

scaffolds

Update on Pest Management
and Crop Development

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

May 21, 2012

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Geneva, NY

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EARLY BIRDS

ORCHARD
RADAR
DIGEST



FEELING OUR
WAY

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3 x 5s

❖❖ Roundheaded Appletree Borer

RAB egg laying begins: May 25. Peak egg laying period roughly: June 16 to July 3.

Dogwood Borer

First DWB egg hatch roughly: June 13.

Codling Moth

Codling moth development as of May 21: 1st generation adult emergence at 29% and 1st generation egg hatch at 0%.

1st generation 3% CM egg hatch: May 26 (= target date for first spray where multiple sprays needed to control 1st generation CM). 1st generation 20% CM egg hatch: June 2 (= target date where one spray needed to control 1st generation CM).

Obliquebanded Leafroller

1st generation OBLR flight begins around: May 26.

Oriental Fruit Moth

1st generation 55% egg hatch and first treatment date, if needed: May 19.

San Jose Scale

First adult SJS crawlers appear: June 7.

❖❖ The yo-yo-ing temperatures over the past few weeks have managed to land us somewhat earlier than what might otherwise be a normal schedule as far as pest phenology is concerned. Most biological processes like insect development respond positively to warmer conditions, so with the warmer temperatures that are forecast for this week, any pest management decisions that are anticipated will tend to need addressing on a fairly predictable schedule. Although this probably won't translate into a lot of treatment decisions having to be made all at once, the following is a snapshot update of some of the traditional crop protection scenarios during this period. This infor-

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mation will admittedly be of limited use for blocks with little to no fruit, but we are providing it here for those pests that do warrant treatment. 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 warmer the post-petal fall period is, the more quickly 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 (those that are getting them). We've just begun to hear of a few instances of injury from this pest in western NY, and the Apple IPM Insect Models Website (http://newa.nrc.cornell.edu/newaModel/apple_pest) puts curculios about one-third of the way through their egg-laying activity in Geneva. 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 lay eggs on or near newly set fruitlets starting at petal fall, so the plum curculio applications will do double duty against this pest as well.

Obliquebanded Leafroller (June 10)

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, particularly owing to the bonus heat units accumulated earlier this season. Depending on the location, larvae can be found now in all stages of development, although inspections are turning up sparse populations in most WNY

orchards. This 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 350 DD (more or less) 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) will help diminish the population for better management during the summer.

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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, Movento, and Provado. Lannate and Thionex are alternatives, but are possibly less effective. 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, Provado, Sevin, Thionex, and pyrethroids such as Asana, and Baythroid.

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). Guthion, 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; their flight generally starts around Memorial Day. 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, Leverage, Lorsban, Pounce, Proaxis, Thionex, Voliam Xpress or Warrior for this application. In cherries, use Ambush, Asana, Baythroid, [Lorsban (tarts only), as a trunk spray ONLY; do not spray the fruit], Pounce, Proaxis, Thionex, Voliam Xpress or Warrior, 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 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

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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 4. 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, but look for it earlier this season. If and when a treatment against this stage is needed, Esteem 35WP is

quite effective. 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. Other alternatives include Centaur (except Nassau and Suffolk Counties) and Movento (which must be mixed with an organosilicone or nonionic spray adjuvant). Assail, OPs such as Guthion and Imidan, or Admire or Leverage, are additional options.

Oriental Fruit Moth (May 2)

Moths started showing up April 9 in Wayne Co., but we're generally regarding April 17–20 as an early biofix 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 Albion to be about 273, and 279 in Williamson. 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 Rimona 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, Admire, Asana, Assail, Calypso, Centaur, Danitol, Delegate, Esteem, Movento, Nexter, Portal, Proclaim, and Warrior also have varying degrees of effectiveness against this pest, usually negatively correlated with frequency of past use.



PEST FOCUS

Geneva: 1st **lesser peachtree borer** trap catch 5/15. **Plum curculio** oviposition scars present on Empire.

Highland: 1st hatch of 2nd generation **pear psylla** nymphs observed. **Rosy apple aphid** feeding injury to apple foliage observed.

Insect predictive model status:

San Jose scale 500DD model prediction @ 493.0(control required this week)

Plum curculio 308DD model for required insecticide residue @ 238.0

Codling moth CM egg hatch 220DD model prediction @ 217.0 (control required this week)

INSECT TRAP CATCHES (Number/Trap/Day)

Geneva, NY

Highland, NY

	<u>5/14</u>	<u>5/17</u>	<u>5/21</u>		<u>5/14</u>	<u>5/21</u>
Redbanded leafroller	2.0	–	3.0	Redbanded leafroller	0.4	0.0
Spotted tentiform leafminer	7.0	2.5	1.1	Spotted tentiform leafminer	3.4	0.8
Oriental fruit moth	4.5	1.2	0.9	Oriental fruit moth	2.4	1.0
American plum borer	1.5	0.3	0.1	Codling moth	4.6	2.6
Lesser appleworm	0.3	0.0	0.1	Lesser appleworm	3.4	1.7
San Jose scale	0.1	–	0.1	Tufted apple budmoth	–	2.2
Codling moth	2.2	2.3	0.8	Fruittree leafroller	0.0	0.0
Lesser peachtree borer	–	1.0*	2.1	Variegated leafroller	0.0	0.4*
Dogwood borer	–	0.0	0.0	Obliquebanded leafroller	–	0.0
				San Jose scale	–	0.1

* first catch

UPCOMING PEST EVENTS

	<u>43°F</u>	<u>50°F</u>
Current DD accumulations (Geneva 1/1–5/21/12):	735	417
(Geneva 1/1–5/21/2011):	493	254
(Geneva "Normal"):	531	282
(Geneva 1/1–5/28 predicted):	926	558
(Highland 1/1–5/21/12):	894	493
(Highland 1/1–5/21/11):	610	317

<u>Coming Events:</u>	<u>Ranges (Normal ±StDev):</u>	
Lesser appleworm 1st flight peak	355–773	174–440
San Jose scale 1st flight peak	554–746	294–418
American plum borer 1st flight peak	636–982	349–597
Obliquebanded leafroller pupae present	601–821	328–482
Black cherry fruit fly 1st catch	702–934	380–576
Codling moth 1st flight peak	574–1008	313–597
European red mite summer egg hatch	737–923	424–572
Rose leafhopper adult on multiflora rose	689–893	366–498
Rose leafhopper adult on apple	809–1053	440–622
Dogwood borer 1st catch	831–1301	473–791
Pandemis leafroller 1st catch	775–907	439–527
Obliquebanded leafroller 1st catch	816–988	472–596
Peachtree borer 1st catch	796–1350	456–834
Redbanded leafroller 1st flight subsides	584–892	325–557
Spotted tentiform leafminer 1st flight subsides	670–946	369–573

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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