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Update on Pest Management and Crop Development

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

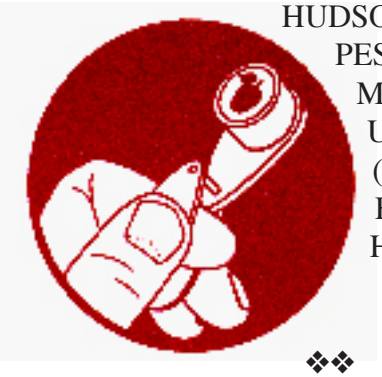
July 16, 2012 VOLUME 21, No. 19 Geneva, NY

INSECTS

FIELD NOTES

JULY KIT?

ORCHARD RADAR DIGEST



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

FOR NOW

Roundheaded Appletree Borer
Peak hatch roughly: June 30 to July 19.

Codling Moth
2nd generation egg hatch at 7%: July 16 = target date for first spray when multiple sprays needed to control 2nd generation CM. 2nd generation egg hatch at 30%: July 25 = target date where one spray needed to control 2nd generation CM.

Spotted Tentiform Leafminer
Third optimized sample date for 2nd generation sapfeeding mines, if needed: July 16.

❖❖ Insects of primary concern this upcoming week include apple maggot management beyond the 10–14-day insecticide residue and 5 fly per trap threshold, early emergence of codling moth larvae (1st application this week at next available window), later emergence of oriental fruit moth (2nd applications if needed), orchards in which San Jose scale damage was observed in the field (1st application for crawlers this week, 19 July), European red mite control at 7.5 mite per leaf threshold, and European corn borer management in newly planted trees, as needed. Native stink bug has become problematic given the hot, dry weather we've had

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PEST FOCUS

Geneva: **Appole maggot** trap catch resumes after 7/15 rain.

Highland: **Codling moth** 2nd flight began today, 7/16.

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over the past two weeks. As a side note, we had our first trap capture of spotted wing Drosophila in Warwick, NY, on Friday, 13 July. Certainly small fruit, and to a lesser degree stone fruit, are primary hosts of spotted wing Drosophila, and should be monitored for the fly's activity.

Adult apple maggot (AM)

Adults have been active in abandoned orchards and along the borders of commercial orchards. We have seen females laying eggs in untreated fruit over the past few weeks. We typically see that dry soil conditions delay adult emergence. However, this season we experienced high early emergence, with trap captures exceeding 5 flies per trap in many apple blocks nearly every week. The most susceptible varieties at this time are early cultivars including Ginger Gold, Gala, and Honeycrisp. In July, most flies stay in unsprayed areas outside of orchards, and usually only a few immigrate into the edges of commercial orchards. Initial pesticide treatments should be applied as soon as trap catches exceed recommended threshold levels (average of 5 flies/volatile-baited sphere trap). If orchards have no previous history of damage, and are not located near any major source of outside AM infestation, spraying orchard perimeters may be sufficient. If trap catches are high and an orchard is near host trees, applications should be made to whole orchards or a greater number of perimeter rows. Refer to the following for pesticide information: http://treefruitipm.info/PesticidesForPest.aspx?PestID=19&GrowthStageID=12

San Jose Scale (SJS)

The pheromone-based degree-day model using the adult flight as a biofix has accumulated 244.1 DD. With the temperatures forecast, we predict first crawler emergence to begin on 19 July in the mid-Hudson Valley (emergence at 340–400 DD base 50°F). The model looks to be "on target" this season and the first of two contact applications should be made toward the end of this week. Refer to the following for management options: http://ipmguidelines.org/TreeFruits/Chapters/CH11/default-5-8.aspx.

Codling moth (CM) Lesser appleworm (LAW) and Oriental fruit moth (OFM):

Larvae will be hatching over the next two weeks. Some of the insecticides used to control apple maggot, such as Imidan, the pyrethroids, selected neonicotinoids, or pre-mix formulations such as Leverage 360 can be used to manage the 2nd emergence of CM and other internal worms. Adult CM will continue to fly, with egg laying and hatch being 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 Lepidoptera injury was noted during the spring last season. If OP or pyrethroid use in 2011 resulted in economic injury, especially in high-pressure blocks, it would be wise to choose an alternative insecticide with internal lep activity. Refer to the following for management options: http://treefruitipm.info/PesticidesForPest.aspx?PestID=24&GrowthStageID=12:

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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
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This newsletter available online at:
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For more fruit resources, check out the Cornell Fruit Page: http://www.fruit.cornell.edu/

European corn borer (ECB)

Adults continue the summer flight, with high pheromone trap captures in New Paltz in mid-July. Shoot growth of young trees is susceptible to ECB infestations, especially if tall weeds and grasses in tree rows are present. Hot, dry weather fosters high population survival. 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 input insect pest management programs. Injury to newly planted trees by larval tunneling occurs in the current season's growth and results in terminal leaf discoloration. Continued larval feeding will eventually kill the terminal shoots, causing die-back and malformation of the tree. Corn borer attack of young trees can occur from June through August. Two "broods" exist in NY, including 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 labeled for ECB management, and when used for OBLR management, will also control ECB infestations when applied at the onset of hatch and feeding.

Native and Invasive stink bug (SB)

These insects have become late season players over the past few years. The two native species causing damage to apple are the brown stink bug, Euschistus sp. and the green stink bug, Acrosturnum hilare. Their presence and feeding injury is often associated with the drought conditions experienced this season, increasing tree fruit attractiveness and the likelihood of late season stink bug feeding. The brown marmorated stink bug, Halyomorpha halys (Stål), has also been observed this week on peaches (Warwick) and vegetables (green bell pepper, Marlboro) in the mid-Hudson Valley. Insecticides for stink bug management include Danitol (2 appl/season; 21.33 oz/A; 14 DTH), Lannate LV (4 appl/season; 1.5-3.0 pt/A; 14 DTH), Endigo ZC (5.0 – 6.0 fl oz/A; 35 DTH), Leverage 360 (2.4-2.8 fl oz/A; 7 DTH), Thionex 50WP (5 lb/A; 21 DTH). Follow label restrictions carefully, especially noting formulation pre-mix active ingredient allowances. ❖❖

GENERAL INFO

LAST CALL

EVENT REMINDERS

LAKE ONTARIO CORNELL COOPERATIVE EXTENSION SUMMER FRUIT TOUR
Featuring New Technology in the Wayne Co. Fruit Industry
Tuesday, July 24, starting 8:00 am: G & S Orchards, 825 Atlantic Ave., Walworth

❖❖ Highlights of the tour will include berry and odd fruit production and pest management issues, innovative CSA marketing, weed control treatment plots in young trees, alternative pollinators for fruit crops, update on strep-resistant fire blight in NY, controlling tree growth in a light crop year, climate, frost and crop protection methods, managing growth in grafted trees, using induction cones for safer pesticide mixing, using platforms and hedgers for increased labor efficiency in tall spindle plantings. Growers, industry, and Cornell faculty and specialists will share new technology and better ways to produce fruit.

Stops: G & S Orchards, Walworth; Mason Farms, Williamson; Orbaker Fruit Farm, Pultneyville; Knapp Orchards, Sodus; and Vande-Walle Fruit Farms, Alton. ❖❖

Thanks to Sponsors, there is no charge to attend!
Please register by July 20: Call 585-798-4265 or email krh5@cornell.edu
For more information, visit: http://www.fruit.cornell.edu/lof

INSECT TRAP CATCHES (Number/Trap/Day)

Geneva, NY

	7/9	7/12	7/16
Redbanded leafroller	0.0	0.3	0.0
Spotted tentiform leafminer	6.5	5.2	4.6
Oriental fruit moth	0.0	0.3	0.0
American plum borer	0.5*	0.3	0.0
Lesser appleworm	0.0	0.0	0.0
San Jose scale	5.0	1.7	3.5
Codling moth	0.1*	0.0	0.1
Lesser peachtree borer	0.0	0.0	0.0
Peachtree borer	0.1	0.0	0.0
Obliquebanded leafroller	0.3	0.2	0.1
Apple maggot	0.0	0.0	0.6

Highland, NY

	7/9	7/16
Redbanded leafroller	0.8	0.3
Spotted tentiform leafminer	55.1	35.7
Oriental fruit moth	3.4	1.0
Codling moth	0.4	1.4*
Lesser appleworm	2.4	5.9
Tufted apple budmoth	0.7	0.1
Fruittree leafroller	0.0	0.0
Variegated leafroller	0.0	0.4
Obliquebanded leafroller	0.6	0.0
San Jose scale	497*	692
Sparganothis fruitworm	0.1	0.0
Apple maggot	0.3	0.2

* first catch

UPCOMING PEST EVENTS

	43°F	50°F
Current DD accumulations (Geneva 1/1–7/16/12):	2238	1528
(Geneva 1/1–7/162011):	1941	1311
(Geneva "Normal"):	1813	1175
(Geneva 1/1–7/23/12 predicted):	2451	1693
(Highland 1/1–7/16/12):	2400	1608
(Highland 1/1–7/16/11):	2075	1390

Coming Events:	Ranges (Normal ±StDev):	
Lesser appleworm 2nd flight begins	1418–2002	918–1326
Oriental fruit moth 2nd flight subsides	2061–2529	1368–1766
Oriental fruit moth 3rd flight begins	2326–2746	1577–1901
Apple maggot 1st oviposition punctures	1605–2157	1144–1544
Apple maggot flight peak	2102–2602	1408–1794
Comstock mealybug 1st flight subsides	1818–2132	1216–1418
Comstock mealybug 2nd gen. crawlers emerge	2234–2624	1505–1781
Redbanded leafroller 2nd flight subsides	2182–2742	1471–1891
American plum borer 2nd flight peak	1991–2549	1339–1755
San Jose scale 2nd flight peak	2118–2496	1426–1746
Spotted tentiform leafminer 2nd flight subsides	1986–2378	1306–1644
Spotted tentiform leafminer 3rd flight begins	2253–2659	1508–1848
Codling moth 2nd flight peak	1931–2735	1278–1892
Obliquebanded leafroller 2nd flight begins	2255–2655	1516–1838

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.