

The Blueberry Bulletin

A Weekly Update to Growers

July 30, 2020

Vol. 36, No. 19

- ❖ Visit the Blueberry Bulletin webpage at njaes.rutgers.edu/blueberry-bulletin
- ❖ The 2020 Commercial Blueberry Pest Control Recommendations for New Jersey is available on njaes.rutgers.edu

BLUEBERRY CULTURE

Dr. Gary C. Pavlis, Ph.D.

Atlantic County Agricultural Agent

In last week's newsletter I stated that the timing for taking a leaf analysis is best done in late July and early August. The reason for this is because the research that established the optimum levels of all the essential nutrient elements was done at that time. A leaf analysis could be done earlier or later but we would not have nutrient values of optimum, deficient, and toxic at that time.

This newsletter has often talked about the need to take a leaf analysis to determine fertilization rates but I have never shared with you growers what each of the essential nutrients actually does in the plant. The chart below may be of some interest to you and show you why all of these elements must be managed correctly.

	Function
1. Nitrogen	i) It makes plant dark green & succulent ii) It promotes vegetative growth.
2. Phosphorus	i) It stimulates root development, increases the number of tillers, gives strength to straw and prevents lodging. ii) It hastens ripening of plants and counteracts the effects of excessive nitrogen. iii) It improves the quality and yield of grain. It increases disease resistance, enhances the activity of rhizobia and increases the formation of root nodules in legumes.
3. Potassium	i) Vigor and disease resistance to plants. ii) It increases efficiency of the leaf in manufacturing sugars and starch. iii) It helps to produce stiff straw in cereals and reduces lodging
4. Calcium	i) Increases stiffness of straw and promotes early root development and growth.

	ii) It encourages seed production
5. Magnesium	i) It is a building block for plant structure and fruit firmness. ii) Helps in uptake of phosphorus and regulates uptake of other nutrients.
6. Sulphur	i) It stimulates root growth, seed formation and nodule formation.
7. Iron	i) Essential for formation of chlorophyll and synthesis of proteins and several metabolic reactions.
8. Manganese	i) It helps in chlorophyll formation.
9. Zinc	i) It helps information of growth hormones and chlorophyll.
10. Copper	i) It regulates respiratory activities in plants.
11. Boron	i) Helps in uptake of calcium and its efficient use by plants. ii) Helps in absorption of nitrogen and is necessary in cell division and fruit set.
12. Molybdenum	i) It is essential for nitrogen fixing organisms both symbiotic and non-symbiotic.
13. Chlorine	i) It is considered essential for photosynthetic process

BLUEBERRY INSECT

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

Mr. Dean Polk, IPM Agent – Fruit

Ms. Carrie Denson, IPM Program Associate – Fruit

Tailing Down...But Spotted Wing Drosophila (SWD) is still the main pest of concern, but only on Elliott and other later varieties.

Aphids: Aphid populations are down to an average of 1.2% of terminals infested with a high of 34% last week. The recent heat, combined with the hardening off of plant tissue has resulted in very low aphid populations, which should no longer be a concern, unless you have lush growing Elliott.

Putnam Scale: Scale infested fruit remains very low. Crawler traps have been put out, and the second generation should be starting in the near future.

By the Numbers:

Week Ending	% Injured Fruit							
	% LEPS Injured Fruit		% PC Injury Fruit		% Scale		% CBFW	
	Avg	Max	Avg	Max	Avg	Max	Avg	Max
5/11	0.05	0.1	0.2	0.3				
5/18	0.06	0.8	0.13	1.4				
5/25	0.122	1.1	0.43	3.8				
5/30	0.17	1.4	0.70	5.6				

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6/6	0.122	1.1	0.43	3.8				
6/13	0.01	0.4	0.001	0.4	0.005	0.1		
6/19	0.003	0.2	0	0	0.02	0.5		
6/27	0.001	0.3	0.001	0.2	0.03	0.6	0.005	0.1
7/4	0.0	0.0	0.0	0.0	0.03	0.5	0.0005	0.1
7/11	0.005	0.1	0.0	0.0	0.02	0.5	0.0	0.0
7/18	0	0	0	0	0.02	0.4	0	0
7/25	0	0	0	0	0.006	0.2	0	0

Trap Counts												
Week Ending	CBFW-AC		CBFW-BC		SWD-AC		SWD-BC		OB-BC		OB-AC	
	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max
5/11	0.1	1	0	0								
5/18	0	0	0	0								
5/25	0.1	1	0.25	1	0.8	7	0	0				
5/30	0	0	0.25	1	.75	5	.55	1				
6/6	5.5	34	0.75	3	2	8	2.1	5				
6/13	5.6	22	3.5	8	4	14	7.7	20	3.2	11	18	340
6/19	7.2	48	6.5	18	4.64	30	4.9	16	71.75	675	21.4	68
6/27	0	0	3.5	8	2.8	12	4.3	25	1834	13750	462	2025
7/4	0.22	1	1	3	4.17	16	11.3	46	2421	8775	976	5062
7/11	0.11	1	0.25	1	5.8	27	6.6	22	1093	5000	1997	6075
7/18	0.11	1	0.5	2	5.3	19	4.6	14	769	5000	1575	6750
7/25	0.11	1	0.25	1	12.2	41	5.5	20	443	3500	920	4050
Week Ending	SNLH – AC		SNLH-BC		BBM-AC		BBM-BC					
	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max
6/27	0.14	3	0.8	4	0	0	0	0				
7/4	0.08	1	0.8	5	0.009	1	0	0				
7/11	0.12	1	1.82	6	0	0	0	0				
7/18	0.11	2	1.16	5	0	0	0	0				
7/25	0	0	0	0	0.02	1	0	0				

Key: PC=plum curculio, Scale=Putnam scale, CBFW=cranberry fruitworm, SWD=spotted wing drosophila, OB=oriental beetle, SNLH-sharpposed leafhopper, BBM=blueberry maggot, BC=Burlington County, AC=Atlantic County