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THE BLUEBERRY BULLETIN

A Weekly Update to Growers

Visit the Blueberry Bulletin webpage: njaes.rutgers.edu/blueberry-bulletin
2024 Commercial Blueberry Pest Control Recommendations for New Jersey:
njaes.rutgers.edu/pubs

Blueberry Culture

Dr. Gary C. Pavlis, Atlantic County Agricultural 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 proved 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 ¾ bloom. Fertigate once a week for 1-2 hours during the normal irrigation schedule. Run irrigation a minimum of ½ hour before and ½ 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
Ms. Carrie Mansue, IPM Sr. Program Coordinator – Fruit

This past week, IPM scouting was conducted in both Burlington and Atlantic Counties. During scouting, we monitored for leafrollers, spongy moth, plum curculio (PC), and thrips.

Leafrollers: Very few were observed.

Thrips: None detected.

Spongy Moth: Only one individual found across the 25 fields evaluated.

Plum Curculio (PC): Early activity was noted. We recorded an average of 0.08 PC per bush, with a high of 0.2 PC per bush. PC was detected in 10 out of the 25 fields evaluated.

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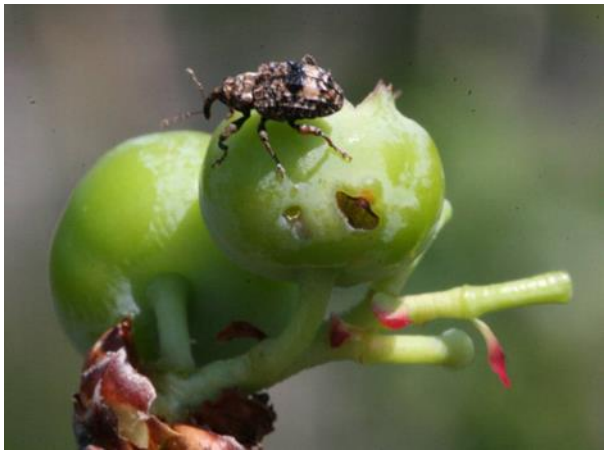
PC (Picture 1) is a native pest of blueberries in North America. In New Jersey, adults overwinter in leaf litter and become active in late April to early May, coinciding with the start of the current scouting period. Adults migrate into blueberry fields to mate, with peak activity typically occurring at the end of flowering and the beginning of fruit set. Females lay eggs inside developing fruit, leaving a distinctive crescent-shaped scar at the oviposition site. A single larva develops inside the fruit, later dropping to the soil to pupate. New adults emerge in July and August, sometimes feeding on ripening fruit before moving to overwintering sites.



Picture 1. Adult plum curculio and the crescent-shaped scar on fruit caused during oviposition (Photo by D. Polk)

Damage. PC adults feed on flowers and developing fruit, especially immediately following petal fall. Damage occurs in two forms: 1. Cosmetic damage from adult oviposition, marked by scarring. 2. Internal damage from larval feeding inside the fruit, which can also cause premature fruit drop. In early-maturing varieties, infested fruit may be harvested before dropping, leading to potential load rejections due to the industry's zero-tolerance policy for PC in blueberries.

Management. At this time, treatment for plum curculio is not recommended due to the presence of bees in the fields. However, once bees are removed, it will be important to begin considering control applications for PC. The primary insecticides recommended for PC control in blueberries are Avaunt and Imidan. Additionally, biological control using entomopathogenic nematodes (EPNs) offers a promising strategy for targeting PC larvae in the soil. Recent trials tested four commercially available EPN species—*Steinernema feltiae*, S. carpocapsae, *S. riobrave*, and *S. scarabaei*. Results indicated that *S. riobrave* was the most effective at reducing adult emergence and remained viable in the soil for up to 21 days under field conditions. Future research will focus on optimizing application timing and methods for EPNs. If you are interested in testing EPNs for PC control in your fields, please contact us for guidance.

Week Ending	Leafroller		Spongy Moth		Plum Curculio		Thrips	
	AVG	HIGH	AVG	HIGH	AVG	HIGH	AVG	HIGH
4/26/25	0.009	0.2	0.005	0.1	0.08	0.2	0	0

Terrapin Scale: Scale traps were not checked this week due to no activity observed last week. However, they will be evaluated in the upcoming week. Once activity is detected, traps will be checked weekly.

Cranberry Fruitworm and Cherry Fruitworm: Currently, activity has only been observed in our cherry fruitworm traps. Moths are flying but have not yet reached peak levels for treatment. No activity has been detected in the cranberry fruitworm traps.

Week Ending	CBFW AC		CBFW BC		CFW AC		CFW BC	
	AVG	HIGH	AVG	HIGH	AVG	HIGH	AVG	HIGH
4/3/25	0	0	0	0	0	0	0	0
4/11/25	0	0	0	0	0	0	0	0
4/19/25	0	0	0	0	0	0	0	0
4/25/25	0	0	0	0	3.85	6	0.75	3
CBFW = Cranberry Fruitworm, CFW = Cherry Fruitworm; AC = Atlantic County, BC = Burlington County								