

# RUTGERS

New Jersey Agricultural  
Experiment Station

## *The BLUEBERRY BULLETIN*

*A Weekly Update to Growers*

*Dr. Gary C. Pavlis, County Agricultural Agent*

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**April 27, 2009**

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### **At a glance. Insect and disease problems that should be considered this week.**

PEST/DISEASE	WEEK OF APRIL 27	WEEK OF MAY 4
<b>Anthracnose</b> Abound or Ziram	Applications are critical at this time	Continue anthracnose schedule on susceptible cultivars.
<b>Botrytis</b> Elevate, Captevate, Switch or Pristine	Possible threat	Continue to monitor pollination. If cool, wet conditions persist the disease will start to develop
<b>Cranberry Weevil</b> Asana, Guthion, Imidan	Atlantic Co.: Should be under control.  Burlington Co.: Continue to scout for adults and evidence of damage. Treat if 20% of clusters with damage or if $\geq 5$ weevils/bush	Should be under control.
<b>Gypsy moth,</b> Leafrollers, spanworms  B.t., Intrepid	Use pheromone traps to monitor adult flight. Scout for larvae. Treat if over 1 larva/100 clusters.	Continue scouting for larvae. Use same threshold.

#### **'Blueberry Twilight Meetings'**

**Thursday, April 30th @ 5:30 PM**

**Variety Farms**

**548 Pleasant Mills Rd.**

**Hammonton, NJ 08037**

**For directions call 609/561-0612**

**Thursday, May 28<sup>th</sup> @ 5:30 pm**

**Atlantic Blueberry Company**

**7201 Weymouth Rd.**

**Hammonton, NJ 08037**

**For directions call 609/561-8600**

#### **Culture:**

*Dr. Gary C. Pavlis*

*County Agricultural Agent*

**Fertilizing Newly Planted Fields:** Growers putting in a new field have requested information on fertilization. First, no fertilizer should be placed in the planting hole. When the plants are set out in the fields, usually in April or early May, the fruit buds should be rubbed or pruned off. With no crop present and only a small area of soil requiring fertilizer, about 125 lbs/A of 10-10-10 is sufficient (1 1/2 oz./bush). Sidedressing with a fertilizing spreader will require higher rates to compensate for open areas between plants. Special caution should be observed as to

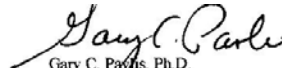
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the time of fertilizing after planting. Fertilizer should not be applied until a second growth starts. For example, if plants are set out while dormant, do not fertilize while the first crop of leaves is unfolding and changing from light green to dark green, wait for new growth. Making the first field application too soon has frequently

caused reddened foliage and a delay of several weeks in the starting of new growth. Keep the fertilizer at least 2 inches away from the crowns of the young plants. In late-June, the application of fertilizer is usually made.

Sincerely,



Gary C. Potts, Ph.D.  
Atlantic County Agricultural Agent

Editor – Blueberry Bulletin  
Blueberry Bulletin – Editor  
GP/sp

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## INSECTS

*Dr. Cesar Rodriguez-Saona,*

*Extension Specialist in Blueberry Entomology, Rutgers University*

*Mr. Dean Polk, IPM Agent – Fruit*

**Cranberry Weevil (CBW):** About 61% of tray samples have been positive for weevils, and about 13% of samples have been over our treatment threshold. We expect activity to decrease now that flowers are in or approaching bloom. Most of our monitored fields have bees already placed in them.

**Plum Curculio (PC):** The first adults were seen in Burlington County on April 24 and in Atlantic County on April 27. Populations are common at one site in Atlantic County.

**Gypsy Moth (GM):** Eggs are starting to hatch, with the first (1<sup>st</sup> instar) larvae seen on April 27. Treatment options for gypsy moth control during bloom include B.t. products (e.g., Crymax, DiPel, Javelin) and insect growth regulators (IGR's) such as Intrepid and Confirm. IGR's take awhile to kill larvae, but feeding stops soon after application. If growers wish to use B.t.'s in heavily affected fields, then treatments should be made prior to 3<sup>rd</sup> instar larval stage. This would be now and during the next week to 10 days. Higher rates of B.t. products are often needed under heavy populations and continuous dispersal from forests.

Gypsy moth population increase comes almost solely from the surrounding woods.

Therefore, if the woods are not treated, and a treatment is applied to the blueberry field, re-treatment is likely to be required as more larvae drift in from the surrounding trees. Treatment thresholds are also difficult to define for several reasons: 1) The population is always changing, and likely to increase, particularly in the early stages, even if an insecticide is applied; 2) Not all insecticides work the same. Some require thorough coverage and have to be eaten, such as B.t. and IGR's (Intrepid and Confirm). B.t. and IGR's can be applied during bloom. Others are contact materials and may need less coverage (pyrethroids, Lannate, Sevin), but can NOT be applied during bloom; 3) Insecticide efficacy that is rated for forests, landscape, and ornamentals is not the same as what is needed for a food crop with a very low tolerance for pest damage. A pest that consumes both foliage and fruit should have a very low threshold, since the value of the fruit is high; and 4) There is a phytosanitary factor in that if only a very few larvae are missed in a control program (perhaps 1 every 2-3 bushes), they can pupate, and remain hanging on the bushes (not susceptible to insecticide), until they are machine "picked" along with the fruit. They, like the larvae, have hairs that some people are allergic to, and will need to be removed from any process (or fresh) pack.

**Mummy Berry:** Primary strikes are present in unsprayed fields. However, no strikes have been seen in commercial fields.

### *Trap Captures*

#### *Atlantic County*

Week Ending	CBFW	RBLR	OBLR	SNLH	Or. Beetle	BBM
4/5		19.9				
4/12		55.1				
4/19		72.0				
4/25		69.4				

#### *Burlington County*

Week Ending	CBFW	RBLR	OBLR	SNLH	Or. Beetle	BBM
4/5		9.3				
4/12		22.6				
4/19		19.2				
4/25		25.1				

### **DISEASE**

*By Peter V. Oudemans, Ph.D.*

*Associate Professor and Extension Specialist Plant Pathology*

**Notes on Anthracnose Control.** Fields that receive sufficient fungicide coverage during bloom should not experience significant anthracnose problems and will not need to rely on the less effective, later season applications. Please remember that Cabrio, Abound and Pristine are all strobilurin fungicides and are vulnerable to resistance build-up. DO NOT make more than two applications in a row with these strobilurin fungicides. Use Captan or Omega or Ziram to separate applications. Please see last weeks newsletter for a full discussion on disease management options for this time of year.

#### **Blueberry Scorch Disease**

Blueberry scorch is a virus disease that is increasing greatly in frequency in New Jersey. The pathogen causes flowers to die without being fertilized and can result in major crop losses. In Burlington and Atlantic counties fields with 70-90% of the plants infected have been observed. Thus this disease

represents a serious threat to the blueberry industry.

Growers and scouts should watch for development of scorch at this time and flag all suspect bushes. Symptoms are easily seen during bloom. Growers should be aware if this disease is present on the farm and where the infected bushes are located. Mark locations of the disease on a farm map and monitor these areas in subsequent years. When suspect bushes are found they should cut back and removed. Aphid scouting and management should be made high priority in fields with infected plants.

Symptoms of the disease vary depending on the cultivar. In Weymouth, Duke, Elliott, and Chanticleer classic symptoms of scorched blossoms and a *Phomopsis*-like die-back are commonly seen. In other cultivars such as and Bluecrop the blossom scorch is less common and fruit may appear to set but will not develop. The plants may also appear chlorotic (yellowing similar to

nitrogen deficiency) and partially defoliate. The disease may be easier to see by standing back from the bushes rather than close inspection. Shortly after bloom the plants will begin to recover. Even though symptom expression may not occur every year, infected bushes remain a source of inoculum in the field increasing the possibility for disease spread.

A virus causes blueberry scorch. For viruses to infect a plant they must enter a living plant cell through a wound. In the case of Blueberry Scorch, aphids can carry the virus on the sucking mouthparts or the stylus and inject the virus into the cell while feeding on plant sap. Once inside the cell the virus begins to multiply and spread to other cells in the plant. Eventually, the entire plant becomes infected and develops symptoms. Once a plant is infected it does not recover. Although infected

plants may appear healthy during some years the infection is persistent and will greatly reduce berry production over the long term. Furthermore, the infected plants represent a source of inoculum that can be transmitted to healthy plants. For these reasons, it is a very good practice to remove infected plants. The virus is easily transmitted from mother plants to rooted cuttings making it critical to obtain cuttings from healthy mother plants only. Recently, the NJ Department of Agriculture surveyed a number of NJ nurseries. These nurseries are now certified to be free of the Scorch virus. Growers should avoid purchasing plants from nurseries that are not certified. Introduction of scorch on to a farm will increase the risk of spreading the disease to other fields and also increase the cost due to removal and replanting.