Blueberry harvest has begun on the ‘Duke’ variety and after visiting numerous farms and eating as many fruit as I could lay my hands on, I think this year’s fruit is the sweetest I’ve ever tasted with ‘Duke’. I have no idea why. It may be that I just enjoy the first fruit of the season so much. Given that, the effects of the winter cold can now be seen quite easily, ‘Duke’ being more affected than ‘Bluecrop’. The hot temperatures and the stress of ripening the fruit have accelerated the symptoms. Cane and leaf discoloration is quite widespread. Usually one or more of the oldest canes on a bush are starting to change color, red, light green and yellow are typical. In the end, the leaves die. In some cases it might be stem blight but it is often just cane damage caused by the winter’s low temperatures. In either case, the only recommendation to the grower is to prune out the affected canes.

**INSECTS**

Dr. Cesar Rodriguez-Saona, Extension Specialist in Blueberry Entomology, Rutgers University; Dean Polk, IPM Agent, Rutgers Cooperative Extension; Amy Raudenbush, Fruit IPM Program Associate, Rutgers Cooperative Extension

Blueberry Maggot (BBM): The first blueberry maggot adults were found in Atlantic County on Monday June 15th. Two adult BBM were observed on yellow sticky traps. The arrival of BBM initiates the start of a spray program for growers who are exporting to Canada. The following is an excerpt from the latest update to the latest update (March 2015) of the Blueberry-Fruit Certification Program (BCP) for both the calendar spray and the IPM (trap) method for certification:

6.1 Calendar spray program

The first insecticide application must be made within five days of blueberry maggot emergence, as determined by the NPPO or its designee. Subsequent sprays must be made at five- to twelve-day intervals, depending on the insecticide, until the end of harvest. Insecticides must be approved for use on blueberries against blueberry maggot and must be used at the rates, dosages and intervals specified on the pesticide label and according to provincial or state recommendations. Records of all insecticide applications...
must be kept and presented to the NPPO upon request.

6.2 Integrated pest management (IPM) program for blueberry maggot

Participants that select the Integrated Pest Management (IPM) option must monitor the designated production areas for blueberry maggot flies using yellow sticky traps baited with ammonium acetate lures. Traps must be placed at least two weeks prior to the earliest expected emergence of blueberry maggot flies."

Blueberry maggot adults are monitored for by yellow sticky cards placed on a metal pole that positions the trap in the top 6 inches of the blueberry canopy. Insecticides used must be effective against BBM, which include: Assail, Asana, Adjourn, Brigade, Danitol, Exirel, Hero, Imidacloprid, Imidan, Lannate, Malathion, Rimon, Sevin, or Sivanto. Diazinon can be used once, but should be saved for scale crawlers. At this time of year we start to focus on materials that also have some effect on Spotted Wing Drosophila, although none have been found as of this writing.

Spotted Wing Drosophila (SWD): We have total of 80 traps placed in commercial fields for monitoring purposes. These are being monitored every 7 days. No SWD have been observed in the traps as of Monday, June 15th. When SWD start to fly the BBM insecticide list above gets shorter and will not include Assail, Admire, Sivanto, or Rimon, but will include Delegate.

While we have not captured any adult SWD yet, Duke fruit is ripe and Bluecrop is starting to color. Previous research has shown that SWD usually starts to lay eggs on coloring and ripening fruit. Since we cannot predict what will happen over the next 7-10 days, we suggest that a 7-day insecticide program be started now to target emerging SWD. For those growers who are still experiencing aphid issues, we DO NOT suggest continued use of neonicotinoid materials (Assail, Actara, Admire). This is not good resistance management, and they are not very effective for SWD. Duke being exported to Canada SHOULD NOT receive any additional Imidan applications, since the MRL in Canada is less than in the U.S. Instead, plan on Lannate anywhere aphids may still be an issue. Where aphids are not a problem then Danitol would be a good choice. If you are not exporting to Canada, then any pyrethroid will do, and Imidan is fair game. Delegate is a good choice for SWD, and should be in an alternating program during the last 2 -3 weeks of the program. It actually has a higher MRL for Canada than we have in the U.S. It has a 3 day PHI and should be used at a rate of 5-6 oz/A with a maximum use of 19.5 oz/A/season. This means you get 3 applications 6-7 days apart, alternating with another chemistry. Malathion still has a 24C label for the high rate as used last year with a 1-day PHI. This means you can use the Malathion 8F at up to 2.5 pt/A or 2.5 lb ai/A. The high rate is what is needed for good SWD control.

Ranking of insecticides based on efficacy against SWD (data provided by Dr. Rufus Isaacs, Michigan State University)
Aphids: There was a decrease in the number of sites with aphids last week with 75% of the sampled sites having aphids present, and 41% of site having over 10% of the shoots infested. The average percent of shoots with aphids was 11% per 50 shoot sample. Growers with aphids present should target this pest and consider treatment options such as: Assail, Actara, Admire Pro and Sivanto. Sivanto is not a neonicotinoid, and is a bee safe product. Sivanto is also effective for blueberry maggot, and has an MRL for Canada that is the same as the USEPA allowed residue. It acts systemically against the aphids with a mode of action similar to the neonicotinoids. Many growers have asked about Lannate against aphids. Lannate has only moderate control against aphids, but will also control blueberry maggot.

Sharp-nosed Leafhopper (SNLH): The first SNLH adult was captured in Burlington County on June 9th and in Atlantic County on June 15th. Adults will continue to fly as they mature from the nymphs that are present near and blueberry fields. Sharp-nosed leafhopper have two generations in blueberries and transmit stunt disease to blueberry plants. Since the adults can fly and spread stunt disease, this is the stage that should be controlled. Most aphicides will also control leafhoppers, as will materials that target SWD.

Oriental Beetle (OB): We continue to find OB adults in our traps. The trap numbers have increased in both Atlantic County and Burlington County over the past week, however, this is not the peak for OB adults.

Plum Curculio (PC): We are still finding scarring on fruit from PC adults laying eggs. At this time the percentage of fruit with scarring from egg laying is minimal, since most infested fruit has prematurely dropped off, and will not be harvested.

Leps. and other larvae: Some cranberry fruitworm (CBFW) larval damage is present in a few fields in Atlantic County. The timing for treatments for this pest is over. Damaged fruit will blow out on the sorting line, and growers should concentrate on remaining aphids, BBM and SWD.

Putnam Scale: Putnam scale was found on fruit in Atlantic County. These are recently settled crawlers. Therefore crawlers are now emerging. The scale is noticeable on fruit by discoloration caused by the scale feeding, and the small scales on the fruit (see below). Esteem or Diazinon are effective against scale crawlers. There are 2 generations of scale per season. If you have visible scale on your berries, then you should be treating the crawler stage. Both Esteem and Diazinon have a 7 day PHI, so this makes it almost impossible to use these materials on Duke, but you can still use them on Bluecrop, Draper and later varieties. Diazinon can only be used once, but will also control BBM and SWD. Esteem can be used twice, and is a very good scale material, but only controls crawlers at this time of year. Thorough coverage is a must (50 gpa) for scale, and cannot be accomplished from the air.

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<th>CBFW</th>
<th>OB</th>
<th>BBM</th>
<th>SNLH</th>
<th>SWD</th>
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Blueberry Trap Counts

Atlantic County

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<th>SWD</th>
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Burlington County

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<th>BBM</th>
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June 16, 2015

BLUEBERRY BULLETIN

If you have any comments about this newsletter, please make them in the space below and mail to:
Dr. Gary C. Pavlis, County Agricultural Agent
Rutgers Cooperative Extension of Atlantic County
6260 Old Harding Highway, Mays Landing, NJ 08330

I would like to see an article on the following subjects:______________________________________________________

I would like to comment on the following articles:____________________________________________________________
Title:______________________________________ Date:____________________________________
Comment:________________________________________________________________________________________
________________________________________________________________________________________________

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