



The Blueberry Bulletin

A Weekly Update to Growers

May 7, 2024

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- ❖ Visit the Blueberry Bulletin webpage at 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

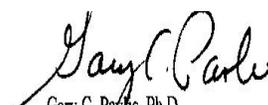
An overwhelming number of farms have deficiencies in Copper and Iron. The best time to remedy this situation is in the spring when leaf expansion has occurred since foliar applications of these micro-nutrients are the most efficient way to get the nutrient into the plant. The chart below is a guide to micro-nutrient application.

RUTGERS
 New Jersey Agricultural Experiment Station

Micro-nutrients sources and rates

| Nutrient | Product | Method | Rate |
|----------|------------|--------|------------|
| Boron | Solubor20 | Foliar | 1.5lb./A |
| Boron | Solubor20 | Ground | 5lb./A |
| Boron | Borax11 | Ground | 10lb./A |
| Copper | Cu chelate | Foliar | Label Rate |
| Iron | Fe chelate | Foliar | Label Rate |
| Mn | Mn chelate | Foliar | Label Rate |
| Mn | Mn sulfate | Foliar | 2 lb./A |
| Zn | Zn chelate | Foliar | Label Rate |

Cooperative Extension of Atlantic County



Gary C. Pavlis, Ph.D.
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PEST MANAGEMENT

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

Dr. Janine Spies, IPM Agent – Frui

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During the week of April 29th- May 4th, 112 fields were scouted throughout Burlington and Atlantic Counties.

Leafrollers (LR), Spongy Moth (SM), and Plum Curculio (PC). Minimal numbers of LR and SM were recorded in the beating tray sampling. The majority of LR activity observed on the beating trays was attributed to Green Fruitworms. PC activity has shown an increase this week. The average PC count for the week was 0.11 per bush, with a maximum count of 1.1 per field site. It is recommended that no insecticide treatments be applied at this time until the bees have been moved out of the fields.

| 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 |

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

Cranberry Fruitworm (CBFW) and Cherry Fruitworm (CFW). Traps for CBFW and CFW were monitored this past week. There has been a significant increase in the number of moths entering fields, especially for CFW in Atlantic County (AC) and Burlington County (BC). Treatment is recommended after the bees have been removed. It is advised to use a broad-spectrum insecticide that will effectively target both CFW and PC.

| 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 |

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

During our scouting this past week, we found Putnam scale on a few canes (Figure 1). Normally, we conduct monitoring for Putnam scale towards the end of the season and recommend treatment for the second generation.

However, in response to recent observations, traps have been deployed in Burlington and Atlantic County to monitor for the first generation. We will continue to monitor scale activity over the next few weeks.



Figure 1. Scales on blueberry canes.
Picture by Karlton Neidigh.

Post-Pollination Insecticide Options

Growers interested in using selective insecticides, particularly for the management of Lepidopteran pests, are encouraged to do so. These compounds offer enhanced safety for humans and the environment. Intrepid is an insect growth regulator (IGR) specifically targeting caterpillars (CBFW and CFW). Esteem, another IGR, demonstrates efficacy against CBFW, CFW, and scale. Delegate also targets caterpillars effectively. Assail, a neonicotinoid insecticide, is active against CBFW and aphids. Altacor, Exirel, and Verdepryn, belonging to a novel class of insecticides known as diamides, exhibit high efficacy against caterpillars. Below are some guidelines to assist in selecting appropriate insecticides for the first post-bloom application:

- 1) If CBFW and CFW are your only concern, growers can use Intrepid, Esteem, Delegate, Altacor, Exirel, Verdepryn, or Assail.
- 2) If aphids are your primary concern, and you do not have major caterpillar or PC pressure, then use Assail, Sivanto, Movento, imidacloprid (i.e., Admire Pro), or Actara. Assail will also control CBFW. These compounds are systemic and very effective against sucking insects. Alternatively, you may use a broad-spectrum insecticide such as Diazinon or Lannate. These broad-spectrum insecticides will also control caterpillars and other pests.
- 4) If you would like to use a broad-spectrum material in late May and early June (for caterpillars, aphids, PC, etc.), you can use Imidan, Diazinon, Lannate, or a pyrethroid (e.g. Danitol). Imidan effectively targets all pests typically present during this period except for aphids. Pyrethroids, while effective against various pests, tend to have limited efficacy against aphids. It is important to note that achieving control of PC with pyrethroids may require higher application rates. However, it is crucial to be aware that pyrethroid insecticides can be highly toxic to natural enemies, potentially disrupting biological control, particularly of aphid predators and parasitoids.

5) Lannate is not labeled in Canada, and while it has the same tolerance on fruit as in the U.S., use should be minimized or avoided if exporting berries.

SCOUTING REPORT FOR DISEASES

During the week of April 29th, scouting activities involved visiting 112 blueberry fields to assess disease presence. Phomopsis twig blight and Botrytis blossom blight are the primary diseases of concern during bloom. Minimal numbers were reported for Phomopsis (Figure 2), and no symptoms of Botrytis were observed.



Figure 2. Phomopsis twig blight infection in flower buds and stem. Picture by Karlton Neidigh.

Starting next week, we will expand our monitoring efforts to include Blueberry Scorch Virus, in addition to Phomopsis and Botrytis.



NEWS RELEASE

United States Department of Agriculture
NATIONAL AGRICULTURAL STATISTICS SERVICE
NEW JERSEY FIELD OFFICE
PO Box 330 Trenton, NJ 08625



FOR IMMEDIATE RELEASE
May 7, 2024

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New Jersey cranberry production increases

TRENTON, NJ – Cranberry growers produced over 579 thousand utilized barrels from 2,900 harvested acres for a 200 barrel per acre yield, according to Bruce Eklund, state statistician of the USDA's National Agricultural Statistics Service, New Jersey Field Office. Value of utilized production was just over \$20 million. Total production is up 3% from last year.

New Jersey **blueberry** growers harvested 50.2 million utilized pounds from 10,800 acres in 2023. The value of utilized production was \$92.1 million for 2023. Average price was \$1.84 per pound, fourth highest nationally.

New Jersey **peach** growers harvested 14,200 utilized tons from 3,300 bearing acres. Value of utilized production was over \$29.1 million.

All reports are available electronically, at no cost, on the NASS web site at www.nass.usda.gov. Both national and state specific reports are available via a free e-mail subscription. To set-up this free subscription, visit www.nass.usda.gov and click on "National" or "State" in upper right corner above "search" box to select the reports you would like to receive.

For the complete "Noncitrus Fruits and Nuts" report released May 7, 2024, go to: <https://usda.library.cornell.edu/concern/publications/zs25x846c>

The "Noncitrus Fruits and Nuts" report and all other NASS reports are available online at www.nass.usda.gov.

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DISEASES

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

Blueberry pollination is progressing despite frosts, rain and high winds. There is extensive frost damage throughout our area but I consider it light. Blossoms near the top of the bush are damaged but the overall fruit set looks good. Weather forecasts continue to predict variable temperatures with some rain showers. For the next week or so we will continue to focus on **Anthracnose**. **But what about Botrytis?** The good thing is that the normal anthracnose program is suppressive to botrytis and we should see signs of the disease if it is going to ramp up. So far the IPM program has not reported any sightings of the disease.

For **Anthracnose** management, the key is to maintain yours scheduled fungicide applications. The bloom period is the most critical timing for anthracnose management. Protectant fungicides such as Ziram are effective but with a 30-day PHI that window is rapidly closing for Duke. Fungicides such as Abound, Miravis Prime, Pristine, Switch or Luna etc. are effective for protecting against Botrytis some are also effective against anthracnose. FRAC 3 fungicides (see leaf drop) can also be suppressive to anthracnose.

Leaf drop should be on your radar now. FRAC 3 fungicides such as Proline, Quash or Quadris Top are effective against leaf drop which will require your attention within the next week.



Scouting for signs of Botrytis. Look for these telltale symptoms. Sporulation on the berry or blossom. Leaf lesions with blossoms stuck to them and fruit rot symptoms

Blueberry scorch sometimes known as **Sheep Pen Hill** is caused by a virus that has spread throughout most of our growing region. The virus causes flowers to die without being fertilized and can result in major crop losses. In Burlington and Atlantic counties fields with 70-90% of the plants infected have been observed. Thus this disease remains a serious threat to the blueberry industry and it needs to be properly managed.

Symptoms of the disease vary depending on the cultivar. In cultivars like Weymouth, Elliott, Duke and Chanticleer the classic symptoms of scorched blossoms and a *Phomopsis*-like die-back are commonly seen. In other cultivars such as Bluecrop the blossom blight is less common but the fruit may appear to set but will not develop. Also, the plants appear chlorotic (yellowing similar to nitrogen deficiency) and may partially defoliate. The infected bushes are easier to see by standing back about ten feet rather than close inspection. Shortly after the bloom period infected plants will begin to recover and by harvest will appear healthy but with a reduced or no crop. Cultivars such as Jersey and Bluetta can be infected but do not show any visible symptoms.

The scorch virus enters living plant cells from the stylet of feeding aphids and begins to reproduce inside of the plant cell.

The virus then spreads inside the plant causing most of the cells to contain copies of the virus. Once a plant is infected it does not recover. Although increased production by infected plants on certain years may suggest recovery, the infection is persistent and will greatly reduce production over the long term. Furthermore, the infected plants represent a source of inoculum that can be transmitted to healthy plants. For these reasons, it is a very good practice to rogue out infected plants. **Plants showing symptoms should be flagged now for removal later or removed immediately.**

A very important method for virus transmission is planting infected cuttings. Since the mother plants not allowed to flower they do not show scorch symptoms. If cuttings are used from infected mother plants these cuttings will also be infected and the disease will be introduced into new plantings. This creates a very bad situation because infected plants will need to be rogued out of the planting for the next 10 years at a significant cost. Testing mother plants for viruses is an excellent sanitary practice that will have major beneficial effects on the establishment of new fields.