

## Fruit IPM for the Week Ending 7/05/13

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### Peach

**Oriental Fruit Moth (OFM):** Most new larvae have hatched in southern counties, and are about 32% hatched in northern counties. Therefore, second generation sprays are over in southern counties, but a second treatment is still due this week in Hunterdon County and north. Timing for second brood OFM applications using OP's, Carbamates, Diamides, and Pyrethroids are as follows:

Second Generation OFM Timing Dates				
County/Region	Degree Days by 7/02 base 45	Insecticide Type		
		Conventional	Intrepid / IGRs	Diamides
Gloucester - Southern	1593	1 <sup>st</sup> – past 2 <sup>nd</sup> –past	1 <sup>st</sup> – past 2 <sup>nd</sup> –past	1 <sup>st</sup> – past 2 <sup>nd</sup> –past
Hunterdon - Northern	1377	1 <sup>st</sup> – past 2 <sup>nd</sup> – 7/5-6	1 <sup>st</sup> – past 2 <sup>nd</sup> – 7/3-5	1 <sup>st</sup> – past 2 <sup>nd</sup> – 7/2-5

**Tufted Apple Budmoth (TABM):** The first brood TABM hatch is completely over in both southern and northern counties. All first generation treatments should have already been applied if needed. Timings for TABM control are outlined below.

	Conventional, Diamides	Conventional, Diamides	Intrepid, Rimon	Bt
County Area	AM – 4 middles	EM – 2 completes	EM – 2 completes	EM – 2 completes
Southern	Past	Past	Past	Past
Northern	Past	Past	Past	Past

**General Moth and “Worm” Considerations:** With the exception of a few farms that still have trap counts that indicate high populations, most insecticides **DO NOT** have to target internal worms or leafrollers at the present time. This means that growers can concentrate on brown marmorated stink bugs (BMSB) where present. This is important, since some of the most effective insecticides that target worms (for example, Altacor, Belt, Delegate, Intrepid) have no affect on BMSB.

**Bacterial Spot:** Heavy rains, especially the storm of 6/18, have caused significant leaf infection of bacterial spot in some orchards. Continued storms this week will cause additional infections. Since these infections are coming later in the season, the symptoms will be more superficial in nature and not the deep heavy pitting from infections that occur earlier in the season. All that can be done now is to maintain coverage with copper in cover sprays and make applications of Mycoshield or Fireline around periods of heavy downpours or severe weather on the most sensitive varieties.

**Brown Rot:** No significant increase in brown rot has been seen in ripening fruit following the record rainfall in June. Rot has been observed only on injured fruit or split pits. It's important to start your preharvest program approximately 3 weeks prior to harvest, especially given the intense rot pressure and weather patterns we are now experiencing.

**June Beetle; Japanese Beetle:** June beetles and Japanese beetles are now flying. These insects can be troublesome on ripening fruit and usually peak around Redhaven season. Sevin is the most commonly recommended material and is effective even at low rates. Provado/Admire is also effective and has a 0 day PHI. Most materials being applied for BMSB should be effective, but residual activity will vary, depending on the material, precipitation and heat.

**Apple**

**Codling Moth (CM):** In southern counties, the time to treat for codling moth will be on or about 7/11. If using Intrepid, applications need to go on 1-2 days earlier than if using standard materials. 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. Unlike peaches, this pest is an internal worm that will need to be targeted along with brown marmorated stink bug (BMSB).

Codling Moth Degree Day Timing						
	Application and Insecticide Type					
County Area	Rimon, Intrepid, Diamides, Delegate: 1250-1300DD 1550-1600DD			Standard Insecticides, 1350DD 1650-1700DD		
DD	1250	1300	1550	1350	1650	1700
Southern	7/6	7/9	7/19	7/11	7/21	7/23
Northern	7/12-13	7/14-15	7/25-26	7/16-17	7/29-30	8/1-2

**Grape**

**Grape Berry Moth (GBM):** Egg hatch for the second generation has started in southern counties. Neonate larvae were observed in berries in Atlantic County on 6/28.

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

## 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	Not yet observed

## Blueberry

**Spotted Wing Drosophila (SWD): Trap Captures** - As of this date, only 1 farm out of the 17 farm sites has remained negative for SWD trap captures. Another way of putting this is that adults are present in traps at 94% of our trap sites. We have been trapping for 5 weeks, and this is the first week that flies have been present in the apple cider vinegar (ACV) traps. The fermenting bait and droskidrink baits continue to capture the most SWD adults.

**Larval Counts** – We have done just over 50 salt water float tests to look for the presence of SWD larvae. As of this writing we have seen no larvae in any commercially treated fields. This includes both ground and aerial sprayed fields. However, larvae are present in unsprayed fields. Up to 7 larvae per qt of untreated berries was found on Tuesday 7/2.

**Treatments** – All growers are advised to continue on a 7 day program. Any insecticide that is used should be effective for SWD management. This includes pyrethroids (only Danitol for Canadian export), Delegate/Entrust, Malathion, Imidan, and Lannate. Since the Canadian MRL for Imidan is half the domestic U.S. residue tolerance, we suggest backing off the PHI and decreasing the total amount used per acre per season. The Canadian Imidan 50W label specifies the following amounts to be used for blueberries in Canada, translated from kg/hectare to lb/A: 2 applications at 1 lb/A each, with a 15 day PHI. Therefore, for many of you who are still exporting to Canada, you are no longer left with an Imidan option. Also be aware that if the weather breaks, and sustained periods of picking are possible, then you likely need both of the 2 applications allowed for the 1 day PHI malathion products.

**Blueberry Maggot (BBM):** There maybe 1 “fortunate” outcome with all this rain and ground moisture. Our trap counts for blueberry maggot have been exceedingly low. This makes sense, since the insect overwinters in the ground, and just started to emerge at the same time the frequent and heavy rains started. It is possible that the over saturated ground could be contributing to a lower BBM emergence. While we can’t make conclusions, it is a fact that BBM populations are low, and this can affect the insecticide you choose. This makes Delegate (suppressive for BBM) and pyrethroids (OK for BBM), equal choices along with the other materials listed for SWD control (all excellent for BBM), since BBM populations are so low.

**Putnam Scale:** About 44% of fruit samples (BC and Duke) are showing some level of injury. About 17% of samples are over the 1% injury level. Growers will have an opportunity to treat 2<sup>nd</sup> generation crawlers in late July to early August – upcoming newsletters will indicate timing.

**Aphids:** Aphid presence is almost unchanged since last week with a frequency of 70% positive shoot samples, and 33% of samples above the 10% infestation level.

**Oriental Beetle (OB) and Other Scarabs:** OB adult emergence has increased and is near a peak. Applications of imidacloprid should be applied as soon as possible if not already done so. No adult beetle species has been seen on fruit or foliage as yet.

**Leafrollers and Other Leps:** Almost no worm activity has been seen in our shoot samples except for low levels of BB Leafminer larvae. About 7% of shoot samples for worm larvae have been positive but none of these have reached the 5% threshold level. On occasion, fresh external and to a lesser extent internal worm fruit injury has been noted but this activity is sparse and not widespread. Cherry Fruit worm has been associated with sparse internal injury.

**Anthracoese:** Only 1 field fruit sample out of 113 was seen with low levels of infection.

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

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

<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

<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