



The BLUEBERRY BULLETIN

A Weekly Update to Growers

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CULTURE

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Atlantic County Agricultural Agent

Water Management: Blueberries have shallow root systems that cannot use water stored deep in the soil. As a result, blueberries grow best where the soil has a high water-holding capacity. Information about soil water-holding capacity is generally available in soil surveys. Soil texture is another clue to water-holding capacity (Table 1). In general, sandy soils hold the least amount of water. These soils must be irrigated more frequently and with less water per application than soils with a high percentage of silt and clay.

Crop rooting depth and the soil water-holding capacity are used together to determine the total water-holding capacity of the rooting volume. The capacity of the rooting volume is important in scheduling irrigation.

Table 1.
Typical Water-holding capacity for various soils.

Texture	Water-Holding Capacity (inches of water per inch of soil)
Sand	0.05
Fine sand	0.08
Sandy loam	0.11
Loam	0.16
Silt loam	0.18

Clay loam	0.19
Silty clay	0.20
Clay	0.22

The following example shows how to determine the water-holding capacity of the rooting volume and how to use this information to schedule irrigations. In this example, assume that blueberries are planted on a sandy loam soil. Using a rooting depth of 1.5 feet, the total water-holding capacity of the rooting volume is 18 inches of soil times 0.11 inch of available water per inch of soil depth, which equals 2 inches of total water-holding capacity. The total water available in the rooting volume should not drop below 50% of the total water-holding capacity. This assures easy access to water by the roots and prevents drought stress. Using this limit in the example, the total water available should not fall below 1 inch, which is half of the 2-inch total water-holding capacity. A blueberry plant growing vigorously in summer can evapotranspire more than 0.25 inch per day. With 1 inch of water available in the rooting volume and approximately 0.25 inch being used per day, it takes 4 days for the blueberry plant to use this stored soil water. Since the average time between rains is 5 days, irrigation is highly desirable for this soil and site under peak use conditions. In general, blueberries grown on light soils with low

water-holding capacities will benefit from irrigation most years, even in the humid

regions. *Reprinted: Highbush Blueberry Production Guide.*

INSECTS

Dr. Cesar Rodriguez-Saona, Extension Specialist in Blueberry Entomology, Rutgers University

Mr. Dean Polk, IPM Agent – Fruit

Ms. Carrie Denson, IPM Program Associate – Fruit

Spotted Wing Drosophila (SWD): Adult trap captures have increased. This is likely a result of decreased spraying in ‘Duke’ fields, as well as the natural population increase we get during mid July. With multiple generations per season, the numbers at this time of year can be staggering. We cannot stress enough that insecticide programs need to be continued for the protection against this pest. Even though some growers are finishing up ‘Bluecrop,’ and machine picking, remember that the tolerance for infested fruit of any kind or market is ‘0’. We continue our salt

tests for field run harvested fruit, and can report ‘0’ larvae found in all tests from commercially treated fields. We also did testing this week on fruit from 2 unsprayed fields, and found numerous infested fruit. A visit to one of those fields showed many infested berries, and fruit with freshly laid eggs (Figures 1-3). This is an obvious demonstration on the importance of continued treatments during this time of rapid population growth.



Figure 1. Hanging berry with holes from SWD egg laying and establishment.



Figure 2. Hanging berries with freshly laid SWD eggs just under the skin surface. Note circled egg breathing tubes on surface.



Figure 3. SWD larva from untreated blueberry field - July 12.

Aphids: Aphid populations are close to the same levels as seen last week, and higher on some farms. High populations provide more opportunity to spread scorch virus, and should be controlled. If berries are off the bush and aphid populations are still high, then growers should think about ground applied insecticides to control high aphid populations.

Blueberry Maggot (BBM): Trap captures are very low to non-existent, except in a few areas in Atlantic County, where trap counts reached 16 flies per trap. When trap captures exceed 1 fly per trap, then chances of having infested fruit increase. Normal insecticide programs for SWD should control BBM populations.

Oriental Beetle (OB): Oriental beetle adult trap captures have peaked, and should show a downward trend for the remainder of the season. The treatment window for OB grubs is now coming to a close. Applications of imidacloprid made after this week will not be very effective, since the grubs will be larger 3rd instars, and not susceptible to the

insecticide. Growers who have not treated, or wish to use an alternative control, should order mating disruption dispensers for 2018, and place them in the fields during May.

Sharpnosed Leafhopper (SNLH): SNLH adults are still present, but have decreased slightly since the previous week. This is the 1st generation starting to die off. A second generation should appear in late August.

Putnam Scale: Scale crawlers are still present, but treatments are not suggested, since this is close to the end of the 1st generation crawler stage. We will keep you posted on the status of second generation crawlers, and spray timing in August.

Blueberry Trap Counts

Atlantic County

Week Ending	Cranberry Fruitworm	Plum Curculio	Oriental Beetle	Spotted Wing Drosophila ♂	SNLH	BBM
5/6						
5/13	0.083					
5/20	0.28	2.4				
5/27	0.56	2.8				
6/3	0.24	0.33		0.74		
6/10	0.33	0	4.9	0.79		
6/17	0.50	0	730	1.65	0	0.1
6/24	0.04	0	2672	1.2	0.29	0.1
7/1	0.04	0	3767	1.84	0.13	0.3
7/8	0.0	0.33	3341	5.02	0.09	0.1

Burlington County

Week Ending	Cranberry Fruitworm	Plum Curculio	Oriental Beetle	Spotted Wing Drosophila ♂	SNLH	BBM
5/6						
5/13	0.33					
5/20	0.14	7				
5/27	0.43	12				
6/3	0.857	2		2.46		
6/10	0.18	0	1.08	1.83		
6/17	0.9	1.0	269	3.08		0
6/24	0.67	-	5460	3.04	1.59	0
7/1	0.36	0	2629	4.64	1.03	0
7/8	0.17	0	4224	5.53	1.07	0.23

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If you have any comments about this newsletter, please make them in the space below and mail to:
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