RUTGERS
New Jersey Agricultural Experiment Station

The Blueberry Bulletin

A Weekly Update to Growers

May 9, 2023 **Vol. 39, No. 6**

- *Visit the Blueberry Bulletin webpage at njaes.rutgers.edu/blueberry-bulletin*
- *The 2022 Commercial Blueberry Pest Control Recommendations for New Jersey is available on njaes.rutgers.edu*
- *The Blueberry Bulletin will now be emailed to those who request it. We will no longer be mailing hard copies out. If you are not on our current list and would like to receive a copy, please call the office at (609) 625-0056.*
- *Blueberry Twilight will be held May 24, 2023, 6pm at Atlantic Blueberry check your emails.*

BLUEBERRY CULTURE

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

Last minute checks: It is mid- May and the reality is that we are only about 3 weeks away from the beginning of the 2023 harvest. We haven't had an extremely cold winter, pollination went relatively well, we have had adequate rain, and the crop load looks to be very good. Once harvest begins I realize that getting berries off the bush, getting them packed and shipped out is the top priority. Until then I would like to suggest that there are numerous things that growers should be looking for in their fields and taken care of before the big push of harvest. Insect and disease scouting is of course important now as discussed by the other articles in this newsletter, however I would like to point out a few other things that a proactive grower should be doing. For example, now is a good time to spot any nutrition deficiency symptoms including iron which would be an indication that the pH is not what it should be. There is still time to give the fields a shot of sulfur if the pH is too high. My office can do a quick pH test for any grower that suspects his/her level has climbed too high. In addition, now is the best time for fertilizer applications as the plant is actively growing and also trying to size up the berries. Please remember that applications of any micro- nutrients should only be made if leaf analysis has indicated a deficiency. Adequate boron levels will indeed increase fruit set and fruit enlargement but excessive levels will damage the plant. It is also a good time to spot stunt in the field, especially on the young canes which have come up this year. If you are not sure of what stunt looks like please call me. There is no treatment for stunt so these plants should be taken out of the planting. Plants with no leaves or very small leaves at this time of the year are an

indication of some kind of root problem. Usually it is due to grubs or root rot and the timing to control these problems is critical as is an accurate diagnosis. If you suspect either of these problems, give me a call and we can diagnose the situation and the remedy. Lastly, if growers notice any abnormal leaf coloration in the field now is the time to tag the plant and get it looked at. It could be a virus, herbicide damage etc. and understanding what the problem is can prevent further problems in the future.

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

PEST MANAGEMENT

Dr. Cesar Rodriguez-Saona, Extension Specialist in Blueberry Entomology, Rutgers University
Ms. Carrie Mansue, Senior Program Coordinator

Lepidoptera larvae – leafrollers, spongy moth: Numbers of leafrollers and spongy moth larvae decreased in the last week compared to the previous week of scouting.
Plum Curculio (PC): PC activity has increased, averaging 0.019 PC per bush, with a high of 0.5. This could be due to the warmer temperatures. Treatment must be on hold until bees are removed. Best post-bloom control options are Avaunt and Imidan.
Cranberry Fruitworm (CBFW) and Cherry Fruitworm (CFW) Traps: Last week, the fist CBFW moth was caught on a trap in Atlantic County, but numbers are still low. CFW trap counts decreased this week in both counties.

Picture 1. CBFW adult. *Photo Taken By: Zsofia Szendrei*

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 (this time of year). Male moths emerge 3-4 days earlier than females. Adults are brownish gray with a pair of white markings on each forewing (see Picture 1). 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 larvae are 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 (Picture 2). Infested fruit prematurely drop. Larvae drop to the ground under blueberry plants beginning the third week of June and build a cocoon.

Picture 2. CBFW damage to developing fruit. *Photo Taken By: Zsofia Szendrei*

Monitoring: Time of treatment can be established based on data from pheromone traps. Based on a degree-day model from Michigan State University 85 degree-days are required from first male capture –biofix– to egg 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 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, Exirel, 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 should only be applied after the removal of honeybee hives.

Insect Sampling Count Summary

	LR/Tray	SM/Tray	PC/Tray	Thrips/Tray
Average	0.10	0.02	0.019	3.79
High	1	0.3	0.5	30
LR = Leafrollers, SM = Spongy Moth, PC = Plum Curculio				

	AC CFW	BC CFW	AC CBFW	BC CBFW
Average	0.85	0.5	0.1	0
High	4	1	1	0
AC = Atlantic County, BC = Burlington County, CFW = Cherry Fruitworm, CBFW = Cranberry Fruitworm				