

# SCAFFOLDS Fruit Journal, Geneva, NY

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Update on Pest Management and Crop Development

May 20, 2013

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## COMING EVENTS

	43°F	50°F
Current DD accumulations		
(Geneva 1/1-5/20):	465	257
(Geneva 1/1-5/20/2012):	705	394
(Geneva "Normal"):	530	284
(Geneva 1/1-5/27 predicted):	627	369
(Highland 1/1-5/20):	596	312

## Upcoming Pest Events – Ranges (Normal +/- Std Dev):

### American plum borer

1st flight peak.....625-973      340-592

Codling moth 1st flight peak.....571-999      311-591

### European red mite

1st summer eggs .....447-555      267-309

Green fruitworm flight subsides .251-451      113-239

Lesser appleworm 1st catch .....263-561      121-303

Mullein plant bug 90% hatch .....472-610      247-323

### Obliquebanded leafroller

pupae present .....601-821      328-482

### Oriental fruit moth

1st flight peak.....	347-547	175-291
Pear psylla hardshells present ....	493-643	271-361
Plum curculio		
oviposition scars present .....	485-589	256-310
Redbanded leafroller		
1st flight subsides.....	589-899	329-561
San Jose scale 1st catch .....	430-614	215-337
San Jose scale 1st flight peak .....	554-746	294-418
Spotted tentiform leafminer		
sapfeeders present .....	343-601	165-317
McIntosh fruit set .....	510-600	266-326

Phenologies Current / Predicted 5/27  
(Geneva):

Apple (McIntosh, Empire): petal fall / fruit set

Apple (Red Delicious): 75% petal fall / fruit set

Apple (Empire): petal fall-fruit set

Sweet cherry: fruit set, shuck split

Peach: fruit set, shucks on

Plum: fruit set, shuck split

Pest Focus

Geneva: 1st Codling Moth and American Plum Borer trap catches 5/16.

1st Lesser Peachtree Borer trap catches 5/16

Wayne Co: 1st Codling Moth catch 5/15.

Highland: European Apple Sawfly and Plum Curculio damage present, but at low levels (<1%).

1st catch of Codling Moth today, 5/20.

### TRAP CATCHES (Number/trap/day)

#### Geneva

	5/9	5/13	5/16	5/20
Green Fruitworm	0.0	0.0	0.2	0.0
Redbanded Leafroller	11.3	5.6	4.2	2.4
Spotted Tentiform Leafminer	22.8	4.6	4.3	2.6
Oriental Fruit Moth	2.2	0.1	0.0	0.8
Lesser Appleworm	0.0	0.0	0.0	0.0
San Jose Scale	0.0	0.0	0.0	0.0
Codling Moth	0.0	0.0	0.3*	0.3
American Plum Borer	-	0.0	0.8*	0.4
Lesser Peachtree Borer	-	0.0	0.0	0.1*

#### Highland (Peter Jentsch)

	4/29	5/6	5/13	5/20
Green fruitworm	0.9	0.0	0.0	-
Redbanded Leafroller	29.4	18.6	5.4	1.8
Spotted Tentiform Leafminer	29.6	272	15.1	830

Oriental Fruit Moth	6.8	3.4	1.3	1.4
Lesser Appleworm	0.4*	-	3.1	0.9
Obliquebanded Leafroller	-	-	0.0	0.3*
Codling Moth	-	-	0.0	1.7*

\* = 1st catch

## **[Section: INSECTS]**

COMMENCEMENT SEASON

(Art Agnello, Entomology, Geneva)

**[Box Text: HATS OFF]**

Most regular biological events like insect development respond positively to warmer conditions, so assuming that this week's forecast of 80-plus degree weather will help get us there, pest management decisions will tend to need addressing on a fairly predictable schedule. Although this week's temperatures probably won't translate into a lot of management decisions having to be made all at once, the following is a long-view update of some of the traditional crop protection scenarios during this period. Dates in parentheses, where present, are the mean date of occurrence in Geneva, according to our recent records.

### **Plum Curculio (May 24 - scars present)**

Curcs have only so much egg-laying activity programmed into their behavior, and it's directly related to the temperature. The cooler the post-petal fall period is, the slower they finish, so the long-term forecast will be instrumental in determining how many cover sprays might be needed after petal fall to adequately protect the region's orchards until the ovipositing is finished. Most orchards probably will have received their petal fall spray this week. We should just begin to notice a few instances of injury

from this pest in western NY, and the **Apple IPM Insect Models Website**

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

puts curculios just barely into their egg-laying activity.

For apples, if you additionally have **Rosy Apple Aphid** colonies active in your trees, consider using Actara or Calypso now, both of which have good activity against both species.

### **European Apple Sawfly**

Traditionally confined to the eastern half of the state, but steadily making westward progress in recent years, the adults start laying eggs on or near newly set fruitlets at petal fall, so the plum curculio applications will do double duty against this pest as well.

### **Obliquebanded Leafroller (June 9)**

We have yet to catch the first obliquebanded leafroller adult in western N.Y., but populations in the Hudson Valley should be at least a week ahead of us, so don't be surprised to begin seeing them in the near future. Depending on the location, larvae should be able to be found now in various stages of development. Next week would therefore be an advisable time to be sure a pheromone trap is hung in problem apple blocks, to fix the date of first emergence in your specific area.

Recall that we recommend sampling at 600 DD (base 43°F) after the first adult catch, to determine the need and timing for treatment. For problem orchards with a reliable OBLR history where sampling is generally not needed, egg hatch (which equates to the first occurrence of susceptible larvae) occurs more or less 350 DD after the 1st adult catch. It pays to keep an eye on the daily highs and lows for your area if you are doing your own trapping, as it's likely that our "normal" first sampling date of July 5 won't turn out to be necessarily appropriate this year; once again, the **Apple IPM Insect Models Website** can help you zero in on these events in your specific area. In orchards not too removed from petal fall and containing large larvae, an application of Altacor, Belt, Delegate, Intrepid, Proclaim, Rimon, or a B.t. product (e.g., Agree, Dipel, Deliver) at this time will help diminish the population for better management during the summer.

## **Stone Fruit Aphids**

Although green peach aphids are not always a serious pest every year, colonies of these greenish, smooth-looking aphids are likely to occur in peach blocks during this period, along with their damage. They cause curled leaves that may turn yellow or red in severe cases, and more importantly, they are vectors of Plum Pox Virus,

which continues to be a threat in the western part of the state. The young aphids begin to hatch about the time of peach bloom and remain on the trees for 2–3 generations, until early summer, when they seek other hosts (mainly vegetable truck crops). Green peach aphids suck the sap from the new fruits and twigs, and are also found on plum, apricot, cherry, and many ornamental shrubs. These insects are difficult to control; the recommended options, where needed, include Actara, Admire, Assail, Beleaf, and Movento. Lannate is an alternative, but possibly less effective choice. Applications are recommended before excessive leaf curling occurs, in order to maximize the spray's effectiveness. Also, keep an eye out for black cherry aphid in your cherry trees after shuck fall. If colonies are building up on the foliage, recommended materials include Admire, Assail, Beleaf, Lorsban, Movento, Sevin, and pyrethroids such as Asana, and Baythroid. Pre-mixes labeled for this use include Endigo, Leverage, Voliam Flexi and Voliam Xpress.

### **Cherry Fruit Flies (June 16)**

It's too early for catches of adults on sticky board traps, but because of the zero tolerance in cherries for insect damage or presence, it's prudent to begin sprays in your cherries soon after shuck split (for this pest as



well as for curculio). Imidan (tart cherries only), Sevin, Diazinon, Assail, Actara, Delegate or the pyrethroids are all effective treatments. Sevin will also control black cherry aphid.

## **Lesser Peachtree Borer (May 24)**

The first adults have just been caught in Geneva. Remember to get your trunk and scaffold sprays on peaches and cherries during the next couple of weeks if borers are a problem in your blocks. An effective alternative is Isomate-PTB Dual for pheromone disruption. Now is a good time to think about hanging the ties (150-250/acre will disrupt both species -- Peachtree Borer appears about mid-month in our region; use the higher rate where pressure is more severe). This pest increases the severity of *Cytospora* canker infections in peaches and is often found within the canker; by feeding in the callous tissues, it interferes with the tree's natural defenses against the disease. Infestations can be determined by the presence of the insect's frass, which resembles sawdust, in the gum exuded from the wound. In peaches, you can use Ambush, Asana, Baythroid, Lorsban (all formulations), Pounce, Voliam Xpress or Warrior for this application (or pre-mixes such as Endigo, Leverage, or Voliam Xpress). In cherries, use

Ambush, Asana, Baythroid, [Lorsban (tarts only), as a trunk spray ONLY; do not spray the fruit], Pounce, Warrior, Endigo or Voliam Xpress, and observe the proper PHIs for these respective materials. Check the labels of all products for the recommended target area, where applicable (trunk vs. foliar).

## **European Red Mite**

Mite populations have been slow to build so far this season, but adults should be present soon, which means that they'll be laying summer eggs that will hatch into potential problems before long. We once again had at least some favorable pre-bloom weather for early season oil or miticide applications this year; however, if you failed to take advantage of these opportunities before bloom, it's not too late to use one of the preventive materials such as Savey/Onager, Apollo, Agri-Mek, Portal, or Zeal in problem blocks or where you may have noted ERM eggs.

In situations where European red mite pressure or the crop's sensitivity to them haven't necessarily justified an early season treatment with any of the above options, this is the time of year when a summer oil program also might be considered as an alternate preventive approach, particularly considering this

species' slow start during the spring. Our field research trials have shown the effectiveness of using a highly refined oil in a seasonal program to control mites throughout the summer. Some examples of these products are PureSpray Spray Oil 10E, BioCover UL, or PureSpray Green (all from Petro Canada), Stylet-Oil (JMS Flower Farms), and Omni (an ExxonMobil product formulated using Orchex 796 and distributed by Helena); others are available, such as Damoil (Drexel), Saf-T-Side (Brandt Consolidated) and Mite-E-Oil (Helena) although we haven't tested all brands.

Our approach is to make three applications, on a preventive schedule, immediately after the petal fall period, before mite populations have a chance to build. The first application can be any time from petal fall to 1–2 weeks later, followed by two additional sprays at 10–14-day intervals. The oil is not concentrated in the tank, but rather mixed on the basis of a rate per 100 gallons of finish spray solution; in most cases, we recommend 100 gal per acre. A rate of 1–2 gal/100 should maintain control of most moderate populations. Don't apply without leaving at least a 10–14-day interval before or after a captan spray.

**San Jose Scale (June 19 - 1st crawlers)**

Minute SJS adult males emerge in the spring from beneath scale covers on the trees, usually during bloom, and mate; 1st catch in Geneva was early this year at May 9. The females produce live crawlers within 4–6 weeks of mating; these make their way to new sites and insert their mouthparts into the tree, secreting a white waxy covering that eventually darkens to black. SJS infestations on the bark contribute to an overall decline in tree vigor, growth, and productivity. Fruit feeding causes distinct red-purple spots that decrease the cosmetic appeal of the fruit. Insecticidal sprays are most effective when directed against the first generation crawlers, specifically timed for the first and peak crawler activity, which are usually 7–10 days apart.

In the Geneva area, first crawler emergence has tended to occur sometime around mid-June. If and when a treatment against this stage is needed, Esteem 35WP is one option. It should be applied at 4-5 oz/acre at first crawler emergence; a low rate (0.25% or 1 qt/100) of a highly refined summer oil (see above) has been shown to improve penetration and, therefore, control. Additional products showing control efficacy include Assail, Centaur (except Nassau and Suffolk Counties) and Movento (which must be mixed with an

organosilicone or nonionic spray adjuvant). Other options include OPs such as Guthion and Imidan, or Admire, or pre-mixes such as Endigo, Leverage, or Voliam Xpress.

## **Oriental Fruit Moth (May 2)**

We're generally calling biofix May 1 in western NY. In problem blocks (i.e., those with a history of more than 1–2% fruit infestation over the past 10 years), the first spray against the first larval brood in apples is recommended at 350–375 DD (base 45°F) from biofix, which corresponds with 55–60% hatch. The records as of today show the DD accumulation in Geneva to be 173 (our biofix in Geneva was May 6), and 278 DD for the Highland Lab (April 29 biofix). Therefore, it's still a bit of time until the window for a timely treatment in apples. If you're more than 7–10 days past your PF sprays and will need something specific against OFM, Altacor, Assail, Avaunt, Belt, Calypso, Delegate, Intrepid, and Rimon are recommended options in apples, and Altacor, Assail, Belt, Delegate, Asana, Danitol or Warrior in peaches.

## **Pear Psylla**

These insects have also been slow to start this season, but the gradually warming temperatures will eventually

result in the production of summer nymphs. Particularly if you weren't able to get an oil spray on before bloom, populations of 1–2 per leaf would be an indication of the need for a prudent application of Agri-Mek at this time; alternatively, Actara, Asana, Assail, Calypso, Centaur, Danitol, Delegate, Esteem, Movento, Nexter, Portal, Proclaim, Provado, and Warrior also have varying degrees of effectiveness against this pest, usually negatively correlated with frequency of past use.

## **[Section: GENERAL INFO]**

### EVENT ANNOUNCEMENTS

#### **[Box text: COME ON UP]**

### WNY PETAL FALL THINNING MEETINGS

Times and Locations:

May 22, 1:00 PM - Lynoaken Fruit Farm, 1872

Greenman Road, Lyndonville, NY 14098. 1/4 Mile North of Platten Rd. Look for Cornell Fruit Event Signs.

May 23, 1:00 PM – Ridgeview Farms, 4715 Congdon Road, Williamson, NY 14589 (from Route 104 – turn

south onto E. Townline Road, Congdon Rd. is

approximately one mile south of Route 104. Look for Cornell Fruit Event Signs.

Come to hear updates on insects and diseases, and of course, thinning recommendations by Terence Robinson. Cornell faculty and the LOF team members will be present to answer questions.

## DEMONSTRATION OF A NEW 3-ROW SPRAYER

You are invited to Vandewalle Fruit Farm, 6003 Shaker Rd, Alton, NY on 3 June 2013. Mr. Thijs Munckhof will be visiting from the Netherlands to demonstrate the MUNCKHOF 3-ROW SPRAYER he has designed. Originally introduced in 2008, there are now over 100 of these machines in use around the world, but this is the first such unit in the United States. MUNCKHOF has been manufacturing Harvesting Machines and Sprayers for over 125 years.

Two Sessions for your convenience: from 4:00-5:00 P.M. and 6:30-7:30 P.M.

For more information, call 315-946-9202.

## CORNELL FRUIT FIELD DAY

Cornell University will host the 2013 Fruit Field Day at the New York State Agricultural Experiment Station in Geneva, NY, on Thursday, August 1, from 8:00 a.m. to 5:00 p.m. There will be two tour loops of tree fruit and

a single tour loop of grapes and small fruit crops. Fruit growers, consultants, and industry personnel are invited to tour field plots and learn about the latest research and extension efforts being carried out by researchers on the Geneva and Ithaca campuses, and on commercial farms elsewhere in the state. The focus of the field day will be on all fruit commodities of key importance to New York's \$350 million industry: apples, grapes, cherries, raspberries, strawberries, blueberries and other berry crops. During lunch, equipment dealers and representatives from various companies will showcase their latest products and technologies to improve fruit crop production and protection.

The event will be held on the Experiment Station's Fruit and Vegetable Research Farm South, 1097 County Road No. 4, one mile west of Pre-emption Rd. in Geneva, NY. Signs will be posted. Attendees will be brought to the different research plots by bus to hear presentations by researchers on the work being conducted. Details on registration and program content will be available soon.

**CORNELL UNIVERSITY STORAGE WORKSHOP**



This year's workshop, slated for August 6 in Ithaca, will feature an international, national and statewide cast. Our guest speakers include Dr. Angelo Zanella, who heads the post-harvest research group at Laimburg Agriculture Research Centre in Italy, and who will be presenting their work on DCA and ILOS, as well as their experiences with DPA. Other presentations will include Honeycrisp, and Empire and Gala browning by Jim Mattheis (USDA, Washington), Jennifer DeEll (Ontario Ministry of Agriculture and Food, Canada), as well as the Cornell team of Chris Watkins and David Rosenberger. Industry presentations include DECCO, PACE and Storage Control Systems. Registration materials will be available shortly.

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