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Update on Pest Management and Crop Development
June 4, 2012

COMING EVENTS

	43°F	50°F
Current DD accumulations		
(Geneva 1/1-6/4):	1072	655
(Geneva 1/1-6/4/2011):	835	499
(Geneva "Normal"):	767	430
(Geneva 1/1-6/11 predicted):	1210	747
(Highland 1/1-6/4/12):	1243	745
(Highland 1/1-6/4/11):	964	573

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

Cherry fruit fly 1st catch	755-1289	424-806
Lesser appleworm		
1st flight subsides.....	990-1466	604-932
Obliquebanded leafroller		
1st flight peak.....	843-1139	491-707
Obliquebanded leafroller		
summer larvae hatch	1038-1460	625-957
Oriental fruit moth		
1st flight subsides.....	831-1121	485-695
Pear psylla 2nd brood hatches....	967-1185	584-750

San Jose scale
1st flight subsides.....851-1233 506-764
San Jose scale
1st gen crawlers present.....1033-1215 619-757
Spotted tentiform leafminer
2nd flight begins.....987-1161 587-725

PEST FOCUS

N. Huron:

1st Dogwood Borer trap catch 5/30.

Geneva:

Codling Moth egg hatch 250-360DD treatment window model prediction @ 363 (May 11 biofix). Treatment still an option in less advanced sites.

Obliquebanded Leafroller DD43 developmental model @ 152 (May 28 biofix); first egg hatch predicted at 360 DD.

Highland:

1st San Jse Scale crawler emergence observed.

Obliquebanded Leafroller DD43 developmental model @ 206 (May 27 biofix); first egg hatch predicted at 360 DD.

San Jose Scale DD50F adult male model accumulation @ 333.4 (May 14 biofix); model prediction date = June 6.

TRAP CATCHES (Number/trap/day)

Geneva

	5/25	5/28	5/31	6/4
Redbanded Leafroller	1.0	0.0	0.0	0.0
Spotted Tentiform Leafminer	1.3	1.0	0.0	0.0
Oriental Fruit Moth	0.3	0.3	0.7	0.0
American Plum Borer	0.0	1.0	0.0	0.0
Lesser Appleworm	0.0	0.5	0.1	0.0
San Jose Scale	0.0	0.0	0.0	0.0
Codling Moth	1.0	1.3	0.3	0.4
Lesser Peachtree Borer	0.2	0.7	0.0	0.1
Dogwood Borer	0.0	0.0	0.0	0.0
Peachtree Borer	0.5*	0.2	0.0	0.0
Pandemis Leafroller	0.5*	1.8	0.3	0.1
Obliquebanded leafroller	0.0	2.2*	0.5	0.0

Highland (Peter Jentsch)

	5/14	5/21	5/29	6/4
Redbanded Leafroller	0.4	0.0	0.0	0.0
Spotted Tentiform Leafminer	3.4	0.8	13.6	50.7
Oriental Fruit Moth	2.4	1.0	0.4	0.4
Codling Moth	4.6	2.6	2.5	1.7
Lesser Appleworm	3.4	1.7	1.7	0.5
Tufted Apple Budmoth	-	2.2	2.1	4.6
Fruittree Leafroller	0.0	0.0	0.0	0.3
Variegated Leafroller	0.0	0.4*	9.4	1.1

Obliquebanded Leafroller	0.0	0.0	1.1	2.3
San Jose scale	-	0.1	0.1	1.0

* = 1st catch

ORCHARD RADAR DIGEST

[Box Text: JUNE BUGS]

Geneva:

Roundheaded Appletree Borer

RAB egglaying begins: May 25. Peak egglaying period roughly: June 16 to July 2.

Dogwood Borer

First DWB egg hatch roughly: June 12.

Codling Moth

Codling moth development as of June 4: 1st generation adult emergence at 77% and 1st generation egg hatch at 25%. 1st generation 20% CM egg hatch: May 31 (= target date where one spray needed to control 1st generation CM).

Obliquebanded Leafroller

Early egg hatch and optimum date for initial application of insecticides effective against OBLR (with follow-up applications as needed): June 13.

San Jose Scale

First adult SJS crawlers appear: June 7.

Spotted Tentiform Leafminer

2nd STLM flight begins around: June 3.

[Section: INSECTS]

DON'T GET FLEECED

(Art Agnello, Entomology, Geneva; ama4@cornell.edu)

[Box Text: WHITE ABOUT NOW]

In most years at this point in the season, we receive reports of the first infestations of woolly apple aphid (WAA) in problem sites in western NY. WAA colonizes both aboveground parts of the apple tree as well as the roots, where it commonly overwinters. In the spring, nymphs crawl up on apple trees from the roots to initiate aerial colonies. Most nymphs are born alive to unmated females on apple trees during the summer. Colonies initially build up on the inside of the canopy on sites such as wounds or pruning scars and later become numerous in the outer portion of the tree canopy, usually during late July to early August.

The aerial colonies occur most frequently on succulent tissue such as the current season's growth, water sprouts, unhealed pruning wounds, or cankers. Heavy infestations cause honeydew and sooty mold on the fruit and galls on the plant parts. Severe root

infestations can stunt or kill young trees, but usually do not damage mature trees. However, large numbers of colonies on trees may leave sooty mold on the fruit, which interferes with harvest operations because red sticky residues from crushed WAA colonies may accumulate on pickers' hands and clothing.

During late June most years, water sprouts, pruning wounds, and scars on the inside of the tree canopy should be examined for WAA nymphs. During mid-July, new growth around the outside of the canopy should be examined for WAA colonies. No economic threshold has been determined for treatment of WAA, but they are difficult to control, so the occurrence of any colonies should prompt the consideration of some remedial action.

WAA is difficult to control with insecticides because of its waxy outer covering and tendency to form dense colonies that are impenetrable to sprays. WAA is resistant to the commonly used organophosphates, but other insecticides are effective against WAA, including Diazinon and Thionex, and some newer products such as Movento, Beleaf, or Assail and may offer suppression (for Movento and Assail, addition of a non-ionic surfactant or horticultural mineral oil will improve

activity). Good coverage to soak through the insects' woolly coverings is integral to ensuring maximum efficacy. Additionally, Lorsban trunk applications for borers made at this time will effectively control any crawlers that might be contacted by these sprays.

HUDSON VALLEY PEST MANAGEMENT UPDATE
(Peter Jentsch, Entomology, Highland; pjj5@cornell.edu)

[Box Text: OUT N' ABOUT]

Insect issues of primary concern this upcoming week include orchards in which San Jose scale damage was observed at pack out, the first emergence of the obliquebanded leafroller and leafroller complex larvae, late emergence of codling moth larvae, and oriental fruit moth and European corn borer in newly planted trees. We no longer a need PC management spray, as we have reached the end of PC migration into the orchard. Dogwood borer and rosy apple aphid have been heavy this season and continue to cause damage to trees and fruit if left unmanaged.

San Jose Scale (SJS)

We have been monitoring SJS by removing the covering of adult females and looking for crawler

development. This morning we observed the first crawlers present within the scale, with no movement out from the coverings onto the stem. The pheromone-based degree-day model using the adult flight as a biofix has accumulated 333.4 DD; with temperatures forecast we predict first crawler emergence to begin on 6 June in the mid-Hudson Valley (emergence at 380–400 DD50F). The model looks to be "on target" this season and the first of two contact applications should be made this week. (click for Management Options).

Obliquebanded Leafroller (OBLR)

Choristoneura rosaceana (Harris) outbreaks in New York, although less prevalent than we experienced in the late 90s, have resulted in severe damage to apple, peach, and pear fruit in many orchards over the past few years. Our management strategies have included directed applications during three periods of the growing season, targeting the overwintering generation during late pre-bloom and early post-bloom, the summer generation and, if populations warrant, the second generation later in August.

As we move into the period for management of the summer generation, we set pheromone traps to capture the first emergence or "sustained flight" to

establish a biofix. This is used to begin degree day calculations to predict the first hatch of OBLR larvae. The first sustained pheromone trap captures of OBLR were observed in Hudson and Tivoli, NY on 24 May, with later captures found in Highland on 28 May.

We are predicting the first emergence of OBLR summer generation larvae to begin on 10 June this season. Applications should be made shortly after this date. To delay the possibility of resistance, you should use different classes of insecticide for each generation. For example, If you used Altacor 35WDG for OBLR overwintering larval control, you should not use Belt 4SC (or vice versa), as they share the same target site, so genetic modification could induce population-level shifts leading to insecticide resistance. (click for Management Options).

Newly hatched larvae of the first summer brood move to and feed on tender growing terminals, water sprouts, or developing fruit. As these larvae mature, they increasingly transition from foliar- to fruit-feeding. OBLR larvae feed on the surface of developing fruit, similar to the type of feeding caused by several other species of leafrollers such as tufted apple bud moth, variegated *leafroller* (*Platynota flavedana*) and

Sparganothis fruitworm (*Sparganothis sulfureana*). All of these insects have been captured in pheromone traps this season. Fruit damage caused by first summer brood OBLR larvae is usually more serious than spring feeding by overwintered larvae, because more of the fruit injured later in the season remains on the tree at harvest.

Codling moth (CM)

Larvae have been hatching over the past two weeks. Most insecticides used to control plum curculio would have controlled the 1st emergence of CM. Adult CM continue to fly, with egg laying and hatch relatively heavy during this period. The majority of eggs are likely to hatch over the next few weeks, so control is critical, especially if internal lepidopteran injury was noted last season. If OP or pyrethroid use in 2011 allowed economic injury, especially in high-pressure blocks, it would be wise to choose an alternate insecticide with internal lep activity. (click for Management Options).

European corn borer (ECB)

Adults are on the wing, with the first pheromone trap captures in New Paltz in mid-May. Extension growth of newly planted young trees is susceptible to ECB infestations, especially if tall weeds and grasses in tree

rows are present. Although infestations of ECB are unpredictable, infestations can cause serious damage in blocks with no prior incidence of injury. ECB injury is most often seen in young or newly planted orchards that receive low levels of insect pest management. Injury to newly planted trees by larval tunneling occurs in the current season's growth, which results in terminal leaf discoloration. Continued larval feeding will eventually kill the terminal shoot, causing die-back and malformation of the tree. Corn borer attack on young trees can occur from June through August. Two "broods" exist in NY, which includes the "Z race", which has one generation per season, and the "E & Z Race", which have two generations. Over the past few years, trap captures of one or both races have been shown to linger into late July throughout the mid-Hudson Valley. Fruit feeding can also occur late in the season through harvest. Delegate 25WG and Dipel 10.3DF are labed for ECB management and, when used for OBLR management, will also control ECB infestations at the onset of hatch and feeding.

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