RUTGERS
New Jersey Agricultural Experiment Station

The Blueberry Bulletin

A Weekly Update to Growers

July 21, 2021 **Vol. 37, No. 18**

* *Visit the Blueberry Bulletin webpage at www.njaes.rutgers.edu/blueberry-bulletin*

* *The 2021 Commercial Blueberry Pest Control Recommendations for New Jersey is available on njaes.rutgers.edu*

As we anticipate the arrival of our seasonal blueberry workers we want to share the most up-to-date information with you. The New Jersey Department of Health anticipates that about 50% of the incoming workers will not be vaccinated prior to their arrival in New Jersey. Workers who are in need of a COVID vaccine may have questions about the safety of the J&J vaccine, the most common vaccine available to farm workers in NJ. The CDC has released updated information What do I need to know about Johnson & Johnson's Janssen COVID-19 Vaccine (J&J/Janssen) now? (cdc.gov)

If you would like to determine if on-farm vaccinations are possible for your farm please email njfarmvax@njaes.rutgers.edu and a member of the Rutgers farmworker vaccination education program will connect you with your local Federally Qualified Health Center representative. For information on our states mega centers visit COVID-19 Vaccine (nj.gov)

Updated information on COVID-19 and the vaccine can be found online at Vaccine Information Resources for Farmers - Rutgers On-Farm Food Safety

CULTURE

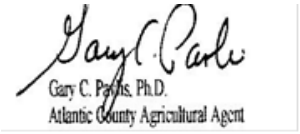
Dr. Gary C. Pavlis, Ph.D
Atlantic County Agricultural Agent

Harvest is progressing well with final pickings of 'Bluecrop' and the first round of 'Elliott'. Growers reported very little in the way of problems this week and fruit quality is quite good.

One problem I did encounter reinforced to me how important a leaf analysis is to the health of a growers blueberry plants. I was called out to a farm and brought to a 'Bluecrop' block. 100% of the ripe fruit was not marketable because of chocolate-like blotchy spots on the fruit. When this fruit was cut open, there was a browning of the interior under the blotchy sections. The fruit was a total loss. In addition, the growing point on every cane was black. This is a very good indication that there is a Boron deficiency. Growers who have attended the Blueberry Open House have seen me show slides of this deficiency symptom. To confirm my diagnosis I collected leaves and sent them to Penn

State for analysis. The analysis came back with very low Boron levels, far below optimum range. In addition, Iron, Copper, Magnesium and Nitrogen levels were also low, though not to the extent of the Boron. FYI, Boron deficiency can be alleviated very easily with a foliar application of Boron. This application is also quite inexpensive.

Growers that are in the Rutgers IPM program know that soil and leaf analysis are monitored every year. As a result, a disaster in which an entire crop is lost due to a nutrient deficiency is much less likely to occur. Growers who are not in the program should realize that in extreme cases, nutrient deficiencies can be devastating. Most growers are probably not aware of the impact that a nutrient deficiency can have. It is understood that diseases and insects can be devastating but nutrition should be added to that list and realize that it is probably the easiest to prevent with an annual leaf analysis. Watch this newsletter for timing of the leaf analysis, how it is done and where to send your samples. This is a very cost effective method to prevent major problems.



BLUEBERRY PEST MANAGEMENT

Dr. Cesar Rodriguez-Saona, Extension Specialist in Blueberry Entomology, Rutgers University
Mr. Dean Polk, IPM Agent – Fruit
Ms. Carrie Mansue Denson, IPM Program Associate – Fruit

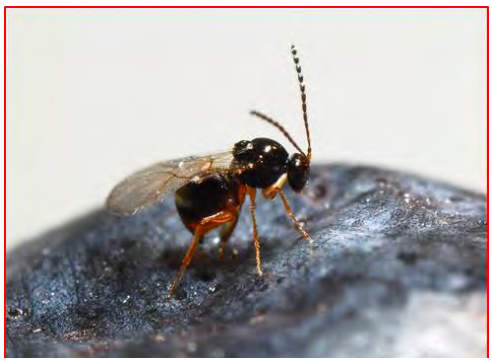
Blueberry Maggot (BBM): No blueberry maggot adults were found over the past week. SWD remains the main insect of concern.

Spotted Wing Drosophila (SWD): Adult populations continue to provide significant pressure, with trap counts showing similar pressure as the previous week. Over 100 males per trap were found in areas with the highest pest pressure. It is very important to stay on a 7 day schedule, and refresh insecticides if heavy storms cause wash-off. Also make sure to rotate insecticide types, or use different products with different IRAC mode of action classifications. As the adults continue to mate and lay eggs, higher populations of larvae will be present in dropped fruit and ultimately ripening fruit if not adequately. Make sure to target the bottom half of the bush as well as berries dropped on the ground, in addition to the tops of the plants. Adult flies are the most active during the early morning hours and at dusk. Therefore, applications of insecticide during the very early morning hours and twilight will be more effective than if applied during late morning to mid-day.

Perspectives of biological control for SWD

Native to Asia, SWD was first detected in the US in California in 2008, and shortly after in the northeast in 2011. It has since become a major pest of several small fruit crops, including blueberries. An important reason for its success is the fact that SWD arrived in the US without its native (co-evolved) natural enemies. Efforts have been made in the last several years to identify effective natural enemies of SWD from Asia for potential mass releases in the US.

A promising candidate is the parasitoid *Ganaspis brasiliensis*, which attacks SWD larvae. Recently, a petition to USDA APHIS was reviewed and is nearing the final stages of being approved to allow release of this parasitoid in the US. Mass releases of *G. brasiliensis* may help reduce SWD populations, particularly in natural and semi-natural habitats where alternative hosts might be available. By lowering SWD populations in these non-crop habitats, we hope to reduce the severity of injury in small fruit crops.



Ganaspis brasiliensis, a parasitoid of SWD. Photo by Kent Daane

APHIS has made the environmental assessment available to the public for review and comment. All comments received **on or before August 16, 2021** will be considered. To review the environmental assessment and make comments: Go to www.regulations.gov. Enter APHIS-2021-0021 in the Search field.

Aphids: Aphids are still being found but are much lower than seen in previous weeks.

By the Numbers Summary:

% Leafroller/Surface Lep. Injury and Plum Curculio Injured Fruit				
Week Ending	% Leps injury to Berries		% PC injury to Berries	
	Avg	Max	Avg	Max
5/14	0.13	2	0.68	7.8
5/21	0.13	1.8	0.80	9.8
5/28	0.013	0.5	0.13	3.7
6/4	0.002	0.2	0.008	0.3
6/11	0.002	0.3	0.005	0.4
6/18	0.001	0.2	0	0
6/25	0.001	0.1	0	0
7/2	0..006	0.2	0.001	0.1
7/9	0.007	0.1	0	0
7/16	0.005	0.2	0.002	0.3

Spotted Wing Drosophila Males per Red Sticky Card				
Week Ending	SWD(AC)		SWD(BC)	
	Avg	Max	Avg	Max
6/4	1.5	8	0.375	3
6/11	1.84	9	1.77	1
6/18	3.4	25	2.86	6
6/25	5.3	42	2.87	9
7/2	7.03	98	7.36	22
7/9	22.58	105	29.73	77

7/16	16.32	115	26.0	80

Oriental Beetle Trap Counts				
Week Ending	OB(AC)		OB(BC)	
	Avg	Max	Avg	Max
6/4	3.9	32	0.25	1
6/11	185.72	2025	15.8	60
6/18	292	1350	285	2025
6/25	1767	11000	974	6075
7/2	2813	13000	1326	6075
7/9	2214	11000	1806	10125
7/16	2255	15000	1288	11135

Blueberry Maggot Adult Captures				
Week Ending	BBM(AC)		BBM(BC)	
	Avg	Max	Avg	Max
6/4	0	0	0	0
6/11	0	0	0	0
6/18	0	0	0	0
6/25	0	0	0	0
7/2	0	0	0	0
7/9	0.05	3	0	0
7/16	0	0	0	0

% Diseased Fruit						
Week Ending	% Mummy Berries		% Anthracnose Berries		% Alternaria Berries	
	Avg	Max	Avg	Max	Avg	Max
6/18	0.002	0.2	0.05	1.4	0.06	1
6/25	0.002	0.1	0.090	2.2	0.072	1.2
7/2	0.002	0.1	0.07	1.8	0.03	0.5
7/9	0	0	0.1	1.6	0.241	2.7
7/16	0	0	0.99	30.8	0.34	22.1