

## Fruit IPM

6/29/16

Dean Polk, David Schmitt, Atanas Atanassov, and Carrie Mansue

### Peach:

**Brown Marmorated Stink Bug (BMSB):** Feeding damage appears to average about 1-2% on several farms, with low numbers in traps. The best protection will be achieved with a regular 7 day border spray program along with scouting for damage over the entire block.

**Oriental Fruit Moth (OFM):** The second flight is underway in all counties. Populations in southern counties are very low. Treatment timing will depend on the material that you choose to use. Please see the insecticide timings below for insecticide type:

OFM 2 <sup>nd</sup> Generation Timing				
County/Region	Degree Days by 6/29 base 45	Insecticide Type		
		Conventional	Intrepid / IGRs	Diamide (Altacor, Belt, Voliam products)
Gloucester – Southern	1501	1 <sup>st</sup> – past 2 <sup>nd</sup> – 6/27-6/29	1 <sup>st</sup> – past 2 <sup>nd</sup> – 6/25-6/27	1 <sup>st</sup> – past 2 <sup>nd</sup> – past
Hunterdon – Northern	1323	1 <sup>st</sup> – past 2 <sup>nd</sup> – 7/4-7/6	1 <sup>st</sup> – past 2 <sup>nd</sup> – 7/2-7/4	1 <sup>st</sup> – past 2 <sup>nd</sup> – 6/31-7/4

**Tufted Apple Budmoth (TABM):** This is not an issue at this time.

**Thrips:** Thrips should be treated where they are active. Active feeding has been observed in Easternglo nectarines in southern counties this week. Susceptible early varieties include Easternglo, PF-5, and Sentry. Delegate @ 6-7 oz/ac is effective for thrips. The addition of a non-ionic surfactant can help improve control. Lannate SP @ 1#/A (or LV @1.5-3 pt/A) can still be effective in some orchards. Prolonged periods of dry weather favor thrips buildup, so make sure to check your fruit during this kind of weather pattern.

### Apple:

**Codling Moth (CM):** Codling moth trap captures are quite high on several farms in both southern and northern counties. Where the flight stands at less than 5 males per trap per week, no insecticides are needed for this pest. If you have treated with pyrethroids, Imidan or Lannate, then switch to another chemistry, such as Altacor, Belt or Voliam products, or Delegate; or plan on using Madex starting with the next flight.

**Woolly Apple Aphids (WAA):** Additional colonies have been seen on several sites in northern counties. Up to 12-14 colonies per tree are present on some farms. Diazinon and Movento are the 2 products that can control WAA, but it is getting too late in the season for Movento to work. Diazinon may be used 2 times during the season; 1 dormant and 1 post bloom or 2 post bloom applications. If you have not yet used it, you can still use 2 applications. The rate for the AG600

formulation is 12.75 oz/100 gal or about 1 qt per acre, applied in enough volume that all surface areas of all wood are wet. A spreader adjuvant may help with the coverage, but make sure you have adequate spray volume.

**Fire Blight:** The shoot blight phase of the disease is still present in scattered areas throughout the State. Where blight is present, pruning out infected shoots is important now especially if thunderstorms are predicted.

**Scouting Calendar Tree Fruit Southern Counties**

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 since 1995 in Gloucester County. Events in northern New Jersey should occur 7-10 days later.

Pest Event or Growth Stage	Approximate Date	2016 Observed Date
Full Bloom Peach (Redhaven)	April 9 +/- 14 Days	April 5
Codling Moth Biofix	April 27 +/- 13 Days	April 22
Full Bloom Apple (Red Delicious)	April 22 +/- 11 Days	April 20
Petal Fall (Redhaven)	April 22 +/- 10 Days	April 22
Petal Fall (Red Delicious)	April 27 +/- 14 Days	May 8
Shuck Split (Redhaven)	April 30 +/- 11 Days	May 2
First PC Oviposition Scars Observed	May 3 +/- 18 Days	May 10
Tufted Apple Bud Moth Biofix	May 4 +/- 10 Days	May 14
Bacterial spot observed on peach leaves	May 15 +/- 21 Days	May 26
Rusty spot symptoms	May 12 +/- 19 Days	May 30
OFM Flagging observed	May 12 +/- 5 Days	May 31
Second Generation Pear Psylla Hatch	May 25 +/- 8 Days	May 29
Bacterial Spot observed on stone fruit	May 25 +/- 33 Days	June 2
Peach Scab Symptoms	June 14 +/- 13 Days	Not yet observed
Pit Hardening	June 15 +/- 9 Days	June 11

**Tree Fruit Trap Counts – Southern Counties**

Week Ending	STLM	TABM-A	CM	AM	OFM-A	DWB	OFM-P	TABM-P	LPTB	PTB
4/9	4				55		0			
4/16	48				25		3			
4/23	14	0			89		9			
4/30	20	0	32		81		9	1		
5/7	0	0	7		38		3	0	0	
5/14	4	1	7		23		0	0	16	
5/21	0	0	7		35		1	1	44	
5/28	0	8	9		9		0	8	42	
6/4	0	0	15		11		0	8	52	
6/11	20	25	8		11	47	3	27	90	
6/18	5	13	1		0	45	0	17	33	
6/25	18	14	6		5	34	0	10	20	

## Tree Fruit Trap Counts – Northern Counties

Week Ending	STLM	TABM-A	CM	AM	OFM-A	DWB	OBLR	OFM-P	TABM-P	LPTB	PTB
4/2	0.3							0.0			
4/9	4				0.0			0.0			
4/16	20				0.0			0.0			
4/23	34				4.3			7.0			
4/30	59		0.4		10.3			10.8			
5/7	122		0.1		1.8			2.3			
5/14	14	0.2	1.3		3.0			1.2	0.1	0.0	0.0
5/21	32	1.1	3.7		5.8			1.7	0.6	4.2	0.0
5/28	16	2.0	2.8		11.0	8.8	0.0	1.2	0.3	6.9	0.0
6/4	23	3.7	3.1		1.2	5.2	0.0	1.6	11.3	20.3	0.8
6/11	191	16.6	4.0		0.8	3.4	0.0	0.2	29.9	12.0	1.0
6/18	37	8.0	4.6		5.4	0.6	0.0	1.7	15.4	10.2	2.3
6/25	83	5.6	2.2		5.6	0.4	0.0	1.6	5.3	3.4	0.8

### Blueberry:

**Spotted Wing Drosophila (SWD):** Both male and female flies are being captured in traps. While most of our sites still show “0” flies captured, more sites are coming up positive for adults. We are also monitoring unpacked, field run fruit. The first fruit sample from an unsprayed field yielded 1 live larva per 1qt of berries this past week. These types of fields will only show higher larval counts over the next several weeks. This also demonstrates the importance of a regular 7 day insecticide program. For the most part, insecticides are contacting adult flies, with some penetrating ability in the fruit skin. By the middle of the season, SWD populations will have overlapping generations, and only about 8% of the entire population will be adults. This, combined with the rapid generation time and high egg laying rate, means that **you CANNOT stretch sprays and expect good control.**

**Oriental Beetle (OB):** OB adults continue to emerge, mate and lay eggs that will hatch and produce grubs that consume blueberry roots. Populations of emerging adults have increased rapidly, and average just over 2300 per trap per week, with a high of just over 4,000 adults per trap. This is indicative of high populations coming from plantings that have not been treated for quite some time. Adults will continue to emerge from the ground over the next several weeks. You have until 7 days preharvest to treat for this insect, or treat post harvest if you can do so before the middle of July when the developing grubs start to get too big to be controlled by imidacloprid.

**Sharpnosed Leafhopper (SNLH):** The first generation of SNLH has matured and now able to fly and spread blueberry stunt disease. Most of the treatments being used for SWD will also suppress SNLH. We should find adults in our traps for the next several weeks. These will mate and lay eggs which produce a second generation in mid August through September. That second generation will require its own special management, since all fruit will be off the bushes by that time.

**Aphids:** Aphids are still present, but at slightly lower numbers than last week. Monitoring showed an average of 6.5% of shoots infested, most on the bottoms of bushes, with a high of 50% of infested terminals.

**Scale (Putnam and other scale insects):** Most of the scale populations we normally see in blueberry are from Putnam scale. There are 2 generations of this insect. The first generation crawlers have just settled on new wood and berries. After the crawlers settle, they will form a gray waxy layer on top as they mature. We are now locating tape monitoring traps where scale is present in order to monitor the timing of the second generation crawlers, usually in early August.

**Anthracnose:** Several farms were again seen this past week with low levels of anthracnose-infected fruit on both Duke and Bluecrop. Please see the last Blueberry Bulletin for a table of fungicide options.

**Blueberry Trap Counts**

Week Ending	CBFW	SNLH	OB	BBM	SWD
6/25	3	0.5	2328	0.03	0.4

CBFW-cranberry fruitworm, SNLH – sharpnosed leafhopper, OB – oriental beetle, BBM – blueberry maggot, SWD – spotted wing drosophila

**Grape**

**Grape Berry Moth (GBM):** As mentioned in the previous newsletter, the end of last week was the best timing for treating second generation grape berry moth with Intrepid, Altacor or Belt in southern counties. If you missed this timing then you can still treat this week with a standard material like Imidan or any registered pyrethroid like Baythroid, Brigade, Danitol or Mustang Maxx.

**Japanese Beetle (JB):** The first Japanese beetle adults were recently seen in southern counties. Make sure to check your vineyards for excessive Japanese beetle feeding. No additional sprays are needed when treating for grape berry moth with the standard materials mentioned above. If JB populations increase, the neonicotinoid materials also provide good control (Actara, Assail, Belay).

**Grape Trap Counts -3 locations, 6 blocks in southern counties**

Week Ending	Grape Berry Moth	Grape Root Borer
6/18	2	-
6/25	1	0