

## Fruit IPM

6/14/16

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### Peach:

**Brown Marmorated Stink Bug (BMSB):** Adults are occasionally seen during orchard scouting. Knock down materials will be required for the remainder of the season in orchards with BMSB populations.

**Oriental Fruit Moth (OFM):** The second flight is underway in southern counties. Treatment timing will depend on the material that you choose to use. Treatments are due now through the rest of the week if using Altacor, Belt or Voliam products, or by the end of the week if using Intrepid. If you are using a pyrethroid, Lannate or Imidan, then make the application on the weekend. The eggs that are laid by this generation will produce larvae (second brood) that will enter the fruit and cause flagging on the trees. If you have a limited crop, still be aware of the timing, since proper timing will help prevent damage fruit. Timing for second brood OFM applications:

OFM 2 <sup>nd</sup> Generation Timing				
County/Region	Degree Days by 6/14 base 45	Insecticide Type		
		Conventional	Intrepid / IGRs	Diamide (Altacor, Belt, Voliam products)
Gloucester – Southern	1085	1 <sup>st</sup> – 6/17-19 2 <sup>nd</sup> – 6/29-6/30	1 <sup>st</sup> – 6/15-6/17 2 <sup>nd</sup> – 6/26-6/28	1 <sup>st</sup> – 6/14-17 2 <sup>nd</sup> – 6/25-6/27
Hunterdon – Northern	931	1 <sup>st</sup> – 6/24-6/26 2 <sup>nd</sup> About – 7/3-7/5	1 <sup>st</sup> – 6/22-6/24 2 <sup>nd</sup> About 7/1-7/3	1 <sup>st</sup> – 6/21-6/24 2 <sup>nd</sup> About 6/30-7/1

**Tufted Apple Budmoth (TABM):** We are in the middle of the first adult flight for this insect, with trap counts indicating healthy populations at some locations. Timings are outlined below for anyone who had high populations last year.

TABM First Generation Treatment Timing					
County/Region	Degree Days by 6/14 base 45	Insecticide Type			
		Conventional, Diamides	Conventional, Diamides	Intrepid, Rimon	Bt
		AM	EM	EM	EM
Gloucester - Southern	727	3 <sup>rd</sup> 6/15-16; 4 <sup>th</sup> 6/20-22	6/18-20	6/18-20	6/18-20
Hunterdon - Northern	715	3 <sup>rd</sup> 6/16-17; 4 <sup>th</sup> 6/22-23	6/18-20	6/18-20	6/18-20

**Thrips:** Thrips are active in a number of locations. Susceptible early varieties like Easternglo, PF-5, and Sentry should be scheduled to receive a thrips treatment from 1 to 2 weeks preharvest. 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. Since prolonged periods of dry weather favor thrips buildup, make sure to check your fruit during this kind of weather pattern.

**Brown Rot:** Thundershowers and overhead irrigation done around periods of warm temperatures and high humidity can provide good opportunities for brown rot infection, particularly in blocks with damaged fruit or blossom blight. If captan has been added to the spray tank in repeated sprays, then you are probably going to have an easier time controlling preharvest brown rot later.

**Bacterial Spot:** Leaf symptoms have been seen in only a few locations and only on highly susceptible varieties, however some fruit lesions are present. Recent heavy rains may have initiated additional infections. Leaf symptoms that can appear a few days after infection, and fruit symptoms begin to appear about 3 weeks after an infection. Since pit hardening has occurred on most varieties in southern counties, the fruit is less susceptible to bacterial spot infections

**Rusty Spot:** Pit hardening is now complete in southern counties and should be nearing completion in northern counties. After pit hardening no further treatment is needed for Rusty Spot.

## Apple:

**Codling Moth (CM):** While spray timings are over for first brood treatment, adults continue to be active. Anytime that CM trap captures exceed 5 adults per trap per week, treatments should continue, since this indicates a high population that can continue to cause trouble. 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.

[illegible]

**Woolly Apple Aphids (WAA):** WAA have not really increased since last week, but are still present in scattered locations.

**Tufted Apple Budmoth (TABM):** See peach section.

**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.

**Summer Diseases:** Some secondary scab infections are present at some locations, particularly in northern counties. The level that is being seen merits a tight schedule, but not severe “burn out” programs. The following is repeated from last week: The primary diseases of concern are the Rots, Sooty Blotch and Fly Speck. Anthracnose (Bitter Rot) has been troublesome over the past few wet seasons especially on Empire. If you are using the extended EBDC schedule control should be good on most cultivars. Where anthracnose control has been difficult to control consider using Pristine, or add Captan or Ziram to the program. The following table for timing apple fungicides is from the 2016 Pennsylvania Tree Fruit Production Guide:

Table 4-7. Apples: fungicide timing.

	Disease									
	Alternaria leaf blotch	Apple scab	Bitter rot	Black rot	Blossom end rot ( <i>Botrytis</i> )	Flyspeck	Powdery mildew	Rusts	Sooty blotch	White rot
½-inch green	—	++	—	—	—	—	—	—	—	—
Prepink	—	++	—	—	—	—	++	—	—	—
Pink	—	++	—	+	—	—	++	+	—	—
Bloom period	—	++	—	++	+	—	++	++	—	—
Petal fall	—	++	—	++	+	—	++	++	—	—
First cover spray	+	++	—	++	+	—	+	+	—	—
Second cover spray	+	++	—	+	—	—	+	—	+	—
Third cover spray	+	+	+	+	—	+	—	—	+	+
Fourth cover spray	+	+	+	—	—	+	—	—	+	+
Fifth cover spray	+	+	++	—	—	++	—	—	++	++
Sixth cover spray	+	+	++	++	—	++	—	—	++	++
Seventh cover spray	+	+	++	++	—	++	—	—	++	++

++ = ideal timing of material for disease control; + = presence of disease and possible control; — = control generally is not needed at that time

### 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	5/31
Second Generation Pear Psylla Hatch	May 25 +/- 8 Days	5/29
Bacterial Spot observed on stone fruit	May 25 +/- 33 Days	6/2
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 End	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	

### Tree Fruit Trap Counts – Northern Counties

Week End	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

## **Blueberry:**

**Aphids:** Aphid populations continue to be the number one insect that merits treatments at this time, although most of these should have already been controlled in order to give you the flexibility of a Spotted Wing Drosophila (SWD) program. Average infestation rates this past week were close to 10% of terminals infested, which is our provisional action threshold. Some sites were considerable higher, up to 83% of terminals infested. Anytime a disease vector is present, the logic is to not tolerate much of a population. Since the aphid complex serves as the vector for blueberry scorch virus, and tolerating “0” aphids is not possible, we try to live with less than 10% of terminals infested. If you have already treated for aphids, then see SWD below.

### **Spotted Wing Drosophila (SWD):**

A few additional SWD adults have been captured in research plots. Aphids should have been controlled before the first picking of Duke. If applications are made between the 1<sup>st</sup> and 2<sup>nd</sup> Duke pickings then Lannate or Exirel both give good SWD control and will control what aphids remain. The primary insects to target are still the blueberry aphid complex and the start of SWD. If aphids are not a pest, then you can start an SWD insecticide rotation program.

**Cranberry Fruitworm (CBFW) and Cherry Fruitworm (CFW):** Infested fruit is present at low levels, particularly in bushes bordering wooded areas. Treatments are over for this pest complex, and since most growers treated with Lep. materials for the first 2 sprays, any infested fruit is likely resulting from either wash off from heavy storms, or poor coverage. The larvae that are inside the fruit ARE NOT going to be contacted by any insecticide that is applied now, unless for a short time a CBFW exists the fruit to infest another one. For the most part, targeting an application for either of these pests now is a Revenge Spray and will have little effect except on your wallet.

**Oriental Beetle (OB):** OB adults continue to emerge, mate and lay eggs that will hatch and produce grubs that consume blueberry roots. If you are not using mating disruption, then AdmirePro (or other generic imidacloprid) is the only labeled insecticide for control of OB infestations. The application targets newly hatched and other young larvae in the top layer of the soil. Since it **does not** control older and larger larvae, applications should be made no later than the middle of July, while keeping to a 7 day PHI.