**Fruit IPM for the Week Ending 6/15/13**

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## Peach

**Catfacing Insects and Native Stink Bugs:** As we move into summer heat, catfacing insects become a primary target, especially in dry seasons. Many orchards have ground covers composed of flowering weeds and clover, which makes an ideal habitat for catfacing insects. These insects breed and multiply in the ground cover, and then find their way to the fruit. Wet springs that help make a health ground cover (especially if it's weeds), followed by prolonged dry periods can often aggravate catfacing damage, since the insects often move from the weedy ground covers to the fruit in the trees. Damage may appear as water soaked areas, bleeding spots on the fruit, or depressed calloused tissue. Because there are pit injury and bacterial spot symptoms present in some orchards, be sure to distinguish between those symptoms and catfacing. Fresh catfacing injury will appear as single or multiple bleeding sites on the fruit surface. Cutting into the bleeding area will reveal a shallow injury. Injured pits will appear similar to catfacing injury, however if the fruit is cut the injured area will appear as a "water-soaked" area extending through to the pit. Bacterial spot often begins with multiple bleeding spots that will eventually heal over leaving blackened spots on areas with broken skin. Orchard blocks that are next to grain fields or wooded edges can be particularly susceptible to stink bug damage.

**Brown Marmorated Stink Bug (BMSB):** Adults are occasionally seen during orchard scouting. BMSB adults were observed in orchards and vineyards last week, and the first nymphs were found in a research planting at RAREC. These initial numbers are low and spotty, but they do tell us that the insect is now reproducing. Knock down materials will be required for the remainder of the season in orchards with BMSB populations. While Thionex is still labeled in apples, it can no longer be used in peaches. This material is being phased out, and tolerances are no longer legal in peaches. DO NOT USE THIONEX IN PEACHES. See the restriction section on fruit from the label below:

| | |
|---|---|
| It is unlawful to use this product after July 31, 2012 on the following crops:<br>Note: These uses may appear on this new label and product from this container can be used on crops in this listing and the listings that follow until the specified end-of-use date for each listing. | Cabbage; Celery (Arizona only); Cherries (sweet); Cotton; Cucumbers; Lettuce; Melons (summer-includes cantaloupe, honeydew, watermelon); Nectarines (except California); Peaches; Squash (summer); Tobacco. |
| It is unlawful to use this product after July 31, 2013 on the following crops: | Pears. |
| It is unlawful to use this product *in the state of Florida* after December 31, 2014 on the following crops: | Apples, Blueberries, Peppers, Potatoes, Pumpkins, Sweet corn, Tomatoes, Winter Squash. |
| It is unlawful to use this product after July 31, 2015 on the following crops: | Apples, Blueberries, Peppers, Potatoes, Pumpkins, Sweet corn, Tomatoes, Winter Squash. |

**Green Peach Aphid (GPA):** GPA are present in a few nectarine blocks in Hunterdon and Sussex Counties. GPA will deform nectarine fruit even at low numbers. Do not tolerate any more than 1 colony per tree in nectarines.

**Oriental Fruit Moth (OFM): This pest is now secondary in most orchards to catfacing insects – tarnished plant bugs and native stink bugs.** Second brood OFM flight is very low. At this time of year, particular attention should be paid to non-bearing orchards that may not be receiving regular insecticide applications. OFM can build up in non-bearing blocks and create pressure for production blocks. Timing for second brood OFM applications using OP's, Carbamates, Diamides, and Pyrethroids are as follows:

| Second Generation OFM Timing Dates | | | | |
|---|---|---|---|---|
| | | Insecticide Type | | |
| County/Region | Degree Days by 6/10 base 45 | Conventional | Intrepid / IGRs | Diamides |
| Gloucester - Southern | 952 | 1st – 6/18-20<br>2nd – About 6/28-30 | 1st – 6/16-19<br>2nd – About 6/27-29 | 1st – 6/15-18<br>2nd – About 6/26-29 |
| Hunterdon - Northern | 784 | 1st – 6/25-27<br>2nd – About 7/7-9 | 1st – 6/23-25<br>2nd – About 7/5-6 | 1st – 6/22-24<br>2nd – About 7/4-6 |

**Tufted Apple Budmoth (TABM):** Timings for TABM control are outlined below. Trap captures are the highest they have been for 7 years at between 65 – 96 males per trap on some farms in northern counties. Where populations are high, observe timing recommendations.

| | Conventional, Diamides | Conventional, Diamides | Intrepid, Rimon | Bt |
|---|---|---|---|---|
| County Area | AM – 4 middles | EM – 2 completes | EM – 2 completes | EM – 2 completes |
| Southern | 3rd 6/12-13; 4th 6/17-19 | 2nd 6/14-15 | 2nd 6/14-15 | 2nd 6/14-15 |
| Northern | 2nd 6/14-16; 3rd 6/21-22 | 2nd 6/22-25 | 2nd 6/22-25 | 2nd 6/22-25 |

**Thrips:** Unless Delegate was used for TABM control, 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 PHI varies for different stone fruit crops, but is set at 1 day for peaches and nectarines. The addition of a non-ionic surfactant can help improve control. Lannate SP @ 1#/A (or LV @1.5-3 pt/A) may still be effective in some orchards. Prolonged periods of dry weather favor thrips buildup more than the current weather pattern, which at the moment is not favorable for thrips populations to build.

**Plum Curculio (PC):** Some fresh injury was recently seem in the far northern counties, so PC remains a target in isolated northern locations.

**Brown Rot; Anthracnose:** 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. An improved fungicide schedule should be initiated 2 to 3 weeks prior to the first picking.

**Apple**

**Obliquebanded Leafroller (OBLR):** Adults have started to emerge and are being found at low numbers in traps set in northern counties. OBLR will mate and lay eggs, which should start hatching by the middle of the month. If you have never had a problem with this insect, there is no need for a special spray. Treatments applied for other insects will usually control OBLR, especially in the first generation. The second generation in August can be more problematic in some years.

**Codling Moth (CM):** Degree day timed treatments are over in all counties. **Treatments ARE NOT OVER if you still have trap counts that exceed 5 males per trap.**

**Aphids: Spirea and Apple (green) Aphids:** Populations continue to build, and are at treatment levels in some orchards statewide. Our treatment threshold is set at 50% of the terminals infested with healthy colonies. Now that **BMSB** is present in orchards, growers will start targeting these early **Low Populations of BMSB**. Use of effective neonicotinoids at this stage such as Belay or Actara can be helpful. These treatments will also reduce aphid populations.

**Wooly Apple Aphid (WAA):** See last newsletter for WAA control strategies.

**Summer Diseases – Sooty Blotch and Fly Speck, White Rot and Black Rot, plus anthracnose,** are critical diseases to control at this time. Topsin-M, Sovran Pristine or Flint can be included for control. Good coverage is essential for control.

**Fire Blight:** If you have not cut out fire blight strikes yet, now through July is a good time to do so. Make cuts into wood that is at least two years old and leave 4 to 6 inch naked stub in 2-year or older wood. By leaving a stub, the canker forms in it, and the stub can be cut off with the canker during the next winter. Sterilizing tools is not necessary if you are practicing this 'ugly stub' pruning method.

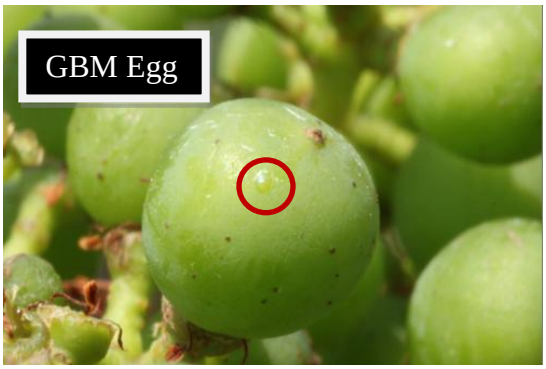
**Pear**

**Pear Psylla:** Pear Psylla continues to be troublesome in specific locations. In addition to insecticide applications, Summer pruning and suckering of trees will help to suppress buildup of Psylla.

**Grapes**

**Grape Berry Moth (GBM):** Many growers will treat for GBM about 10 days after bloom. However, the more critical timing is to treat the second generation. We set the

phenology model biofix for June 1. Given the 810 degree days (base 47F$^0$) needed for treatment of the second generation, we forecast that the first applications for generation 2 will be just after July 4 in southern counties. A summary of the first generation flight is in the table below. Feeding on early fruit set can also be seen below – note eaten berry (left) and hanging larva (right). Injury from the first generation will be visible in one to two weeks.





| Grape Berry Moth Trap Captures 2013 | |
|---|---|
| Date | Trap Avg |
| 5/25 | 0 |
| 6/1 | 2 |
| 6/8 | 13 |

## 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 |
| 1/4" Green Tip Red Delicious | March 27 +/- 10 Days | March 29 |
| Oriental Fruit Moth Biofix | April 8 +/- 10 Days | April 16 |
| Oriental Fruit Moth – 170 DD target | April 19 +/- 12 Days | May 2 |
| 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 |
| White Peach Scale Crawler Emergence | May 29 +/- 7 Days | May 24 |
| Second Generation Pear Psylla Hatch | May 29 +/- 3 Days | May 27 |
| SJS Crawlers-first generation | June 6 +/- 4 Days | June 1 |
| Pit Hardening | June 19 +/- 5 Days | Not yet observed |

**Blueberry**

**Blueberry Maggot (BBM):** The first trap capture was seen on June 7 in Burlington County. This starts the clock for those growers on a **calendar based spray program** if exporting fruit to Canada. The first insecticides must be applied within 10 days of first capture, and again every 7-10 days through the Canadian shipping season. For the **trap based program**, growers need only to pay attention to traps placed in specific production areas, and treat on a schedule based on those trap catch dates. Due to **Spotted Wing Drosophila programs**, which will require **7 day insecticide programs**, it will no longer be practical trying to use the trap based program for blueberry maggot control.

**Plum Curculio (PC):** Adults have been seen on only 1 site, an organic farm, and is in a cooler area compared to most farms in our program. Therefore we consider this recent catch to reflect activity that is behind other farms in the region. No fresh PC injury has been seen, and PC is not a target at this time on most farms. Field fruit samples show that fruit with egg scars will easily drop off with just a slight disturbance.

**Leafrollers and Other Leps:** Most shoot samples for worm larvae have been negative and of those that are positive, none have been close to the threshold of 5% of shoots infested. BB Leafminer (teepee shelters) are being seen at a few sites. This insect is usually not a significant pest, and there is no treatment threshold established.

**Aphids:** Sampling shows that 64% of shoot samples are positive for aphids. About 36% of samples are above the 10% infestation level. One site in Burlington Co was noted as having numerous lady bug larvae predators feeding on aphids.

**Cranberry Fruitworm (CBFW):** Recent trap levels are lower compared to the previous week. Low levels of fruit injury have been seen at just 3 sites. Most farms in our program have not needed to treat for this pest.

**Oriental Beetle:** The adult flight is starting with low trap captures. An Atlantic Co. farm that has had some of the highest trap counts in previous seasons has just been recorded with a count of 7 adult beetles in a 7 day count.

**Putnam Scale:** Crawler trap counts are indicating that this pest is still a target for a limited time. Fruit samples in infested Duke fields are showing some injury at a few locations. This is a good time to scout for scale in Duke since there is plenty of colored fruit which easily shows the pinpoint cream colored wax dots often surrounded by a light colored halo. If this is present you could consider a treatment over the next several days, although Esteem has a 7 day PHI, and is better suited for Bluecrop and later plantings. History of previous scale problems on the fruit can be used as a scouting tool to target the most likely fields that will need scouting and possible fields to treat. High water volumes are best in the treatment of scale.

| Tree Fruit Trap Counts – Southern Counties | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Week Ending | STLM | TABM_A | CM | AM | OFM-A | DWB | OFM-P | TABM_P | LPTB | PTB |
| 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 | |

| Tree Fruit Trap Counts – Northern Counties | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Week Ending | STLM | TABM-A | CM | AM | OFM-A | DWB | OBLR | OFM-P | TABM-P | LPTB | PTB |
| 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 | 0 |
| 5/25 | 33.2 | 8.9 | 6.6 | | 12.2 | | | 10.3 | 5.3 | 17.5 | 0 |
| 6/1 | 16.6 | 15.1 | 5 | | 8.6 | | | 2.5 | 20.6 | 20 | 0 |
| 6/8 | 29.3 | 40.4 | 6.3 | | 1.2 | 4.3 | 2.7 | 0.5 | 45.6 | 27.5 | 0 |

| Blueberry Insect Trap Counts - Atlantic County | | | | | | | |
|---|---|---|---|---|---|---|---|
| Week Ending | RBLR | CBFW | OBLR | SNLH | Or. Beetle | BBM | BMSB |
| 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 | 0.83 |
| 6/8 | 4.7 | 0.89 | 0 | 4.5 | 0 | 4.7 | 0.89 |

| Blueberry Insect Trap Counts - Burlington County | | | | | | | |
|---|---|---|---|---|---|---|---|
| Week Ending | RBLR | CBFW | OBLR | SNLH | Or. Beetle | BBM | BMSB |
| 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 | 1.2 |