Fruit IPM for the Week Ending 8/3/13

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Brown Marmorated Stink Bug (BMSB): In some locations there are more nymphs than adults being seen in orchard blocks. This is changing, since as nymphs mature, adult counts should start to increase. We are also finding that most pheromone traps have higher numbers of nymphs than adults. Overall numbers are still low in commercial orchards. Recent insecticide efficacy work has shown that some materials may give up to 7 days residual activity against the young nymph stages. Materials for adults will still be needed though as long as adults are present. Adults come in and out of an orchard quickly, doing some feeding, but depositing eggs from which nymphs will emerge. Therefore an effective strategy now is to use frequent sprays, including on the borders to keep adults out, but kill any nymphs that are already in the orchard. The following is a list of products tested at the Penn State lab in Biglerville by Dr. Greg Krawczyk (2012), that showed at least 80% mortality on nymphs with 7 days of residual activity (see the website for a more complete summary). http://extension.psu.edu/plants/tree-fruit/news/2012/management-options-against-brown-marmorated-stink-bug-in-pennsylvania-fruit-orchards-2012-perspective Other summaries can be found on the Stop BMSB website: http://www.stopbmsb.org/managing-bmsb/chemical-controls/ and http://www.stopbmsb.org/stopBMSB/assets/File/Research/BMSB-SAP-Nov-2012/Efficacy-of-Insecticides-Krawczyk-Nov-2012.pdf Keep in mind that various efficacy tests may have used different methods, and that this may be reflected in the results:

Active Ingredient	Product and Rate/A	Percent Nymph Mortality @ 7 days
imidacloprid	Admire Pro - 7 oz	100
	Leverage (mix) – 2.8 oz	97
thiamethoxam	Actara – 4 oz	100
	Endigo (mix) – 5 oz	100
methomyl	Lannate SP – 16 oz	84
	Lannate LV 3 pt	96
fenpropathrin	Danitol - 16 oz	100
Lambda-cyhalothrin	Warrior II – 2.5 oz	100
	Endigo (mix) – 5 oz	100
endosulfan	Thionex – 2 lb	100
bifenthrin	Bifenture – 12.8 oz	100
dinotefuran	Scorpion 35 – 5 oz	88
	Venom – 3 oz	100

Most testing that is done to derive this type of data is done with a combination of field/lab methods. Efficacy tests DO NOT completely duplicate actual field conditions. For example this year we have experienced both extremes in temperatures and rainfall. Therefore, growers should choose the high label rates of effective BMSB insecticides for actual field use. Thionex can only be used in apple. It is no longer registered for use in peach/nectarine or pear. It has a 21 day PHI. Bifenthrin and dinotefuran products will be used under a section 18 label only that you must have when using these materials.

Peach

Oriental Fruit Moth (OFM): Timings for third brood OFM applications are updated as follows:

Third Brood OFM Timing Dates				
		Insecticide Type		
County/Region	Degree Days by 7/30 base 45	Conventional	Intrepid / IGRs	Diamides
Gloucester – Southern	2541	1st – past 2nd –7/27-7/29	1st – past 2nd –past	1st – past 2nd –past
Hunterdon – Northern	2283	1st – 7/23-7/27 2nd – 8/5-8/7	1st – 7/22-7/23 2nd – 8/4-8/8/5	1st – 7/21-7/25 2nd – 8/3-8/5

Tufted Apple Budmoth (TABM): Timings for second generation TABM control are outlined below. Tap counts remain very low, since we are between generations.

	Conventional, Diamides	Conventional, Diamides	Intrepid, Rimon	Bt
County Area	AM – 4 middles	EM – 2 completes	EM – 2 completes	EM – 2 completes
Southern	1st 7/28-7/29; 2nd 8/3-8/5	1st – 7/30-8/2	1st – 8/2-8/5	1st – 8/2-8/5
Northern	1st 8/7-8/9; 2nd about 8/14-15	1st 8/9-8/11	1st 8/11-8/13	1st 8/11-8/13

San Jose Scale: Second generation crawlers are now out in southern counties. See previous newsletters for control information.

Apple

Brown Marmorated Stink Bug (BMSB): See other sections on this insect.

Tufted Apple Budmoth: See Peach Section above.

Codling Moth (CM): Codling Moth (CM): All timings for CM sprays have past in all areas of the state. However, the second generation is drawn out over a longer period of time, and trap counts are above the treatment threshold of 5 males per trap on many farms. Therefore treatments are not over in most orchards. Growers who have trap counts above 5 males per trap and have a history of CM injury should maintain coverage with very effective materials. Most of the materials used for TABM control, except for BT should control CM. BE sure to adjust the rate since in some cases it is higher for CM control than TABM.

San Jose Scale: See peach section.

Summer Diseases: Disease pressure is high as long as a wet weather pattern holds.

Captan/Topsin combinations or Pristine are preferred summer disease protectants at this time. These protectants should be renewed after 1-2" rain. Pristine should be more rainfast than Captan/Topsin.

Grape

Grape Berry Moth (GBM): Timing for third brood GBM has just passed in southern counties. If using Intrepid or diamides (Altacor, Belt or Voliam products), the ideal timing was 7/26. However, if using OP's (Imidan), or pyrethroids, good control can still be attained if treating early this week, but no later. Timing in central and northern counties can be a few days to a week later. Check the NEWA web site for a location near you.

Grape Berry Moth Trap Captures 2013		Grape Root Borer
Date	Average males/trap	Average males/trap
5/25	0	
6/1	2	
6/8	13	
6/15	3	
6/22	0	
6/29	2	0
7/6	6	1
7/13	5	1
7/20	4	4
7/27	2	9

Scouting Calendar

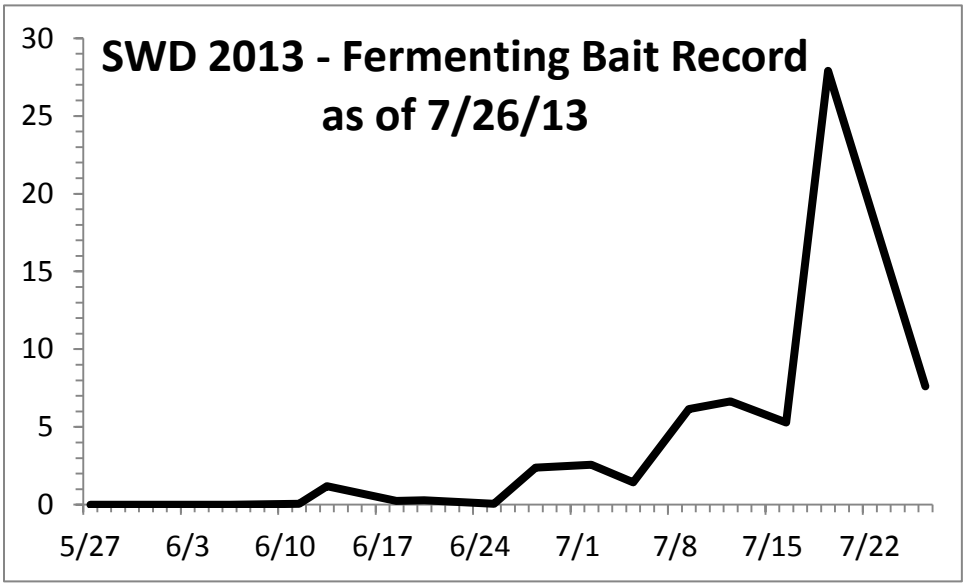
The following table is intended as an aid for orchard scouting. It should ***not*** be used to time pesticide applications. Median dates for pest events and crop phenology are displayed. These dates are compiled from observations made over the past 5-10 years in Gloucester County. Events in northern New Jersey should occur 7-10 days later.

Pest Event or Growth Stage	Approximate Date	2013 Observed Date
Full Bloom Peach (Redhaven)	April 16 +/- 7 Days	April 11
Full Bloom Apple (Red Delicious)	April 20 +/- 9 Days	May 1
Petal Fall (Red Delicious)	April 27 +/- 13 Days	May 9
Shuck Split (Redhaven)	April 29 +/- 7 Days	May 8
Pit Hardening	June 19 +/- 5 Days	June 18
Third Generation Pear Psylla Hatch	June 30 +/- 2 Days	June 26
SJS Crawlers-second generation	July 21 +/- 4 Days	July 27

Blueberry

Spotted Wing Drosophila (SWD): Trap Captures – Trap captures have dropped off some. This is likely in part due to the wet weather we had this past week and the soaked ground conditions. It is also likely that this decrease in adult activity is temporary. All trap locations in our survey system remain positive, and as Elliott ripens, they will continue to be a suitable host.
Larval Counts – We have done over 250 salt floatation tests to date. Growers are now picking Elliott, and all sampled Elliott fields are free from SWD infestation.

After "Harvest" Fields – Due to weather, high volume, or low prices, some growers are leaving a considerable amount of fruit in the fields. Please be aware that SWD will find this fruit and multiply in it. If you are leaving a field partially unpicked and your neighbor is still picking a late variety, this may not make for the best of neighbor relationships. We do advise spraying completely harvested fields if they are next to fields undergoing harvest. We DO NOT advise spraying fields if left unharvested, just to decrease the SWD population. This would require many sprays and the practice may increase the likelihood of developing insecticide resistance.



Putnam Scale: Scale crawler traps are just now starting to show a little activity. We expect that if growers wish to treat these 2nd generation crawlers, the timing should be over the next couple of weeks. More updates and information will appear in next week's newsletter.

Aphids: Populations are very low with only 10% of shoot samples positive for just light colonies.

Anthracnose: About 38% of fruit samples are positive for this disease, and in some cases the levels of infection are high. This in part is due to some blocks of Bluecrop being left unharvested after the 2nd pick. No infection has been seen on Elliot yet.

Leafminers: About 24% of samples are positive for this blueberry leafminer or teepee maker. Most levels under 10% of shoots infested. We have never seen this pest injure fruit.

Tree Fruit Trap Counts – Southern Counties									
Week Ending	STLM	TABM_A	CM	AM	OFM-A	DWB	OFM-P	TABM_P	LPTB
4/13					0		0		
4/20	14				5		0		
4/27	0				51		1		
5/4	4	0	0		83		4	0	
5/11	3	1	27		17		2	0	
5/18	5	2	12		28		5	3	28
5/25	1	16	17		23		5	15	38
6/1	1	17	8		30		0	18	12
6/8	1	29	8		1	44	0	37	52
6/15	13	18	7		1	73	0	15	16
6/22	5	8	3		9	35	0	6	24
6/29	13	3	2		0	13	0	3	5
7/6	0	1	1		0	11	0	1	0
7/13	4	1	3		0	4	0	1	12
7/20	7	3	5		12	3	1	3	4
7/27	6	4	5	0	26	3	0	5	1

Tree Fruit Trap Counts – Northern Counties										
Week Ending	STLM	TABM-A	CM	AM	OFM-A	DWB	OBLR	OFM-P	TABM-P	LPTB
4/13	1									
4/20	2							0		
4/27	71.5		0					1.1		
5/4	74		0					9.3	0	
5/11	87		1.3		29.4			14.1	0	
5/18	41	0	3.9		36			9.4	0	0
5/25	33.2	8.9	6.6		12.2			10.3	5.3	17.5
6/1	16.6	15.1	5		8.6			2.5	20.6	20
6/8	29.3	40.4	6.3		1.2	4.3	2.7	0.5	45.6	27.5
6/15	43.3	46.3	1.6		0.2	1.5	5	0.2	59.4	22.4
6/22	57.7	41.9	1.8		0.2	1.7	1.7	0.8	39	12.8
6/29	58.9	25.3	1.7		1.4	1.7	2	2.4	26	11.4
7/6	85.4	12.7	0.6		1.1	3.3	2.7	4.3	9.8	8.5
7/13	41.6	4.2	1.1		4.5	13	0	2	2.4	7.2
7/20	18.7	1.6	2.1	0	1.2	7.7	0	0.8	1.1	6.9
7/27	74.7	3.2	6.3	0	2	1	0.7	1.5	1.7	2.9

Blueberry Insect Trap Counts - Atlantic County						
Week Ending	RBLR	CBFW	OBLR	SNLH	Or. Beetle	BBM
4/13	116					
4/20	120					
4/27	100					
5/4	72	0				
5/11	28	0.01				
5/18	12.4	0.15				
5/25	3.1	0.1				
6/1	1.6	0.83				1.6
6/8	4.7	0.89	0	4.5	0	4.7
6/15	58	0.48	7.3	0.3	189	0
6/22	80	0.08	12	0.5	350	0.005
6/29	47	0.005	3.7	0.13	1723	0.006
7/6	54.4	0.004	1.3	0.04	2159	0.1
7/13	25.4	0	0.7	0.43	1966	0.1
7/20	8	0	4.3	0.02	897	0.12
7/27	15.2	0	7.8	0.03	442	0.08

Blueberry Insect Trap Counts - Burlington County						
Week Ending	RBLR	CBFW	OBLR	SNLH	Or. Beetle	BBM
4/13	71					
4/20	44					
4/27	38					
5/4	26	0				
5/11	9	0				
5/18	1	0.04				
5/25	2	0.13				
6/1	0.2	2.1				
6/8	2.8	1.2	0.33	1	0.07	2.8
6/15	4.8	0.91	8	0.24	26	0
6/22	28.3	0.03	10.3	0.6	231	0
6/29	38.4	0.14	1	0.01	957	0.01
7/6	64.3	0.2	6	0.23	905	0.05
7/13	22.3	0.04	0	0.05	878	0.02
7/20	2	0.15	0	0	330	0
7/27	3.5	0	1	0	141	0.02