

CHECK THAT FUZE

PEST
PYROTECHNICS
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❖❖ The summer seems to be settling into a hotter and (hopefully?) drier pattern, which will tend to benefit some insect pests more than others. The following is a brief rundown of some items to keep near the top of your "scramble" list, just to help prevent anything from getting out of hand.

Internal Leps

We are generally in between the first and second flights for both codling moth and oriental fruit moth. The first brood CM flight has tapered off and we're nearly through the hatch period, although we should remain attentive for any signs of a renewed surge in trap numbers during this time (the vaunted "B peak" that can vex early season management efforts), so most sites with traditionally heavy pressure from these pests should still be subject to first generation larval control needs. If you aren't actually inspecting the young fruitlets for signs of fresh infestation, it would be prudent at least to consider the need for a(nother) protective spray if weekly adult numbers surpass 5 per trap; Delegate, Altacor, Belt, and Exirel are the top-ranked options. Additionally, we'll be looking for increasing captures of the 2nd flight of oriental fruit moth (time management sprays for when catches exceed 10/trap/week), and should note a definite uptick in trap numbers within the next 10–14 days, especially if the temperatures maintain their typical July values.



Obliquebanded Leafroller

According to our developmental models, the first summer brood hatch should be anywhere from 50–100% complete around the state this week. Orchards with historically high OBLR pressure should normally receive an application of a suitable material during the first part of July, so this week would be the latest possible time for such an application against the larvae of this brood if they haven't been attended to. Delegate, Altacor, Belt, Exirel, Rimon and Proclaim are appropriate choices, particularly in cases where the larvae are a bit larger, and a B.t. product such as Dipel, or else the IGR Intrepid are also options, but these tend to be more effective when applied against the earlier stages. If you are applying any of the diamides (Belt, Altacor, Exirel, plus the various premixes containing the same a.i.s) or Delegate to control codling moth and oriental fruit moth, they will also be very effective against OBLR at this time. Regardless, we have found that this specific spray is the most critical for preventing fruit-feeding damage at harvest, so put this at the top of your

continued...

IN THIS ISSUE...

INSECTS

- ❖ Summer insects lineup

CHEM NEWS

- ❖ Bifenthrin Section 18 for BMSB in NY

ERRATA

- ❖ June 26 summer diseases article

MODEL BUILDING

ORCHARD RADAR DIGEST

TRAP CATCHES

UPCOMING PEST EVENTS

list of priorities if OBLR has distressed you in the past.

Apple Maggot

Adults have not made their first appearance in Geneva or Highland yet, but should begin showing up in traditional high-pressure sites around the state soon. Stings and larval tunneling would first be detected in early and favored varieties such as Ginger Gold and Honeycrisp, particularly in the Hudson Valley. If you aren't monitoring in specific orchards and haven't yet made preparations for a protective spray against AM (and aren't using Delegate or Altacor for OBLR, both of which have some activity on AM), prudence would suggest attention to this pest. Hanging a few volatile-baited sphere traps on the edge of susceptible plantings can provide valuable insight on when (and whether) immigrating flies are posing a threat. Growers on a Delegate or Altacor program for leafrollers/internal leps should get some protection against moderate AM pressure. For those not using Imidan in their cover sprays, Assail will provide excellent control of apple maggot as well as internal leps.

Woolly Apple Aphid

Individual nymphs should have started to become noticeable as they make their way up into the canopies of infested trees, and we have been seeing substantial aerial colonies in the Geneva research plantings. This would be a prudent time to begin a preventive spray program for this pest in blocks with historically high pressure. Quoting from the May 31 issue's overview of treatment options:

'WAA is resistant to the commonly used organophosphates, but other insecticides are effective against WAA, including Diazinon and Movento, and some additional products such as Admire, Assail, or Beleaf may offer suppression. For Movento and Assail, addition of a non-ionic surfactant (e.g., LI-700 or Regulaid) or horticultural mineral oil will improve activity. Good coverage to soak

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

European Red Mite

Our recent wet conditions have not been favorable for mid-season buildup of mite populations, but if we do get a turnaround in the heat (more) and rain (less) trends, it would be advisable to inspect the foliage in traditional hot spots plus sensitive varieties like Delicious, Braeburn and Gala, to be sure they don't blow up with the warm temperatures. During July, we recommend a 5 per leaf threshold of motile stages, and you can use the appropriate presence-absence sampling chart on p. 75 of the Recommends.

Spotted Wing Drosophila

First captures of female SWD have been recorded in various parts of the state already this season [Onondaga Co. (June 14), Orleans Co. (June 15), Wayne and Niagara Co. (June 21), Ulster and Cayuga Co. (June 26), Suffolk and Steuben Co.

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scaffolds

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(June 27)], with sustained catches now reported in Albany, Rensselaer, Saratoga, Schuyler, and Washington Counties. Although berry fruit crops are considered to be most at risk for SWD infestation, cherries are also potential targets, so growers with either sweet or tart cherries that are not in the process of being harvested soon may want to consider using a protective spray to get them through the final days of maturation in sound shape. Labeled products such as Imidan (tarts only), Asana, Mustang Maxx, Lambda-Cy, Danitol, and Exirel, Entrust, (plus Delegate – suppression only) are potential options. Asana, Mustang Maxx, Entrust, and Lambda-Cy are 2(ee) labels; users must have a copy in their possession at time of application.



Brown Marmorated Stink Bug

Peter Jentsch reports that, to date, they have seen low brown marmorated stink bug (BMSB) adult trap captures that are well below threshold for management in the Hudson Valley. However, scouting for the insect in trees has revealed BMSB eggs and newly hatched nymphs on apple foliage in Ulster County this week (Nic Ellis, Apple Leaf). In tree fruit blocks where nymphs are found, orchard management for the pest should be initiated. One of the most effective tools for management of BMSB is the active ingredient bifenthrin, in a number of formulations (see Chem News for an update on the Section 18 for Brigade and Bifenture). Other products showing efficacy against BMSB include Actara, Danitol, Endigo, Lannate, and Voliam Xpress/Besiege.

MODEL BUILDING

Insect model predictions for Highland[H]/Geneva[G]

[Source: NEWA Apple Insect Models, <http://newa.cornell.edu/index.php?page=apple-insects>]

Obliquebanded Leafroller 50% egg hatch @ 630 DD43 from biofix; 90% egg hatch @ 810 DD43 (currently @ 869[H] / 550[G]).

ORCHARD RADAR DIGEST

[H = Highland; G = Geneva]:

Roundheaded Appletree Borer

RAB peak hatch roughly: July 4-July 22 (H)/July 10-July 30.

Dogwood Borer

Peak DWB egg hatch roughly: July 21 (H)/July 29 (G).

Codling Moth

Codling moth development as of July 3:

2nd generation adult emergence at 0% (H)/0% (G) and 1st generation egg hatch at 97% (H)/85% (G).

Lesser Appleworm

2nd LAW flight begins around: July 4 (H)/July 13 (G).

Obliquebanded Leafroller

Optimum sample date for late instar summer generation OBLR larvae: July 3 (G).

Oriental Fruit Moth

2nd generation first treatment date, if needed: July 6 (G).

2nd generation second treatment date, if needed: July 9 (H)/July 18 (G).

Redbanded Leafroller

2nd RBLR peak catch and approximate start of egg hatch: July 4 (H)/July 13 (G).

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Spotted Tentiform Leafminer

Optimum first sample date for 2nd generation STLM sapfeeding mines is: July 4 (H)/July 13 (G).

"A" LIST

BIFENTHRIN SECTION 18
APPROVED FOR BMSB

❖❖ The US Environmental Protection Agency has granted New York State a FIFRA Section 18 Specific Exemption for the use of Bifenture 10DF Insecticide/ Miticide (EPA Reg. No. 70506-227), Bifenture EC Agricultural Insecticide (EPA Reg. No. 70506-57), and Brigade WSB (EPA Reg. No. 279-3108) to control brown marmorated stink bug on apples, peaches, and nectarines in Columbia, Dutchess, Monroe, Orange, Orleans, Ulster, and Wayne Counties in New York State. Please note the following:

- The Section 18 labels restrict use to Columbia, Dutchess, Orange, and Ulster Counties, as well as (new this year) Monroe, Orleans, and Wayne Counties. Use in any other counties is prohibited.
- The exemption is valid through October 15, 2017.
- Bifenture 10DF, Bifenture EC, and Brigade WSB are all restricted-use pesticides.
- Aerial application is prohibited.

Users must have a copy of the appropriate Section 18 exemption in their possession at the time of use. Users must also follow all applicable directions, restrictions, and precautions on the primary product label. Copies of the approved Section 18 labels are available at the DEC's [NYSPAD](#) product registration website. ❖❖

Please note the following corrections (under-scored) to sections of last week's article on summer diseases by Srdjan Acimovic:

- In the lower Hudson Valley, if by any chance we had a drier spring and early summer (which we did not), the start of your SBFS spray program must not be delayed after the first week of July, because you need to spray starting no later than July 10 to prevent summer fruit rot infections.
- For prevention of white rot, good fungicides are: Pristine, Merivon, Topsin M, Flint, Gem, Sovran, Luna Sensation, Captan, Ferbam granuflo... Merivon, Flint, Pristine, Luna Sensation, Topsin and Ferbam are effective for SBFS as well.
- For preventing black and white rots, good choices are: Pristine, Merivon, Luna Sensation, Topsin M, Flint, Gem, Sovran, Captan, Ferbam granuflo. Topsin, Pristine, Captan, Merivon, and Sovran will also be effective for blossom end rot and bitter rot. Merivon, Luna Sensation, Flint, Pristine, Topsin and Ferbam are effective for SBFS as well.
- In different locations of the world, different Colletotrichum species cause bitter rot. In Norway, it is reported that Colletotrichum fungi usually overwinter in apple buds.
- (in the section on bitter rot:) QoI fungicides such as Flint, Luna Sensation's trifloxystrobin component, Sovran, and the pyraclostrobin component in Pristine and Merivon are good choices. Always combine QoIs with at least mid-label rates of Captan.

INSECT TRAP CATCHES (Number/Trap)								
Geneva, NY				Highland, NY				
	6/26	6/30	7/3		6/19	6/26	7/3	
Redbanded leafroller	2.5	31.5	26.0	Redbanded leafroller	2.0	14.5	16.0	
Spotted tentiform leafminer	107.0	270.0	312.5	Spotted tentiform leafminer	173.5	168.0	177.0	
Oriental fruit moth	47.5	35.5	42.5	Oriental fruit moth	2.0	2.0	1.5	
Codling moth	9.5	13.5	2.0	Lesser appleworm	2.5	6.0	20.0	
Lesser peachtree borer	14.0	4.0	5.0	Obliquebanded leafroller	20.0	18.5	9.5	
Peachtree borer	15.0	16.5	24.0	Codling moth	36.0	29.5	6.0	
Dogwood borer	12.0	13.0	2.0	San Jose scale	0.0	0.0	0.0	
Obliquebanded leafroller	16.5	7.0	7.5	Sparganothis fruitworm	0.0	1.0	0.0	
Apple Maggot	–	–	0.0	Variegated leafroller	1.0	2.0	2.0	
				Tufted Apple Bud Moth	13.0	20.0	7.0	
				Dogwood Borer	1.0*	1.5	4.0	
				Apple Maggot	0.0	0.0	0.0	

* first catch

UPCOMING PEST EVENTS			
		43°F	50°F
Current DD*	(Geneva 1/1–7/3/17):	1462.4	844.1
accumulations	(Geneva 1/1–7/3/16):	1445.8	906.3
	(Geneva "Normal"):	1494.3	950.8
	(Geneva 1/1-7/10, predicted):	1641.4	984.1
	(Highland 1/1–7/3/17):	1857.0	1190.0
<u>Coming Events: Ranges (Normal ±StDev):</u>			
Apple maggot 1st catch		1225-1661	774-1072
Apple maggot 1st oviposition punctures		1605-2157	1144-1544
Codling moth 1st flight subsides		1264-1821	801-1200
Codling moth 2nd flight starts		1775-2234	1028-1499
Comstock mealybug 1st flight peak		1505-1731	931-1143
Dogwood borer flight peak		1434-1864	898-1233
Lesser appleworm 2nd flight starts		1429-2108	924-1405
Obliquebanded leafroller 1st flight subsides		1622-2041	1054-1375
Oriental fruit moth 2nd flight peak		1448-1954	924-1311
Pandemis leafroller flight subsides		1441-1692	901-1103
Redbanded leafroller 2nd flight starts		1209-1562	744-1016
San Jose scale 2nd flight starts		1629-1979	1058-1336
Spotted tentiform leafminer 2nd flight peak		1385-1786	869-1189
Spotted tent. leafminer 2nd gen tissue feeders		1378-2035	913-1182
*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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