetoram is derived from different spinosyn components that have been chemically modified to give it improved insecticidal activity and greater photostability than spinosad. In addition to enhanced activity

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against OBLR, Delegate also exhibits high efficacy against the internal lep species; however, this SLN label allows its use only for CM and OFM. The full state label, which includes OBLR and other species, is still under review by the DEC.

In the control of CM, Delegate exhibits residual efficacy equivalent to that of azinphosmethyl. However, it is classified as a Reduced Risk pesticide, and its environmental profile and fate are similar to those of Spintor. Residues aged for 3 hr are practically non-toxic to honey bees, and it exhibits a low impact on key beneficial arthropods. Delegate has been found to be toxic to predatory mites and parasitoids in acute laboratory tests, but under field conditions, any effects on beneficial species are slight and transitory. This product represents an important new tool in the management programs of growers faced with increasingly problematic internal lep infestations in their apples.

The SLN label specifies an application rate of 4.5-6.0 oz of product per acre, with a maximum of 2 applications (12 oz of product max) allowed this season. Delegate has an REI of 4 hrs, and a PHI of 7 days. Bear in mind that a copy of the SLN label must be in the possession of the user at the time of application. Dow anticipates that there will be product delivered to NY distributors within the next 7 days. ❖❖

PEST FOCUS

Geneva:

1st **pandemis leafroller** and **obliquebanded leafroller** trap catches today, 6/9.

Highland:

Obliquebanded leafroller 1st trap catch 6/6. **Plum curculio** degree day model initiated at petal fall. So far 288 DD₅₀ have accumulated. Model predicts end of migration into apple at 308 DD₅₀. **San Jose scale** model predicts crawler emergence, and the need for control, 6/8. **Rose leafhopper** and **white apple leafhopper** caught in traps. **Pear psylla** 2nd gen. nymphs on pears.

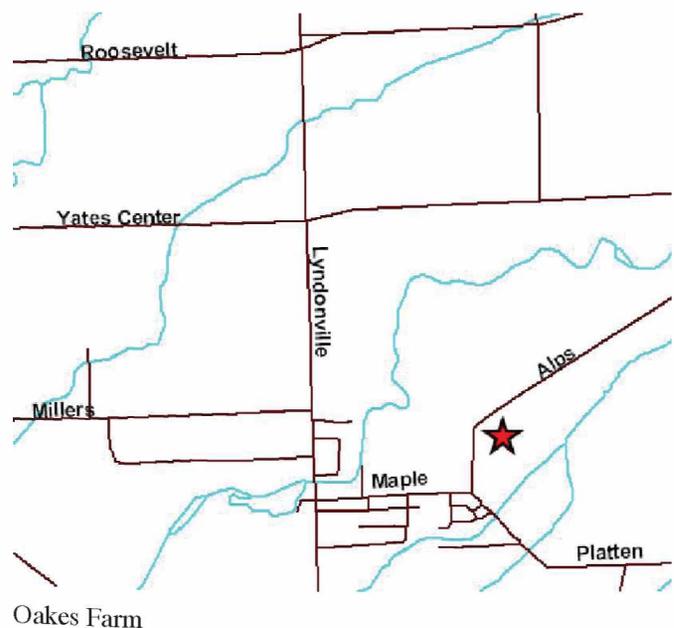
FINAL SHOWING

FINAL REMINDER
OF TOWER AND
SENSORS FIELD
DEMONSTRATION
(Andrew Landers,
Entomology, Geneva)

❖❖ There will be one final demonstration that will showcase equipment that was purchased through a USDA Conservation Innovation Grant. The purpose of this grant was to bring a new concept or technology to an area that will reduce environmental impact and increase profitability for agriculture producers. Ten Farmers received cost-share to purchase ten new sprayers in 2007. The District is hoping this program will lead to more cost-share opportunities in the future for farmers to purchase conservation type equipment.

• June 10, 2008 at 10:00 am, LynOaken Farms, Alps Road, Town of Yates

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INSECT TRAP CATCHES (Number/Trap/Day)

	Geneva, NY				Highland, NY	
	6/2	6/5	6/9		6/2	6/9
Redbanded leafroller	0.4	0.2	0.3	Redbanded leafroller	0.1	0.0
Spotted tentiform leafminer	3.0	0.8	0.8	Spotted tentiform leafminer	0.0	1.1
Oriental fruit moth	0.1	0.0	0.3	Oriental fruit moth	0.1	0.0
American plum borer	0.0	0.0	0.4	Codling moth	2.7	1.4
Lesser peachtree borer	0.3	0.8	0.0	Lesser appleworm	0.9	0.8
Lesser appleworm	0.0	0.0	0.1	Obliquebanded leafroller	0.0	0.6
San Jose scale	9.1	6.2	3.3			
Codling moth	0.3	0.2	0.1			
Pandemis leafroller	0.0	0.0	0.5*			
Obliquebanded leafroller	0.0	0.0	0.8*			

* first catch

UPCOMING PEST EVENTS

	<u>43°F</u>	<u>50°F</u>
Current DD accumulations (Geneva 1/1–6/2/08):	910	539
(Geneva 1/1–6/2/2007):	900	549
(Geneva "Normal"):	886	519
(Geneva 1/1–6/9 Predicted):	1089	676
(Highland 3/1–6/9/08):	910	510
<u>Coming Events:</u>	<u>Ranges (Normal ±StDev):</u>	
Codling moth 1st flight peak	599–989	325–581
European red mite summer egg hatch	737–923	424–572
Spotted tentiform leafminer 1st flight subsides	663–943	360–566
Spotted tentiform leafminer 2nd flight begins	958–1188	564–742
Dogwood borer 1st trap catch	810–1368	462–842
Obliquebanded leafroller 1st flight peak	904–1322	538–834
Pandemis leafroller flight peak	863–1167	491–707
Oriental fruit moth 1st flight subsides	827–1269	484–804
Pear psylla 2nd brood eggs hatch	967–1185	584–750
Peachtree borer 1st catch	788–1360	450–842
Rose leafhopper adults on apple	809–1053	440–662
San Jose scale 1st flight subsides	850–1202	507–741

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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