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Update on Pest Management
and Crop Development

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

June 8, 2015

VOLUME 24, No. 11

Geneva,

THE
CALM

ORCHARD
RADAR
DIGEST



San Jose Scale

1st generation SJS crawlers appear:
June 12 (H)/June 15 (G).

Spotted Tentiform Leafminer

2nd STLM flight begins around:
June 10 (H)/June 13 (G).



[H = Highland; G = Geneva]:

Roundheaded Appletree Borer

RAB Peak egg-laying period roughly: June 19 to
July 4 (H)/June 22 to July 7 (G).

Dogwood Borer

First DWB egg hatch roughly: June 19 (H)/June
22 (G).

Codling Moth

Codling moth development as of June 8:

1st generation adult emergence at 35% (H)/24%
(G) and 1st generation egg hatch at 0% (H,G)

1st generation 3% egg hatch expected: June 16
(H)/June 19 (G).

Obliquebanded Leafroller

1st generation OBLR flight, first trap catch expected:
June 2 (H)/June 5 (G).

Where waiting to sample late instar OBLR larvae
is not an option (= where OBLR is known to be
a problem, and will be managed with insecticide
against young larvae), early egg hatch and opti-
mum date for initial application: June 17 (H)/ June
20 (G).

Oriental Fruit Moth

2nd generation OFM flight begins around: June 22
(H)/June 25 (G).



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ON A SCALE OF IMPORTANCE

CRAWLERS AFOOT
(Peter Jentsch,
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❖❖ We should soon be seeing the emergence of crawlers of San Jose scale (SJS), *Quadraspidiotus perniciosus* (Comstock) from under the overwintered adult female scale covers on apple trees. The SJS has become a primary fruit pest in many orchards across the region over the past 10 years, as older chemistries such as Penncap-M and Lorsban, which once held this insect in check, have been removed from the pest management toolbox. With little in the way of residual insecticide in the orchard after the threat of plum curculio has passed, there is little to keep this insect from gaining a foothold in tree fruit blocks, which invariably leads to severe economic injury if left unmanaged. Many producers find this insect very difficult to eradicate. Multiple applications targeting all three generations using products with different modes of action appear to work best. The pheromone-based model we now use targets the adult flight as a biofix, predicting SJS crawler emergence at 380-400 DD (base 50°F). This year, the first adults were observed in traps on 11 May, accumulating 365 DD to date. Therefore, we are expected to reach 380 DD or the onset of crawler emergence in the next 1-2 days.

We are quite fortunate to have a group of effective insecticides to assist us in managing this insect during key timing windows of the growing season. However, the window of opportunity for using materials such as Lorsban, Supracide 25WP and Movento for this generation has passed. Our options now include oil, contact insecticides, or insect growth regulators that will target the emerging crawlers.

The use of oil at 1% has been quite effective when used alone against SJS if complete coverage is achieved. However, your fungicide program will dictate the use of oil. The fungicide Captan may

cause phytotoxicity to foliage and fruit if penetrants such as oil are used in tank mixes or in close application schedules with oil. Centaur 0.7WDG, working as an insect growth regulator (IGR; IRAC Class 16), acts to inhibit the synthesis of chitin. Esteem 35WP, also an IGR (Class 7), functions as a juvenile hormone mimic, inhibiting metamorphosis from one stage to another. Movento 240SC (lipid biosynthesis inhibitor; IRAC Class 23) is also effective when applied preventively, as its systemic activity requires some time for it to become established in the woody tissues. All these insecticides are most effective when directed against the first appearance of crawlers, yet have no contact toxicity and tend to act very slowly. Assail and Admire Pro (Class 4) are both broad-spectrum neonicotinoids that can be effective when directed against emerging crawlers. The efficacy of some of these materials (e.g., Movento, Assail, Centaur) is improved by the addition of an adjuvant with penetrating properties; however, Esteem and Admire Pro can be used effectively without the use of a penetrant. Remember, rotating classes of insecticides for each generation will delay the onset of resistance. Making multiple applications of the same class or same insecticide at a 14-day interval for the same generation is recommended.❖❖

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ORGANIC APPLE WORKSHOP

EVENT
ANNOUNCEMENT

GENERAL
INFORMATION



San Jose scale damage

PEST FOCUS

Geneva: 1st **peachtree borer** trap catch today, 6/8.

Highland: 1st **obliquebanded leafroller** trap catch 5/29.

Insect model predictions for Highland/Geneva:

Plum curculio emergence complete at 308 DD50 (currently @ 337[H]/257[G])

Codling moth larval emergence @ 220 DD50 (currently @ 391[H]/304[G])

Obliquebanded leafroller larval emergence @350 DD43 (currently @ 185[H]/106[G])

San Jose scale crawler emergence @ 400 DD50 after 1st flight (currently @ 366)

❖❖ On Wednesday, June 10, NOFA-NY will be joining with Cornell to sponsor a Field Day Workshop entitled "Organic Production: Managing Productivity, Insects, Diseases and Weeds" at the NYSAES Loomis Farm, 3135 County Rd. 6, Geneva, from 1:00–4:30 PM. Presentations by entomologist Arthur Agnello, horticulturists Terence Robinson and Susan Brown, and plant pathologist Kerik Cox will focus on organic orchard practices informed by their ongoing research in the Station's 3-acre organic apple planting. Growth and productivity will be discussed, including new and upcoming disease-resistant varieties, rootstocks, training systems, pruning, weed control options, and nitrogen fertilization. Basic and advanced seasonal management approaches to insect control will be shared such as the use of entomopathogenic nematodes for biological control of plum curculio, and predatory mite seeding for the control of European red mite. The group will also go over organic fire blight management techniques and results from last year's summer disease trials.

Registration fees are \$15/person or \$25 for two or more people/farm.

Please pre-register online at: <http://www.event.com/events/organic-apple-production-managing-productivity-insects-disease-and-weeds/event-summary-dd51400a20b0417e89d-847bae3565cf2.aspx>

Pre-registration closes at 4pm on June 8th. [NOTE: This field day is free to Cornell faculty and CCE staff; please sign in at the event, as pre-registration is not necessary.]

This event is produced by NOFA-NY in partnership with the NYS Agricultural Experiment Station and support from the NYS Dept. of Ag & Mkts Specialty Crop Block Grant Program.

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INSECT TRAP CATCHES (Number/Trap/Day)						
Geneva, NY				Highland, NY		
	<u>6/1</u>	<u>6/4</u>	<u>6/8</u>		<u>6/1</u>	<u>6/8</u>
Redbanded leafroller	0.2	0.0	0.0	Redbanded leafroller	0.0	0.0
Spotted tentiform leafminer	0.2	0.0	0.0	Lesser appleworm	0.2	0.0
Oriental fruit moth	0.2	0.0	0.0	Oriental fruit moth	1.6	1.6
Lesser appleworm	0.0	0.0	0.1	Codling moth	4.6	5.0
Codling moth	0.7	0.0	0.9	Spotted tentiform leafminer	0.1	5.3
San Jose scale	0.0	0.0	0.0	San Jose scale	0.0	0.0
American plum borer	0.0	0.2	0.0	Dogwood borer	1.0	2.4
Lesser peachtree borer	0.5	0.0	0.1	Obliquebanded leafroller	7.8*	10.0
Peachtree borer	0.0	0.0	0.2*			
Dogwood borer	0.3	0.3	1.0			
Pandemis leafroller	1.3	0.2	4.1			
Obliquebanded leafroller	0.5*	0.0	2.6			
* first catch						

UPCOMING PEST EVENTS

	<u>43°F</u>	<u>50°F</u>
Current DD* accumulations (Geneva 1/1–6/8/15):	847	531
(Geneva 1/1–6/8/2014):	818	486
(Geneva "Normal"):	885	476
(Geneva 1/1–6/15, predicted):	1036	670
(Highland 1/1–6/8/15):	1078	684

<u>Coming Events:</u>	<u>Ranges (Normal ±StDev):</u>	
Spotted tentiform leafminer 2nd flight begins	994–1166	592–728
American plum borer 1st flight peak	594–966	323–585
Codling moth 1st flight peak	555–983	302–580
Pear psylla 1st summer adults	737–885	428–526
Pear psylla 2nd brood hatch	967–1185	584–750
San Jose scale 1st flight peak	555–739	297–415
San Jose scale 1st flight subsides	864–1238	515–769
European red mite summer egg hatch	737–923	424–572
Black cherry fruit fly 1st catch	702–934	380–576
Cherry fruit fly 1st catch	755–1289	424–806
Obliquebanded leafroller 1st flight peak	834–1226	485–771
Pandemis leafroller flight peak	883–1189	507–733
Rose leafhopper adults on multiflora rose	689–893	366–498
Rose leafhopper adults on apple	809–1053	440–622
Oriental fruit moth 1st flight subsides	839–1115	492–692

*[all DDs are Baskerville-Emin (B.E.)]

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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