

The Blueberry Bulletin

A Weekly Update to Growers

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2018 Commercial Blueberry Pest Control Recommendations for New Jersey
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BLUEBERRY INSECT

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The Spotted Lanternfly is in New Jersey!

Spotted lanternfly (Fig. 1) was found on Friday August 10 on a commercial Hunterdon County fruit and vegetable farm. The insect was found in a Tree of Heaven being used as a trap tree with a plastic catch basin placed around the base of the tree, and the first 5-6 feet of the trunk sprayed with dinotefuran to kill any insects that land on the tree. The dead insects were supposed to fall into the catch basin. They did not. The find was made by looking up into the foliage and seeing the adult stage. To our knowledge this is the first sighting of this insect on a commercial farm in NJ. Growers should be particularly aware of any possible activity in trees of heaven that border cultivated plantings. These trees are common in poor and disturbed soil. This capture was made from trees on a hillside that line the border of a powerline which runs through the farm. This insect feeds on many host plants, including grapes, and has the potential to attack blueberries (particularly in locations close to where Tree of Heaven is found); however, with the amount of spraying that normally goes on for spotted wing drosophila in blueberries, it is not likely that this insect will cause a major problem as many of the same insecticides (e.g. organophosphates, carbamates, and pyrethroids) should be effective against both. For more information, see the July 18 Plant and Pest for an article by Dr. Anne Nielsen, Rutgers fruit entomologist, here <https://plant-pest-advisory.rutgers.edu/?s=spotted+lanternfly>



Figure 1. Spotted Lanternfly adult from Hunterdon County farm.
Photo: Karlton Neidigh & Atanas Atanassov

Putnam Scale: Second generation crawlers are active. Anybody who had any fruit infested with scale should treat those fields now. The keys to scale control are 1) high volume sprays, 2) timing, and 3) the correct material. Use plenty of spray volume for this spray. The two best choices for materials are Esteem and Diazinon. Diazinon can only be once post bloom, and it is still too early for the second generation sharp-nosed leafhopper (SNLH) treatment. Therefore, if you plan to use Diazinon later for SNLH, then you have to use Esteem now. It's the better material for this anyway.

Spotted Wing Drosophila (SWD): Trap counts continue to increase. The highest counts this past week were 50 in Atlantic County and 68 in Burlington County. Treatments are over for most growers, but if you still have any Elliott still on the bushes, then treatments are still required. At the end of July we did get a positive fruit reading in a salt test (Fig. 2). Spraying and picking had just stopped in this field.



Figure 2. SWD larvae on filter screening (photo - Brendan Branca)

Sharp-nosed Leafhopper (SNLH): Trap captures have increased, but this is still too early to define this as the second generation peak flight. Treatments are still Not suggested at this time.

Life cycle – SNLH feeds and reproduce 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. 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



Figure 3. Adult sharp-nosed leafhoppers

nymphs are wingless and can't fly. This insect completes two generations in New Jersey. Adults

(Fig. 3) 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 5 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.

Monitoring and control – Adults (Fig. 3) 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 2nd 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 will probably be sometime near the end of August to early September. 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.

Summary of insect counts seen during the week of July 23rd – July 27th

	Leafroller % Inj. Shoots	Aphids % Inf. Shoots	CBFW % Inf. Fruit	Leafrollers % Fruit injury	PC % Fruit Injury	Scale % Fruit Injury
Average	0.96	5.98	0	0.010	0	0.02
High	26	32	0	0.2	0	0.7

Blueberry Trap Captures – Atlantic County

Week Ending	PC	CBFW	OB	SWD	BBM	SNLH	Putnam Scale
5/26	0.43	0.0					
6/2	0.43	0.0					
6/9	0.09	0.43	5.4				
6/16	0	0.015	31.75	0.02	0	0.072	

6/23	0.285	0.015	1436	0.176	0.024	0.104	
6/30	0.28	0	2583	2.78	0.012	0.1333	
7/7	0.428	0.016	3469	3.16	0.09	0.09	24.5
7/14	0.142	0.02	2827	8.235	0.011	0.253	1
7/21	0.142	0	827	10.42	0.101	0	0.714
7/28	0	0	96.43	15.21	0.125	0.02	0.29
8/4	0	0.05	68.48	8.7	0.15	0.02	7.71

Blueberry Trap Captures – Burlington County

Week Ending	PC	CBFW	OB	SWD	BBM	SNLH	Putnam Scale
5/26	1.67	0.18					
6/2	0.67	0.16					
6/9	0.0	0.1	0.6				
6/16	0	0.5	38.52	0.15	0	0	
6/23	0	0	1016	0.5	0	0	
6/30	0	0.25	2463	4.63	0	0.5517	
7/7	0	0.105	3741	4.8	0.25	0.143	0
7/14	0	0	1980	26.45	0	0.071	0.5
7/21	0	0	1002	15.5	0	0	0.333
7/28	0	0	485.5	8.35	0.49	0.07	0.67
8/4	0	0.1	206.47	11.1	0.38	0.11	0.67

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