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New Jersey Agricultural Experiment Station

The Blueberry Bulletin

A Weekly Update to Growers

August 22, 2022 **Vol. 38, No. 20**

- *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*

BLUEBERRY CULTURE

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

Diseased bushes: Roguing of diseased bushes should be progressing. Remember to spray diseased bushes before removing them.It is necessary to kill the leafhoppers and it is more efficient, more economical, and wise from the standpoint of conservation of beneficial insects to spray individual bushes rather than entire fields.

Spraying entire blueberry fields with insecticide at this time will destroy many beneficial insects which are now abundant. Bumblebees and other wild bees are busily foraging in goldenrod, boneset, aster, gerardin and other wild flowers. The killing of these effective pollinators of blueberries is wanton and unwise .Parasites and predators of leafrollers, leafminers, aphids and scale are also numerous now in blueberries and their reduction by insecticides will make the problem of their control next year difficult.

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

PEST MANAGEMENT

Blueberry Insects

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

Scale Traps: Scale traps have increased since last week, indicating that second generation crawler activity continues. These numbers indicate that we are in the thick of crawler emergence and, if you have not done so, it is time to treat. Make sure to use a high-volume spray, since you are trying to cover the entire cane and twig surface. Use as close to 100 gal/acre as you can. These insects do not 'fly into' residual insecticide. Rather they must be thoroughly covered when making the application, and the insecticide must reach into all the bark crevices where nymphs might be settled. Diazinon and Esteem are the products of choice.

Date	Scale	
	Avg	Max
8/19	134	400

Sharp-nosed Leafhopper (SNLH) traps: Sharp-nosed leafhopper numbers are low but increasing in Atlantic City, while numbers in Burlington County have decreased from last week. While we saw a slight increase this past week, it is still not enough and too early to think about second generation SNLH treatments.

Life cycle – SNLH feeds and reproduces on blueberry, huckleberry, cranberry, and other related plants. SNLH feeding causes little direct damage, but it transmits the phytoplasma that causes stunt disease in blueberries. They are small brown insects with a pointed head (Figure 1). SNLH picks up the disease while feeding on infested bushes and carries it to other plants in subsequent feedings. Usually, only adults will carry the disease from plant to plant, since nymphs are wingless and cannot fly (Figure 1). This insect completes two generations in New Jersey. Adults are abundant in the woods, where many alternative hosts are present, and may move to commercial blueberry fields in the spring. Eggs overwinter inside fallen leaves and hatch in mid-May. Nymphs complete five instars. Nymphs from the first generation reach adult stage in mid-June, while nymphs from the second generation reach adulthood in early August. Adults move back to the woods in the fall. Monitoring these generations is critical for timing of control strategies.

Figure 1. Sharp-nosed leafhopper nymph (left) vs. adult (right).

Monitoring and control – Adults are monitored using yellow sticky traps. First generation SNLH is often controlled with sprays targeted for plum curculio, aphids, and cranberry fruitworm. Treatment decisions for the second generation should be based on individual population levels, as well as any history of stunt disease on your farm. Because adults disperse from woods, monitoring should be intensified in, and sprays should be directed to, the perimeter of fields to control migrants carrying the disease.

Insecticides are usually applied just prior to peak flight, which is near the end of August to early September (around this time of year but see above information). If needed, we recommend use of Assail, Actara, imidacloprid (e.g., Admire Pro), Lannate, or Malathion. It is also important to remove all plants that show symptoms of stunt disease. Removal of bushes should be done after insecticide treatment to avoid movement of leafhoppers from infested to healthy plants, thereby facilitating spread of the disease.

Date	SNLH AC		SNLH BC	
	Avg	Max	Avg	Max
6/18	0	0	0	0
6/25	0.02	1	0.76	10
7/2	0.22	5	0	0
7/9	0.456	7	2.33	13
7/15	0.22	2	0.09	1
7/22	0.01	1	0	0
7/29	0.135	2	0.07	2
8/6	0.05	1	1.83	12
8/12	0.07	2	4.79	28
8/19	0.12	5	0.017	1