

April 28, 2026

Vol. 42, Issue # 7

THE BLUEBERRY BULLETIN

A Weekly Update to Growers



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

Save the Date: Blueberry Twilight Meeting, Thursday, May 14th, Research Center 6pm

Blueberry Culture

Dr. Gary C. Pavlis, Atlantic County Agricultural Agent

What is Pulse Drip Irrigation?

Pulse drip irrigation is a modern approach to irrigation that involves applying water in small and frequent intervals. In traditional irrigation systems, plants are watered for one to three hours. Water then sinks deeply into the soil. Pulse irrigation turns on for 5 to 15 minutes, 5-10 times a day. The primary goal of Pulse Irrigation is to maintain a high soil moisture level, ensuring that the root zones remain free from stress. This creates aeration in the root zone, which improves the plant's photosynthesis process.

How Pulse Drop Irrigation Works.

It is composed of a series of irrigation cycles, each of which consists of two phases, the operating phase and the resting phase. The traditional drip irrigation system can be modified to pulse drip by using a timer or controller to reduce watering duration and increase the frequency of the watering cycle.

Advantages of Pulse Drip Irrigation

Pulse irrigation can reduce water usage by 50-80%. It provides water in short, regular intervals, which helps plants grow successfully. Converting a drip system to pulse is easy and economical. It reduces fertilizer use and runoff, and Pulse watering ensures that all nutrients remain within the root zone. This approach reduces



nutrient leaching, particularly in sandy soil. Pulse irrigation maintains a moist root zone, essential for optimal microbial activity, healthy soil biome, and healthy plant growth. See your irrigation specialist to see if converting to a Pulse system would work for your operation.

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

Insects

Scouting activities were conducted last week across 141 fields in Burlington and Atlantic Counties. Field evaluations focused on the presence of leafrollers, spongy moth, plum curculio, and thrips. All target pests were detected during scouting (see the table below for details). There was a slight increase in plum curculio and thrips; however, due to the ongoing pollination period, insecticide applications targeting these pests are not recommended at this stage.

IPM Data

Week	Leafrollers		Spongy Moth		Plum Curculio		Thrips	
	Avg	High	Avg	High	Avg	High	Avg	High
4/17	0.0649	2	0.0001	0.1	0.0686	2.5	0.5547	9
4/25	0.0801	0.8	0.0001	0.1	0.1156	3	1.0383	26

Thrips

Thrips are difficult to detect due to their small size, and the injury they cause can resemble symptoms of nutrient deficiencies or disease. To confirm that thrips are responsible for crop injury, inspect the affected plant parts directly for the presence of thrips, using a white beating tray to dislodge them for easier detection. Grower concerns typically focus on thrips injury to flowers, usually caused by flower thrips in the genus *Frankliniella*. In New Jersey, the eastern flower thrips (*Frankliniella tritici*) is commonly found in and around farms and can feed on flowers, posing a potential threat. This species can be monitored using white sticky traps. Observations show that after bloom, most thrips activity shifts to young foliage, where feeding can cause leaf curling. This injury is primarily caused by another species, *Scirtothrips ruthveni*. However, it is still unclear whether this foliar injury affects yield. Thrips damage to fruit is generally minimal and becomes undetectable as the berries mature.

We have collected data on thrips captures using white sticky traps and have recently developed a degree-day model to predict thrips abundance in blueberry fields. The model is available here: <https://benedick.sebs.rutgers.edu/BlueberryWeather/>

Scouting and Control. Thrips can be monitored using white sticky traps and beating trays. If thrips are found causing significant injury, consider using Entrust (OMRI-approved for organic production) or Delegate. Both insecticides are highly toxic to bees and should only be applied at dusk during bloom, when bees are not actively foraging. Avoid applying these products during bloom unless absolutely necessary.



Plum Curculio

Plum curculio (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. 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 (Picture 1). 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. Plum curculio 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 plum curculio larvae 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. The primary insecticides recommended for plum curculio control in blueberries are Avaunt and Imidan. Additionally, biological control using entomopathogenic nematodes (EPNs) offers a promising strategy for targeting the 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 plum curculio control in your fields, please contact us for guidance.

Trap Monitoring

Cranberry and cherry fruitworm traps were deployed last week and will be monitored weekly moving forward. Scale traps targeting Putnam and terrapin scale will be installed in the coming week to monitor first-generation crawler emergence and help optimize treatment timing.

Weed Monitoring

In the coming weeks, the IPM team will monitor emerging weed populations within fields. This information will be used to guide post-emergence herbicide decisions and support effective management strategies aimed at reducing overall weed pressure.



Pollination Update

Dr. Beth Ferguson, Postdoctoral Researcher, Rutgers University

Bloom Progress. The bloom period this year moved rapidly in our first week due to the multiple 90°F days but has slowed down considerably as we have had mostly average weather.

We are on track for an average bloom duration of ~4 weeks. Farms in the Hammonton area can expect their Duke crop to be about 65-80% progressed by this point and Bluecrop 60-75%. While we are past peak bloom in Duke, Bluecrop will likely be finishing peak bloom towards the end of the week. Later-blooming acreage that did not have significant freeze damage is also hitting peak bloom (Draper, Elliott, etc.). As we approach the end of the bloom period keep in mind bees should not be kept once the bulk of your flowering acreage is past about the 90% progression point.



Picture 2. Nectar from Bluecrop flower. (Photo by B. Ferguson).

While we saw almost no nectar production last week, the plants have recovered over the weekend. Duke, Bluecrop, and Draper plants are all producing nectar at similar levels to what was observed in the first week (Picture 2)—which means plenty of food for your bees. Observed foraging activity is excellent under good weather conditions with bees primarily using the newly opened flowers (Picture 3).



Picture 3. Honeybee foraging on healthy flowers (Photo by B. Ferguson).