

Fruit IPM

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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 nd Generation Timing				
County/Region	Degree Days by 7/5 base 45	Insecticide Type		
		Conventional 2100-2200; 2450-2500	Intrepid / IGRs 2050-2100; 2400-2450	Diamide (Altacor, Belt, Voliam products) 2025-2150; 2375-2400
Gloucester – Southern	1651	All sprays done, 3 rd gen. due about 7/18	All sprays done, 3 rd gen. due about 7/16	Sprays done, 3 rd gen. due about 7/16
Hunterdon – Northern	1481	All sprays done, 3 rd gen. due about 7/26	All sprays done, 3 rd gen. due about 7/24	Sprays done, 3 rd gen. due about 7/24

Tarnished Plant Bug and other Cat-Facing Insects: Sweep sampling in flowering and weedy ground cover shows up to 23 adults and nymphs present per 50 sweeps. Few to no cat-facing insects are present in weed-free turf ground cover. The presence of flowering weeds increases pest pressure, increases fruit damage, will cause an increase in insecticide use; and since they attract bees where they don't belong, flowering weeds make it difficult to impossible to use neonicotinoid insecticides.

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

Thrips: Thrips are active. See last newsletter for thrips control - Delegate @ 6-7 oz/ac, or Lannate SP @ 1#/A (or LV @1.5-3 pt/A). The addition of a non-ionic surfactant can help improve control. Prolonged periods of dry weather favor thrips buildup, so make sure to check your fruit during this kind of weather pattern.

Brown Rot: Some rot has been seen in ripening nectarine blocks and a few peach blocks. Where brown rot is present, this presents very high inoculum levels for disease control of the existing clean fruit, both within the block and in surrounding blocks. If practical, removal of rotten fruit from the orchard will aid in the rot 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. Rot control may be difficult where physiologically deformed fruit is present in great numbers.

Japanese Beetle and other Scarab Beetles: Japanese beetle adults are present in all counties, but at low levels. Most insecticides will control these insects but the best materials are formulations containing Imidacloprid (Admire Pro; Leverage); Carbaryl (Sevin); Phosmet (Imidan); or Fenpropathrin (Danitol). Most neonicotinoids have fast knock-down properties when also used for aphids and other target pests, but need to be used at their higher rates. Besides imidacloprid (Admire), these include Assail, Actara, and Belay.

Apple:

Codling Moth (CM): The 2nd generation flight is underway in southern counties, with the first sprays due over the 4th of July holidays. The second application will be due in southern counties between 7/12-15, depending on the insecticide used. Intrepid and Rimon should be used early, while all other materials can be applied around 7/14 in southern counties. The first applications in northern counties are due around 7/10 if using Intrepid/Rimon, but between 7/14-15 for other materials.

Codling Moth Degree Day Timing							
County Area	Degree Days base 50 as of 7/5	Application and Insecticide Type					
		Rimon, Intrepid, Diamides, Delegate: 1150-1200DD 1450-1500DD			Standard Insecticides, 1250DD 1550-1600DD		
DD		1150	1200	1500	1250	1550	1600
Southern	1196	7/3	7/5	7/13-15	7/7	7/17	7/19
Northern	1036	7/9	7/11	7/26	7/13	7/28	7/30

Woolly Apple Aphids (WAA): Woolly aphids continue to appear in some blocks in southern and northern counties. We have had significant biological control in past years so it’s worth waiting to treat. When scouting examine the colonies by gently removing the “wool” and look to see if aphids are alive or dead. Beneficials that we have observed feeding on woolly aphids are [syrphid fly larvae](#), and [parasitic wasps](#). We have no established threshold for treatment, however an average of 10 colonies per tree would be conservative. Diazinon and Movento are 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. AdmirePro applied through drip irrigation will also work. Foliar applications of neonics such as Admire Pro, Actara and Belay, generally provide good control of shoot infestations but will not control colonies feeding on woody plant parts.

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	June 24
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	
7/2	7	2	4		11	1	2	2	23	0

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
7/2	40	3.3	1.6		5.4	0.2	0.0	1.5	9.3	8.8	0.3

Blueberry:

Spotted Wing Drosophila (SWD): Weekly treatments should continue on Bluecrop and later varieties. The fact the 1 positive larval sample was recently found in an unsprayed field, reinforces the idea that treatments should continue on a 7 day program.

Oriental Beetle (OB): OB trap counts are close to what they were during the previous week. These insects will continue to emerge, mate and lay eggs 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): First generation adult SNLH continue to be active at low levels. 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, at 8.7% of terminals infested with live colonies. At this point in the season, most aphid populations will be found in the bottom portions of bushes at the tips of new canes. It is easier to find populations on Elliott than other varieties at this time.

Scale (Putnam and other scale insects): Incidence of scale is very low at .03% of samples seen as positive. No treatments are needed at this point. However growers should be aware which fields have scale populations, so they can be treated in August during the 2nd generation crawler stage. More on this in later newsletters

Anthracnose: Several farms were again seen this past week with low levels of anthracnose-infected fruit on Bluecrop. Incidence is very low at .03% of samples showing field symptoms. Please see the last Blueberry Bulletin for a table of fungicide options.

Blueberry Trap Counts

Week Ending	CBFW	SNLH	OB	BBM	SWD males
6/25	3.0	0.5	2328	0.03	0.4
7/1	1.2	0.63	2439	0.04	0.7

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

Grape

Grape Root Borer (GRB): Trap counts indicate that no borer adults have been captured, although adults should be emerging soon. Most NJ grape acreage does not have a borer problem, although some growers will want to treat if the insect is present on their farm. Traps that are placed in a vineyard can only be used for timing, but not to determine if you have a real problem. This is because the traps attract emerging adults over a wide area, and very often, most of the adults in a trap are coming from wild grapes in the surrounding woods. Potential problems in a vineyard can only be determined by examining many vines at the soil level or below for the presence of larvae or emerged adults.

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
7/2	2	0