CULTURE

Dr. Gary C. Pavlis, Ph.D.
Atlantic County Agricultural Agent

Bloom is about over and fruit sizing is progressing. It is obvious that last winter’s low temperatures have damaged canes, fruit buds and leaf buds in many blocks. It is difficult at this stage to estimate the amount of fruit loss that has occurred. I believe some of the canes will recover but many will not. I believe the best course of action by growers who have experienced this damage is to make sure the plants are not under any other kind of stress. It has been dry so irrigating on a regular basis would be advisable. In addition, any nutritional, disease or insect problem should be taken care of. I always harp on monitoring soil pH and keeping it within the 4.5 to 5.0 range and if you have been putting off applying that lime or sulfur, I would advise growers to get out these applications ASAP.

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

Plum Curculio (PC) – The number of sites with PC adults has increased to 20% over the past week. However, the maximum count per site remains the same as the previous week at 5 PC adults per 10 bush sample. In addition, we are seeing damage on the fruit from PC at 45.7% of the sampled sites. The highest level of injury seen in a field was 3.1% of fruit clusters damaged. Damage is monitored for by observing approximately 1000 fruit for a crescent shaped scarring (see picture below). Treatment options after bees are removed include: Avaunt, Imidan, Danitol, Brigade, Mustang Max (pyrethroids weaker on PC).
Leps. and other larvae: Leaf roller larvae and other leps are present in 17.6% of the fields. The maximum number of lep larvae over the past week has increased to 4 per beating tray sample. Over the past week there has been some damage to fruit, the highest level of injury seen was 4% of fruit sampled. In addition to leaf rollers, green fruitworm species and eastern tent caterpillars are also being found.

Aphids: Aphids were first found on May 6th and we continue to find aphids in Burlington and Atlantic counties. Over the past week 58.3% of sites scouted had aphids present. An average of 2.6 aphids are being found per 50 shoot sample. So while aphids are getting more widespread, there actual numbers are low. Since aphids are capable of vectoring Blueberry Scorch Virus, there is a low threshold for aphids in the field. Treatment options for aphids include: Assail, Actara, Admire Pro and Sivanto. Sivanto Is Not a Neonicotinoid, and is a bee safe product. Its mode of action is similar to that of the neonicotinoids, and therefore is very effective for sucking insects. In blueberries it is labeled for aphids and thrips. At the higher rate, Assail will control cranberry fruitworm. Actara also controls PC but not Leps like cranberry fruitworm.

Cranberry Fruitworm (CBFW): Trap counts for CBFW remained low over the past week. In the past week 3 traps each had 1 CBFW present. Typically the spike in CBFW is around the end of May or beginning of June. We are continuing to monitor traps for adults.

Life Cycle: CBFW has one generation a year. It overwinters as a fully-grown larva within a cocoon made of silk and soil particles (hibernaculum). Pupation occurs during the early spring and moths begin to emerge during the second-third weeks of May (adults started to emerge already; see above). Male moths emerge 3-4 days earlier than females. Adults are brownish gray with a pair of white markings on each forewing (see photo). The eggs are pale-green, flat, and are laid singly, mostly along the inside rim of the calyx cup. Eggs hatch in 5-7 days and the newly emerged larva is pale yellowish-green. Upon hatching, larvae bore into the fruit usually near the junction of stem and berry. The larva remains inside a fruit until its content is consumed, and then it moves to another fruit. A larva may feed on as many as 5-8 berries. Infested berries are contaminated with larval excrement which can be seen near the entrance hole. CBFW infestations can be recognized by the presence of webbings filled with excrement in berries (see photo). Infested fruit prematurely drop. Larvae drop to the ground under blueberry plants beginning the third week of June and build a cocoon.
laying. The number of males caught in the traps provides information on the presence and distribution of CBFW within a field. Traps are usually placed at the wooded borders of fields, where pressure tends to be high. Growers with a history of high CBFW population should especially be aware of the importance of monitoring. In addition, eggs may be scouted for after early fruit set. Larval infestation is difficult to detect early in the season, but as larvae grow, the increasing numbers of fruits affected and frass produced provide clear indication of infestation.

Control: CBFW can be controlled by registered insecticides. Either one or two applications may be needed, depending on the population level. If trap counts are high, then an early application of an insect growth regulator (Intrepid, Confirm, or Esteem) may be used when the first eggs are laid and start to hatch. In New Jersey this may be just prior to the peak flight. This would be followed by a second application soon after bloom. Post-bloom applications with broad spectrum materials (such as Danitol, Asana, or Imidan), or with softer materials such as Assail, Avaunt, Altacor, or Delegate can be done 7-10 days following the first application and after bees are removed. If trap counts indicate a lower population, then a single insecticide application may be made post-bloom. Broad spectrum insecticides are harmful to beneficial insects, and can only be applied after the removal of honeybee hives.
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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:______________________________________________________

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Rutgers Cooperative Extension of Atlantic County
6260 Old Harding Highway, Mays Landing, NJ 08330
Phone: 609/625-0056, Fax: 609/625-3646
E-mail: pavlis@njaes.rutgers.edu

http://www.njaes.rutgers.edu/pubs/blueberrybulletin
Dr. Gary C. Pavlis, County Agricultural Agent
Editor - The Blueberry Bulletin
Sharon Ponzetti, Secretary
E-mail: ponzetti@njaes.rutgers.edu