RUTGERS
New Jersey Agricultural Experiment Station

The Blueberry Bulletin

A Weekly Update to Growers

August 18, 2021 **Vol. 37, No.22**

* *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*

CULTURE

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

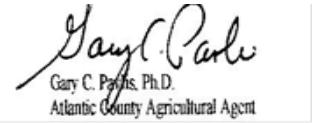
Blueberry Culture

I have often spoken to growers about the importance of a leaf analysis to determine the need for fertilization applications and to keep all the essential nutrients in balance. It must be understood that each of the essential nutrients, nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, manganese, iron, copper, boron and zinc do not act independently within the plant. Higher than optimum levels of one of these can adversely affect the uptake of another. This interaction is quite extensive. Just as an FYI, I thought it would be beneficial to post a chart outlining the nutrients and their effect on other nutrients. This will be useful to growers when looking at their leaf analysis results. For example, if you results show a very high level of potassium and a low level of magnesium, one approach to remedy the situation is to lower

Nutrient - Relationships	
	Depresses
Phosphorus (P)	*Aluminum* *Zinc* *Calcium* *Manganese* *Magnesium*
Potassium (K)	*Sodium* *Iron* *Manganese* *Magnesium*
Sulfur (S)	*Calcium* *Copper*
Calcium (Ca)	*Manganese* *Magnesium* *Phosphorus* *Zinc*
Magnesium (Mg)	*Phosphorus* *Calcium*
Zinc (Zn)	*Iron* *Copper* *Phosphorus* *Sulfur*
Manganese (Mn)	*Iron* *Phosphorus* *Potassium* *Magnesium*
Copper (Cu)	*Sulfur* *Iron* *ZincPhosphorus*
Iron (Fe)	*Potassium* *Phosphorus* *Copper*
Aluminum (AL)	*Iron* *Phosphorus*

applications of potassium AND increase the application levels of magnesium. In reality, just lowering the potassium application levels will most likely fix

the magnesium problem. Late July and August are the optimum times to conduct a leaf analysis.



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

Blueberries:

General: Updated from last week - All fruit has been harvested. Therefore we are only concerned with post-harvest pest issues. These include 1) Spray timing for 2nd generation sharpnosed leafhopper, 2) Treating any fields that had or have Putnam scale populations – timing for crawler activity, and 3) Post harvest applications of fungicides for black shadow control.

Putnam Scale: There are 2 generations per year of Putnam scale, and the insect is most sensitive to control when in the crawler stage. Eggs that are under the scale covering of adult females start to hatch in early August and nymphs emerge and spread out to new cane growth and leaves. Peak nymph emergence and movement is usually around mid-August, and therefore when treatments should be applied if you had any fields with scale presence during June to early July, or the first generation. Last week our trap counts averaged 33.57 nymphs per trap with a high of 108, this week's average was 70.28 with a high of 207 crawlers per trap. Therefore we are in the thick of crawler emergence and 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. One field treated with Diazinon (100 gal/A) last week showed good control .

Sharpnosed Leafhopper (SNLH): Insecticides are timed for the second generation of adults, and rarely do Putnam scale and Sharpnosed leafhopper 'cooperate' so they can be treated at the same time. This is also true this year. So while growers need to treat for scale now, it is still too early for any second generation treatments targeting SNLH. We are averaging only .62 SNLH per trap in Atlantic County and .08 SNLH per trap in Burlington County.

Black Shadow: On average we are finding black shadow presence on 39.72 % of canes per bush and a high of 100% of canes per bush. Those growers with significant black shadow on their bushes may wish to follow recommendations published earlier by Dr. Peter Oudemans. For more information please see earlier articles on black shadow:
https://njaes.rutgers.edu/blueberry-bulletin/pdfs/2020/bb-v36n23.pdf
https://njaes.rutgers.edu/blueberry-bulletin/pdfs/2021/bb-v37n01.pdf

Amended Special Local Need for Malathion 8F on Blueberries

An amendment to extend the expiration date of the FIFRA 24(c) Special Local Need Registration for the control of Spotted Wing Drosophila (SWD) in New Jersey blueberries to **December 31, 2024** has been approved by the EPA. This will allow continued use of a high rate of Malathion 8F (Gowan) – up to 2.5 pts per acre. According to the label, Malathion 8F has a REI of 12 hours, the maximum number of applications per year is 2 and the minimum retreatment interval is 7 days. Do not exceed a total maximum use rate of Malathion from all sources of 5 lbs a.i. per acre per year. Do not apply within 1 (one) day of harvest and do not apply within 25 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, natural ponds, estuaries, and commercial fish ponds).