

Fruit IPM

5/24/16

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Peach:

Oriental Fruit Moth: The first flight is done throughout most of the state. All applications should have already been applied, except in far northern counties, where the second spray is due the middle of this week.

Tufted Apple Budmoth (TABM): The first of 2 flights of tufted apple budmoth have started, although a little late this year. Adults started to emerge in northern counties on 5/10 and in southern counties on 5/14. Although this has been a minor pest, timings are outlined below for anyone who had high populations last year.

	Conventional, Diamides	Conventional, Diamides	Intrepid, Rimon	Bt
County Area	AM	EM	EM	EM
Southern	About 6/6-8	About 6/5-6	About 6/4	1 st About 6/8
Northern	About 6/8-10			

Plum Curculio (PC): We are entering the period of peak of PC activity in all areas of the state. The first oviposition scars were seen in pome fruit over the past week. If significant rains follow insecticide applications, then re-apply with effective materials after an inch or more of precipitation. Do not rely on pyrethroids for control, especially in hot weather. Avaunt, Imidan (phosmet), provide the best control. The neonics, Actara, Belay and Calypso also work well, but should not be used where groundcovers have flowering weeds, since bees will be foraging and you will be making an application inconsistent with the label.

Tarnished Plant Bugs (TPB) and Other Catfacing Insects: This is the other key insect complex at this time of year. The worst TPB problems we have seen have been when there are many dandelions in the aisle ground cover. As the aisles are mowed, the bugs move into the fruit and feed within the trees. General spray timing at this time of year should still be targeted for **Oriental Fruit Moth and/or Plum Curculio (PC)**. Most materials, except the diamides (Altacor, Belt, Turismo) used for these pests will have some efficacy for plant bugs.

San Jose Scale (SJS): Scale crawlers usually emerge about the first week of June. While it is too early for control, growers may wish to be prepared if you had known high populations of scale last year: If you have scale infestations on your trees, it is important to note if crawlers are present, even if you treated with oil in the early spring. If crawlers are present then treatment options include Esteem, Movento, Centaur, and Diazinon. Esteem, Centaur and Movento should be applied at the beginning of crawler emergence. Diazinon is labeled for only one post bloom or foliar application on stone fruit (Rec = max. of 2 lb/acre of the 50W). The apple label allows up to 2 foliar applications per year as long as a prebloom application WAS NOT made. Foliar applications may cause russet, but has worked in the field for scale crawlers as long as applications are made 1-2 weeks after the start of crawler emergence and again 2 weeks later.

Thrips: Thrips tend to start building up at this time of year in weedy groundcovers and in hedgerows with flowering shrubs. More on thrips in future newsletters

Anthracnose: Hot and wet weather is favorable for anthracnose infections. The varieties Klondike, Harrow Beauty, Snow Giant, and Sugar Giant seem to be particularly susceptible. Growers may find it useful to protect against anthracnose, especially in blocks that have a history of the disease. For all practical purposes this means avoiding the use of sulfur in those blocks, and substituting Captan (2.5# 80W; 4# 50W) for the next several weeks. Ziram @4.5-8#/ac is also effective. QoI chemistries (Pristine, Luna Sensation, Gem) should also be effective when applied around final swell.

Bacterial Spot: Copper formulations should continue to be used to suppress bacterial spot. Generally we recommend starting at 0.5 ozs metallic copper and gradually lowering the rate as the season progresses. Please see an earlier chart on this subject: [published a chart](#). Avoid combining copper with captan especially if it has been overcast for several days. Also avoid acidic spray solutions when applying copper. No bacterial Spot symptoms have been seen to date, however trees are dropping more leaves than usual for this time of year. Mostly this is due to stress from cool and cloudy weather.

Rusty Spot: Current conditions are very favorable for rusty spot development. Early symptoms should be visible soon in commercial blocks. **The untreated control in the RAREC pathology research block already has 8.1% rusty spot infection on the fruit.** Maintain control measures until about pit hardening. This is another area where having flowering weeds in your ground cover is a bad thing. DMI fungicides (Rally; difenaconazole) are the current standard rusty spot controls, but if combined with a neonicotinoid insecticide insect control, you have a toxic combination for bees. If you have a weedy ground cover and use a neonic, then consider using one of the biorationals (Armcarb; Kaligreen; Serenade) in place of Rally to minimize impact on bees.

Apple:

Codling Moth (CM): The first flight has been active for the past 3 weeks. The first adults were caught on April 22 in southern counties, and April 26 in Hunterdon County. The first treatments with standard materials were due Monday 5/23 in southern counties, and will be due in Hunterdon County by 5/29 or slightly later if you are further north.

Codling Moth Degree Day Timing					
		Application and Insecticide Type			
County Area	Biofix	Rimon: 75-100DD + 14-17 days later	Intrepid 150 + 450 DD Diamides - Altacor, Voliam mixes: (150-200 DD) + 14-21 days later	Madex 250 DD + every 7-9 days during brood hatch (later if first spray is an IGR)	Standard Insecticides - Delegate, Avaunt, OP's, carbamates, pyrethroids 250 DD + 550 DD

DD		75	100	150	450	250	250	550
Southern	April 22	Past	Past	Past	6/4	Past	Past	6/9
Northern	April 26	Past	Past	Past	6/5-8	5/28-29	5/28-29	Too far off

European Apple Sawfly First fruit injury was seen with both primary and secondary damaged fruits in northern counties. Damage has been on isolated trees and at low levels. All damage has been in mixed variety blocks where a petal fall insecticide was not applied early enough to attain good control.

Tufted Apple Budmoth (TABM): See peach section.

San Jose Scale (SJS): See peach section.

Fire Blight: The shoot blight phase of the disease is present in a few areas in southern counties. Where blight is present pruning out infected shoots is important now especially if thunderstorms are predicted.

Summer Diseases: We are now entering the phase for secondary scab control if primary infections are becoming visible. 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, Merivon, or add Captan or Ziram to the program.

Pear

Pear Psylla : Pear Psylla egg laying increased significantly this week. Hatch should begin in about a week to 10 days. Control of this generation is important to avoid overlapping generations throughout the summer. Applications of 1 % **summer oil** in early cover sprays have shown to be of benefit. Use oils and adjuvants with caution on Asian varieties. When applying insecticides for psylla control timing is important as materials such as Movento and Agrimek should be applied when the first eggs hatch. In the case of Movento application a few days before hatch is better as this material takes some time to move into the tissue. Add penetrants as per label instructions. Neonicotinoids may also applied when the first eggs hatch. The addition of 1 qt. summer oil or a non-ionic surfactant will improve control with these materials. Finally Sivanto, a chemistry closely related to neonicotinoids is effective but should be used with oil as per label instructions. Some miticides such as Portal and Nexter are effective, but should be applied when most eggs have hatched but before any nymphs begin to form wings.

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	Not yet observed
Rusty spot symptoms	May 12 +/- 19 Days	Not yet observed
OFM Flagging observed	May 12 +/- 5 Days	Not yet observed
Second Generation Pear Psylla Hatch	May 25 +/- 8	Not yet observed
White Peach Scale Crawlers active	May 26 +/- 11 Days	Not yet observed
San Jose Scale Crawlers active	June 2 +/- 8 Days	Not yet observed

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	

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

Blueberry:

Plum Curculio (PC): As bees are being removed the first post pollination insecticides are being applied. PC egg scars have been easily found around field edges. As the weather warms, more PC activity is expected, as demonstrated on Monday when active adults were seen. This is THE PRIMARY INSECT TARGET at this time. Given the other pests likely to be present, future programs for spotted wing drosophila (SWD) and resistance management, the 2 best options for the 1st post pollination application include Avaunt or Imidan. This leaves the other chemistries free for a rotational program for SWD when it becomes active. If you are exporting to Canada, then Avaunt would be preferred, since you can effectively use only 2 applications of Imidan per season for that market, and it should be available for SWD control.

Leps (leafroller larvae, eastern tent caterpillar, spanworms and gypsy moth larvae):

Average counts have been only .06 larvae per 100 fruit clusters, with a high of .6 larvae per 100 clusters. One larva per 100 clusters is the treatment threshold. If this number is exceeded, then use only B.t.s or Intrepid while bees are foraging. Eastern tent caterpillars are the main issue in this pest group, since they are now about 1.5" long and can easily strip a young bush. Make sure to check field edges, especially near wild cherry trees, where populations have been quite high.

Aphids: Aphid populations are just starting to increase, but ARE NOT a spray target at this time. Save these sprays for early to mid June.

Looking ahead: The next (2nd post pollination) treatments will likely be for aphids and/or cranberry fruitworm, although no adults have been captured as of this writing.

Disease: Bud scales are still present on both Duke and Bluecrop. Since this is an overwintering site for anthracnose, fungicide applications should still be maintained in the next spray. If you have used a number of more expensive fungicides during bloom, then Ziram and Captan are options. However even at this date Ziram may leave a visible residue on Duke and perhaps Bluecrop.