

## Fruit IPM for the Week Ending 7/12/13

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### Peach

**Oriental Fruit Moth (OFM):** While we have a lull in internal worm activity, the timing for the third brood is coming up by the middle of the month. The first hatch for OFM is expected to start in southern counties about 7/17. Timing for third brood OFM applications are as follows:

Second Generation OFM Timing Dates				
County/Region	Degree Days by 7/06 base 45	Insecticide Type		
		Conventional	Intrepid / IGRs	Diamides
Gloucester - Southern	1806	1 <sup>st</sup> – 7/17 2 <sup>nd</sup> – 7/27	1 <sup>st</sup> – 7/15 2 <sup>nd</sup> – 7/25	1 <sup>st</sup> – 7/15 2 <sup>nd</sup> – 7/25
Hunterdon - Northern	1584	1 <sup>st</sup> – too far off 2 <sup>nd</sup> – too far off	1 <sup>st</sup> – too far off 2 <sup>nd</sup> – too far off	1 <sup>st</sup> – too far off 2 <sup>nd</sup> – too far off

Some farms in northern counties continue to have trap counts above 6-8 moths per trap. Captures at or above these levels indicate higher insect pressure that may lead to terminal and fruit infestations. High trap captures can also indicate that the 1<sup>st</sup> and second generations were not well controlled. These growers should continue an effective insecticide program, alternate insecticides and check coverage and sprayer calibration.

**Tufted Apple Budmoth (TABM):** We also have a “time out” for TABM activity. Second generation TABM egg laying and hatch should start up again by the end of the month in southern counties, and by August 8-10 in northern counties.

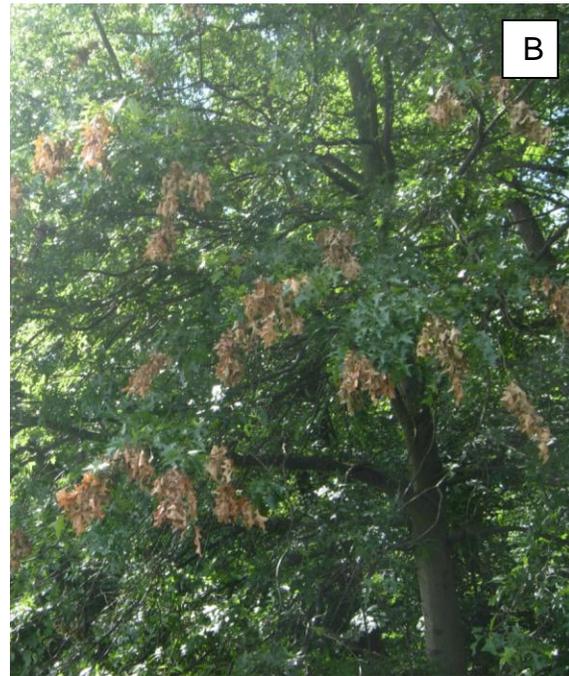
**Brown Rot:** Significant rot has been seen in ripening nectarine blocks and a few peach blocks though not as severe. Rot is found mainly in areas that received the brunt of the June rains. Where brown rot is present, this presents very high inoculum levels for disease control of the existing clean fruit. If practicable, removal of rotten fruit from the orchard will aid in control in affected blocks, and possibly the edges of adjacent blocks that have not yet begun to ripen. Rotate fungicides and maintain a tight program. See Norm Lalancette’s recent article on brown rot control: **Integrated Preharvest Fungicide Programs for Brown Rot.**

**San Jose Scale (SJS):** Growers with a history of scale on their farms should start to plan for the third generation crawler stage. Effective materials include Assail, Actara, Diazinon, Esteem, Centaur, and Movento. See the Production guide for rates. Note that Esteem should be applied at the beginning of crawler emergence while Centaur should be applied at peak crawler emergence. Peak crawler emergence usually occurs sometime in late July or early August in southern counties. Diazinon is limited to one in-season application per season, and may not be as effective as the other listed materials.

**Thrips:** Thrips were observed feeding in a number of orchards last week. Delegate and Lannate are the preferred materials for thrips control at this time. Lannate LV may NOT be used on nectarines in NJ, while the SP formulation can be used on both peaches and nectarines. Do not apply more than 3 applications of Lannate SP per season on nectarines or 6 applications per season on peaches. There is a 1 day PHI for nectarines and a 4 day PHI for peaches. Delegate can

be used at the rate of 6-7 oz/A with a 1 day PHI for peaches and nectarines.

**Periodical Cicada:** Some individual shoot flagging due to egg slits (A) were observed at 2 farms in northern counties. Cicada activity was noted in blocks surrounded by forest, in which trees were also damaged (B). No additional activity from cicadas is expected. Nothing can be done at this point, except to prune out affected branches. See below:



## Apple

**Tufted Apple Budmoth:** This is only a minor pest at the present time. We are between generations and no treatments should be needed during the next couple of weeks. If the population increases, along with the second generation flight, then treatments may be needed, but will likely take a back seat to BMSB management. The second timing for codling moth will either overlap with, or be just ahead of the TABM timing, and that most of the materials used for CM control will also control TABM.

**San Jose Scale:** Crawlers are now active in several locations. See peach section and the Tree Fruit Production Guide for materials and timing.

**Codling Moth (CM):** Codling moth usually has 2 and a partial 3<sup>rd</sup> generation per year in most of NJ. The second generation is often the most troublesome and can be drawn out in many areas. Treatments would normally started at 1250DD past biofix with standard materials, but this is now extended to about 1300DD and lasting through to about 1600-1650DD. In southern counties, the time to treat for codling moth is now through the middle of the week, and 7/12-14 in northern counties. Do not use trap counts as a guide for this second generation degree day timed spray. Treatments should be completed at the optimum timing with the correct rate and

volume. After 2 complete CM treatments have been applied, then trap counts can be used as a guide to help determine the need for supplemental applications. If using a granulosis virus like Carpovirusine or Cyd-X, remember that these need to be applied in repeated applications every 7-9 days, and need to be ingested by the young larvae as they hatch from eggs laid on the fruit. Generally the use of the virus is only suggested for the first generation, but can be used now if insecticide resistance is present and alternatives are needed. Do not use neonicotinoids (Belay, Calypso, Assail, Actara, Admire, or combinations containing those active ingredients (ai's). Neonicotinoids may have anti-feeding activity, thus inhibiting the ingestion of the virus.

Codling Moth Degree Day Timing						
	Application and Insecticide Type					
County Area	Rimon, Intrepid, Diamides, Delegate: 1250-1300DD 1550-1600DD			Standard Insecticides (OP's, Lannate, Pyrethroids, Neonicotinoids, and (granulosis virus): 1350DD 1650-1700DD		
DD	1250	1300	1350	1500	1550	1600
Southern	7/7	7/8	7/10	7/15	7/17	7/19
Northern	7/11	7/13	7/15-16	7/20-21	7/23-24	7/25-26

## Grape

**Grape Berry Moth (GBM):** Treatments for the second generation are now over. The next week or two is a good time to evaluate control. Examine 50 clusters on vineyard edges and in the vineyard interior for damaged berries or webbing. If there is an average of 6% or less damaged clusters then control is considered successful or there is no need for further control.

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
7/5	6	1

## 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.

<b>Pest Event or Growth Stage</b>	<b>Approximate Date</b>	<b>2013 Observed Date</b>
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	Not yet observed

## **Blueberry**

**Spotted Wing Drosophila (SWD): Trap Captures** - As of this date, most of our trap sites have been positive for SWD adults. We expect that trap captures will increase by the end of the week. The bottom line is that if you grow blueberries, you need an intensive SWD management program on your farm.

**Larval Counts** – We have done just over 113 salt water float tests to look for the presence of SWD larvae. As of this writing we can say that growers are doing a good job with managing SWD and fruit quality is good. **Every Grower** should be checking their own fruit both pre and post pack in order to help maintain quality.

**Treatments** – All growers are advised to continue on a 7 day program. Duke harvest is over for most growers, and that may leave recently machine harvested Duke fields next to Bluecrop fields in their second pick. Several growers have asked about the continuation of treatments on Duke fields that have already been harvested. The harvested fields we have seen may still have ½ pt of berries on the bush and 1-2 pts on the ground beneath each bush. That’s well over 1,000 pts/a and an adequate source on which SWD can reproduce. We do not know how far SWD can fly or how well it’s carried on the wind, especially when next to an active blueberry field. **Therefore it would be a prudent idea to continue insecticide treatments in recently harvested fields when those fields are near other fields not yet completely picked.** When treating these fields, it now becomes easier to choose materials, since you don’t have to worry about Canadian exports, or PHI’s. Remember though that part of your target is on the ground in and around the crown of the bush, so coverage remains important.

**Blueberry Maggot (BBM):** Populations of adults continue to be very low. Some exceptions exist. Remember to manage according to the trap counts on your farm. Your trap counts reflect a history of the population on that site as well as a result of your own management.

**Oriental Beetle (OB) and Other Scarabs:** OB adult activity is very high. Adults will not damage the crop, but do indicate population density. Growers have about a week to 10 days to complete Admire/imidacloprid treatments if not already done. High trap counts can be used as a record to indicate the need for mating disruption to be used next year if you do not use the ground spray option. Some Japanese beetles are feeding on foliage and berries.

**Aphids:** Aphids are being seen in 72% of shoot samples, with 42% of samples above the 10% infestation level. Where present, the levels of infestation are higher than in the previous report.

**Leafrollers and Other Leps:** Leafroller/Worm activity has been lower than during the previous

week. Only 4% of shoot samples have been positive and none have exceeded a treatment threshold. Occasional worm injury is being seen at some locations.

**Putnam Scale:** Scale is still being seen at several locations. In general, the levels of injury would justify a treatment of 2<sup>nd</sup> generation crawlers. The timing for this treatment should arrive in late July/early August. Future newsletters will indicate timing.

**Anthracnose:** Anthracnose is present at several locations, with about 14% of fruit samples showing injury. See the 2013 Blueberry Pest Control Recommendations for NJ. Some growers have been using Prophyt and similar products. Use of these products requires that the spray water be higher than pH 5.5, and should be applied at a volume of 50 gal/acre. Try to allow 12 hours of drying time after application before overhead irrigation or rain. These treatments may help suppress root rot development which may be a risk after recent precipitation.

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

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

<b>Blueberry Insect Trap Counts - Atlantic County</b>						
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

<b>Blueberry Insect Trap Counts - Burlington County</b>						
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