



# The Blueberry Bulletin

## *A Weekly Update to Growers*

May 14, 2024

Vol. 40, No. 9



- ❖ Visit the Blueberry Bulletin webpage at [njaes.rutgers.edu/blueberry-bulletin](https://njaes.rutgers.edu/blueberry-bulletin)
- ❖ The 2024 Commercial Blueberry Pest Control Recommendations for New Jersey is available on <https://njaes.rutgers.edu/pubs/>

## BLUEBERRY CULTURE

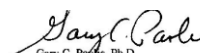
*Dr. Gary C. Pavlis, Ph.D., Atlantic County Agriculture Agent*

### Fertigation Guidelines:

Growers have asked me for some guidelines for fertigating blueberries. As you may be aware, our research in New Jersey has shown that fertilizing blueberries a little at a time through the trickle system has shown to be very beneficial. Increases in yield have been seen each year of the research. In addition, increases in fruit firmness have often been seen.

Over the years the following guidelines have been developed:

1. Determine the amount of Nitrogen required/acre/year for each field. Total N should be based on leaf analysis the year before however 60# of Nitrogen/A is a good base recommendation for mature plants if a leaf analysis has not been conducted.
2. Multiply total acres to be fertigated by #/A and convert to total gallons for the season.
3. Fertigation period is 6-8 weeks, starting at  $\frac{3}{4}$  bloom. Fertigate once a week for 1-2 hours during the normal irrigation schedule. Run irrigation a minimum of  $\frac{1}{2}$  hour before and  $\frac{1}{2}$  hour after fertigation. If travel time from the injection point to the final application point is longer, allow for one hour before and after fertigation time of travel. This will ensure application uniformity to the furthest emitter within the zone. As a rule of thumb, for a scheduled irrigation, irrigate at least 3-4 hour during a 1-2 hour fertigation. Using a 1gph emitter, irrigate 4-6 hours every 3 days, with a .5 gph emitter, irrigate 8-12 hours every 3 days. This is based on no rainfall and ET rates of .2"-.26"/day.
4. Install tensiometers to monitor soil moisture within the 12"-18" root zone depth. For loamy sands and sandy loams irrigate when readings are 20-30 CB on the tensiometers. This will supply needed water and fertilizer to the root zones.
5. Injection pump should be sized for maximum acreage/zone that you plan to irrigate/fertigate at one time ( 2 hour injection time, for a 4 hour irrigation per zone). Example- a 10 acre drip system at 60# N requirement/acre will need 600 gallons of liquid 10-10-10. If injection is scheduled for once a week for 8 weeks, 75 gph injection pump is recommended for a one hour injection period. If you inject for 2 hours, the rate is lower (37.5 gph injection rate). If zones are over 10 acres, plan for between 50-100 gph injection rate. A lower injection rate can be used with a longer fertigation/irrigation period.

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

## PEST MANAGEMENT

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

*Dr. Janine Spies, IPM Agent – Fruit*

*Carrie Mansue, Senior Program Coordinator*

During the week of May 6<sup>th</sup>-11<sup>th</sup>, 117 fields were scouted throughout Burlington and Atlantic Counties.

**Leafrollers (LR), Spongy Moth (SM), and Plum Curculio (PC).** The numbers of caterpillars (LR and SM) were minimal in the beating tray sampling. The majority of caterpillars found on the beating tray sampling were Green Fruitworms. Plum Curculio (PC) activity is on the rise, with an average count of 0.10 PC per bush for the week and a maximum count of 3 per field site.

Week Ending	LR/Tray		SM/Tray		PC/Tray		Thrips/Tray	
	Average	Maximum	Average	Maximum	Average	Maximum	Average	Maximum
4/6	.	.	.	.	.	.	.	.
4/13	.	.	.	.	.	.	.	.
4/19	0.01	0.2	0.006	0.2	0.03	0.3	.	.
4/26	0.02	0.3	0.01	0.2	0.03	0.5	0	0
5/4	0.06	0.4	0.008	0.4	0.11	1.1	0.05	4
5/11	0.06	0.4	0.005	0.2	0.10	3	0.41	8

LR = Leafrollers, SM = Spongy Moth, PC = Plum Curculio

**% injury to infested fruit.** This week, scouting observations included percent injury to developing berries. Significant injury to the berries from LR and PC was noted. Scarring from both old and new PC injury was recorded.

Week Ending	% Injury of Fruit by LR		% Injury of Fruit by PC	
	Average	Maximum	Average	Maximum
5/11	0.17	3.9	0.80	12.7

LR = Leafroller, PC = Plum Curculio

**Cranberry Fruitworm (CBFW) and Cherry Fruitworm (CFW).** Traps for CBFW and CFW were inspected this past week. There has been a notable increase in the number of moths entering fields, particularly for CFW in Atlantic (AC) and Burlington Counties (BC). Treatment will be necessary after the bees have been removed. It is recommended to use a broad-spectrum insecticide that will effectively target both CFW and PC. See newsletter article from last week for more information.

Week Ending	CBFW Traps				CFW Traps			
	AC AVG	AC Max	BC AVG	BC Max	AC AVG	AC Max	BC AVG	BC MAX
4/19	0	0	0	0	0.44	2	0	0
4/26	0.4	3	1	2	0.1	1	0	0
5/4	0	0	0	0	12.1	25	9.5	14
5/11	0	0	0	0	17.25	44	20	24

AC = Atlantic County, BC = Burlington County, CBFW = Cranberry Fruitworm, CFW = Cherry Fruitworm

**Scale Traps.** Scale traps were deployed on blueberry bushes and inspected this week. There were no signs of scale activity, and no crawlers were detected at this time.

### SCOUTING REPORT FOR DISEASES

During the week of May 6th, scouting was conducted in 117 blueberry fields to evaluate disease presence. Observations revealed minimal instances of Phomopsis twig blight and Botrytis blossom blight. However, symptoms indicative of Blueberry Scorch Virus was detected in certain fields (Figure 1). If symptoms resembling Blueberry Scorch Virus emerge, it is advised to mark affected plants and remove them from the fields at the end of the season.



Figure 1. Blueberry Scorch Virus symptoms in plant on the right – unproductive, chlorotic (yellowing) leaves, and blighted blossoms.

### WEED IDENTIFICATION

The scouting report for the week of May 11<sup>th</sup> notes the emergence or already emerged presence of goldenrod (Figure 2), marestail, and nutsedge. It is recommended to implement a post-bloom herbicide application targeting the observed weed species, check the label for size range of various weed species for optimal and effective weed control.



Figure 2. Emerged Goldenrod in blueberry fields. Picture provided by Carrie Mansue.

## DISEASES

**Peter V. Oudemans, Ph.D.**  
**Professor and Extension Specialist**  
**Plant Pathology**

Weather forecasts suggest variable temperatures and the date of harvest is somewhat elusive (June 10-11). Susceptible cultivars such as Bluecrop will benefit from continued fungicide applications although the interval can be increased to 10-14 days.

**Blueberry scorch** symptoms are becoming obvious this season. Symptoms may be confused with Phomopsis. The major difference between the two is that for scorch the majority of the bush is impacted whereas with Phomopsis the only a few branches are affected per bush. Since scorch is uncurable it is recommended that plants be removed so that the virus does not spread. You can get an accurate diagnosis by submitting samples to Michigan State Plant and Pest Diagnostics (<https://www.canr.msu.edu/pestid/>). Please be aware that the prices listed do not include the out-of-state service fee.



Remember scouting for **Mummy Berry and Phomopsis** should precede any decision to spray and you should scout now for these diseases so that you can identify disease prone blocks in 2023. Mummyberry is much more common this season but look for it on susceptible such as Weymouth, Sierra, Elliott, Earliblue, Coville, and Berkeley. Scouting for the disease now will help identify areas prone to the disease in the following season. There are no fungicide controls for these diseases at this stage of growth.



A. Immediate pre-bloom (approx. 5-7 days until bloom). Primary mummy strike on an inflorescence bud (B) and a leaf shoot (C).



An example of Phomopsis Twig Blight taken during the pre-bloom period.



An example of botrytis on blueberry fruit. Note how the fungus spreads from a blossom on to the fruit.



Diagnosing mummy berry in clusters and after slicing berries.

**Root rot** was severe in some fields last season and those fields may benefit from a *Phytophthora* fungicide application. The blueberry plant is continuing to produce new roots and the disease will be especially severe in areas with poor drainage. If *Phytophthora* was present last season, the first step is to improve drainage in the field. There are two types of fungicides labeled for phytophthora management. Phosphite fungicides labeled for blueberry include: Aliette, K-Phite, Phostrol, Prophyte and Rampart to name only a few. Phosphites are not fertilizer and DO NOT provide a significant source of phosphorous. Other compounds marketed as fertilizer do not have sufficient active ingredient to provide disease control and may cause phytotoxicity if concentrations are increased. **Phosphites may have phytotoxic effects** when not sufficiently diluted (50 gallons/acre) and if the spray water is below pH5.5. Phosphites (same active ingredient as Aliette) are systemic fungicides with both downward and upward mobility. In other words these products may be applied as a foliar spray and the active ingredient will move into the root zone when leaves are present. At this time of year both types may be applied to the soil since there is insufficient leaf material present to absorb the fungicide. Mefanoxam is the second type of fungicide that labeled for soil applications only. This is a highly effective (and expensive) material and should be used after conditions (drainage) are improved. Ideally this material is used post-harvest in late summer-early fall to protect overwintering roots.

**Stem Blight** was prevalent in some fields last year. This disease is relatively easy to diagnose (see below). Plant removal or pruning to remove infected canes are the primary methods for control. No fungicides are recommended for control.



Diagnosis of stem blight starts with foliar symptoms of a dead cane or the entire plant. Then, using pruners, examine a cross section of the for browning of the wood. You may need to make multiple cuts to find the symptomatic part of the cane.