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Update on Pest Management
and Crop Development

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

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WHITES OF THEIR EYES

PINK IN SYNC
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in Geneva today, so it will not be too long before biofix is established in a number of plantings statewide. In blocks with a history of OFM infestation, 1 or 2 traps checked at least weekly will help indicate the timing and relative size of the first generation population this year. What should be the response when the numbers start building?

❖❖ The forecast for the end of the week promises some early summer weather, so most areas should be within hailing distance of pink bud by the week-end. It's therefore not too early to be thinking of pink bud insect management needs now, so as not to be caught off guard in case we get into one of our famous "let's floor it" scenarios.

First, if **San Jose scale** is a concern and you have yet to do anything to head it off, there is still a limited window of suitable management tactics available before foliar development progresses too far to permit effective coverage. If you are intending to use oil, a 1% spray through tight cluster can be quite effective, provided you're able to thoroughly cover the wood surfaces. Insecticidal options include Centaur (34.5 oz/A), Esteem (4–5 oz/A), Lorsban (4EC or Advanced at 1.5–4 pt/A; or 75WG at 2–2.67 lb/A) or Supracide 2EC at 3 pt/A). Remember that you are limited to only 1 application of Lorsban in apples per season, whether prebloom as a foliar or trunk spray, or as a postbloom trunk application.

The pests of greatest concern at pink bud are usually **rosy apple aphid** (RAA), **oriental fruit moth** (OFM), and **tarnished plant bug** (TPB), with **European apple sawfly** and **plum curculio** waiting in the wings, optimally for attention at petal fall. OFM just made its entrance

In a normal year, the average temperature ranges tend to result in very little egg hatch during pink and bloom, as this usually holds off until petal fall. If we end up with sufficient egg hatch before actual bloom, a pink application of an internal worm material like Altacor, Belt or Delegate would be an option; although this is earlier than we would normally expect to need them, these products would also address codling moth, which would not be far behind an early OFM hatch. For growers wishing to save these A-list products until after petal fall, a B.t. product would be another option from pink to bloom. Regardless, these "what-if" scenarios underscore the value of using (and frequently checking) pheromone traps to set

continued...

IN THIS ISSUE...

INSECTS

- ❖ Insect management at pink bud

ORCHARD RADAR DIGEST

PEST FOCUS

PHENOLOGIES

TRAP CATCHES

UPCOMING PEST EVENTS

the clock on OFM and CM development in specific blocks. Also, the value of mating disruption as a component of OFM and CM management programs cannot be overstated. Now is the optimal time to deploy pheromones for both of these species; although CM starts to fly a bit later, our favored approach is to use products that incorporate the mating pheromones of both insects, so it's prudent to act now to ensure that you're ready for their emergence. These first flights of the season give us the best opportunity to get on top of internal worm control, because timing and development of the different stages only gets more complicated (i.e., less synchronized) as the season progresses.

Depending on block history and personal philosophy, RAA and TPB can be either annual challenges, puzzling but token annoyances, or else a complete flip of the coin. Do they occur, do they need to be treated, are they able to be controlled adequately, and does it matter if they're just ignored? These pests also have yet to indicate their potential for problems this season, although it's likely that rosies can be found already in some orchards, given enough inspection. It's possible to scout for RAA at pink, but this is often not practical, considering all the other things demanding your attention at this time. TPB is not a good candidate for scouting, and if the bloom period is prolonged by cool, wet weather, a pink spray is of little use. You'll need to decide for yourself whether this bug is of sufficient concern to you to justify treating.

We have seen few orchards in western NY (and only slightly more in the Hudson Valley) where TPB control is warranted, simply because the most effective treatment has been to use a pyrethroid, which: a) kills predator mites, and b) still rarely lowers TPB damage enough to be economically justified. If you elect a spray of Ambush, Asana, Baythroid, Danitol, Gladiator, Pounce, Warrior or Voliam Xpress/Beseige at pink for plant bug, you'll take care of rosy apple aphid (plus mullein plant bug and STLM) at the same time. If RAA is your main concern, you could

elect a pink spray (non-pyrethroid options include Actara, Assail, Beleaf, Esteem, Lannate, Lorsban, or Vydate) if you have the luxury of a suitable application window. Once again, be sure to consider potential impacts on non-target species such as beneficials, and be aware of your bee supplier's concerns about effects on pollinating bees.

Leafrollers are also out there, but only a portion of the population will be active at this time, so although you might get good control of any larvae you spray now, don't forget that the rest of the population won't be out (and susceptible to sprays) until bloom or petal fall, so it's probably better to wait until then to address this pest.

Finally, if **mites** normally need attention in a given block, and you haven't elected (or been able to use) a delayed-dormant oil application as a part of your early season mite management program, you'll be needing to rely on either: one of the ovicidal acaricides (Apollo, Savey/Onager, Zeal) available for use, whether before or after bloom; a rescue-type product after bloom (add Acramite, Envidor, Kanemite, Nealta, Nexter, and Portal to the above list) that can reduce

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motile numbers later on if they should begin to approach the threshold; or Agri-Mek, which falls somewhere between these two strategies. Like the true ovicides, Agri-Mek should also be considered a preventive spray, as it needs to be applied early (before there are very many motiles) to be most effective, generally within the first 2 weeks after petal fall. Recall that Proclaim is related to Agri-Mek, and also has some miticidal activity, if you expect to use it at petal fall for leafrollers. For any of the rescue products, the operational threshold (through June) is an average of 2.5 motiles per leaf (see the chart on p. 74 of the Recommends). ❖❖

THE LONG VIEW

ORCHARD RADAR DIGEST

Beginning with today's issue, we will once again be publishing pest predictions generated by the Univ. of Maine's Orchard Radar model estimation service, provided to us by Glen Koehler. This pest management tool uses commercially available weather data as an input for apple pest occurrence and development models taken from many established university and practitioner sources. It's offered as another perspective on what's happening in the orchard, to compare against our own record-generated advisories and, of course, personal observations from the field. We'll be printing only some of the short-term arthropod events; the full Orchard Radar product range covers disease and horticultural events as well. The public New England sites available for anyone to use are located at: <https://extension.umaine.edu/ipm/ag-radar-apple-sites/>. Growers interested in exploring this service for their specific site may wish to contact Glen personally (glen.koehler@maine.edu).

[H = Highland; G = Geneva]:

Roundheaded Appletree Borer

RAB egg laying begins: May 29 (H)/June 2 (G).
Peak egg laying period roughly: June 19-July 4

(H)/June 23-July 7. First RAB eggs hatch roughly: June 13 (H)/June 17 (G).

Dogwood Borer

First DWB egg hatch roughly: June 15 (H)/June 18 (G).

Codling Moth

1st generation 3% egg hatch expected: June 1 (H)/June 4 (G).

Lesser Appleworm

1st LAW trap catch: May 1 (H)/May 3 (G).

Mullein Plant Bug

Expected 50% egg hatch date: May 2 (H)/May 6 (G), which is 6 (H)/7 (G) days before rough estimate of Red Delicious petal fall date

Obliquebanded Leafroller

1st generation OBLR flight, first trap catch expected: May 31 (H)/June 4 (G).

Oriental Fruit Moth

1st generation OFM flight starts: April 22 (H)/April 26 (G).

Redbanded Leafroller

1st generation RBLR peak trap catch and approximate start of egg hatch: April 25 (H)/April 27 (G).

San Jose Scale

First adult SJS caught on trap: May 8 (H)/May 12 (G).
1st generation SJS crawlers appear: June 10 (H)/June 14 (G).

Spotted Tentiform Leafminer

1st STLM flight peak trap catch: May 1 (H)/May 3 (G).

White Apple Leafhopper

1st generation WALH found on apple foliage: May 1 (H)/May 4 (G).

PEST FOCUS

Geneva:
Spotted Tentiform Leafminer 1st catch
 4/20.
Oriental Fruit Moth 1st trap catch today,
 4/24.

PHENOLOGIES

Geneva:	Current	5/1, Predicted
Apple (McIntosh):	tight cluster/early pink	bloom
Apple (Empire):	tight cluster/early pink	bloom
Apple (Red Delicious):	tight cluster	bloom
Apple (Idared):	tight cluster	bloom
Pear (Bartlett):	early green cluster	white bud/bloom
Pear (Bosc):	bud burst/early green cluster	white bud/bloom
Tart Cherry:	early white bud/early bloom	bloom
Sweet Cherry:	bloom	petal fall
Peach:	pink/bloom	fruit set/shuck split
Plum:	green cluster/bloom	bloom/petal fall

INSECT TRAP CATCHES (Number/Trap)

	Geneva, NY			Highland, NY		
	<u>4/17</u>	<u>4/20</u>	<u>4/24</u>	<u>4/3</u>	<u>4/10</u>	<u>4/17</u>
Green fruitworm	1.0	0.5	0.0	Green fruitworm	0.0	1.0*
Redbanded leafroller	24.0	18.5	57.0	Redbanded leafroller	0.0	10.0*
Spotted tentiform leafminer	0.0	1.5*	8.0	Spotted tentiform leafminer	0.0	0.0
Oriental fruit moth	-	0.0	0.5*	Oriental fruit moth	-	0.0
				Lesser appleworm	0.0	5.0*
				Obliquebanded leafroller	-	0.0

* first catch

UPCOMING PEST EVENTS

		43°F	50°F
Current DD*	(Geneva 1/1–4/24/17):	262.4	119.2
accumulations	(Geneva 1/1–4/24/16):	239.2	106.4
	(Geneva "Normal"):	218.7	104.4
	(Geneva 1/1-5/1, predicted):	394.9	204.7
	(Highland 1/1–4/24/17):		

<u>Coming Events:</u>	<u>Ranges (Normal ±StDev):</u>	
American plum borer 1st catch	392-521	196-285
Apple grain aphid nymphs present	128-488	63-247
Codling moth 1st catch	396-566	200-307
Comstock mealybug 1st gen crawlers in pear buds	215-441	80-254
European red mite egg hatch complete	368-470	182-280
Green fruitworm flight subsides	267-465	124-249
Lesser appleworm 1st catch	276-564	129-305
Lesser appleworm 1st flight peak	364-775	183-444
Mullein plant bugs 1st hatch	331-443	163-229
Oriental fruit moth 1st flight peak	329-534	165-285
Spotted tentiform leafminer 1st flight peak	268-407	123-214
Spotted tentiform leafminer sapfeeding mines present	343-601	165-317
White apple leafhopper nymphs on apple	302-560	146-308
McIntosh bloom	344-416	169-219

*all DDs 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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