

The Blueberry Bulletin

A Weekly Update to Growers

May 31, 2022

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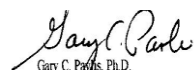
- ❖ Visit the Blueberry Bulletin webpage at njaes.rutgers.edu/blueberry-bulletin
- ❖ The 2022 Commercial Blueberry Pest Control Recommendations for New Jersey is available on njaes.rutgers.edu

BLUEBERRY CULTURE

Dr. Gary C. Pavlis, PhD.
Atlantic County Agricultural Agent

June Symptoms: As blueberry harvest is almost upon us I am getting numerous calls from growers who are noticing plants that are not looking normal. This is the typical time for various symptoms to show up because the plant is actively trying to ripen the fruit load that has set. This process takes a tremendous amount of nutrients and water from the plant. Actually, nutrients and water that are taken up from the soil go to the fruit first and if there is a surplus, it goes to nurture the plant. As a result, if there are any problems such as root rot, root damage due to grubs, nutrient deficiencies, or a lack of roots due to a hard pan that has restricted root growth, the plants will often not be able to push out leaves and in fact, the developing fruit may start to shrivel. Extreme heat will bring out these symptoms even faster because the plant is further stressed. Visits to farms the last few days have revealed plants that are definitely stressed. For the most part, many do not have leaves but have a heavy load of fruit. I have mentioned this symptom in this newsletter before. This symptom is almost always due to a root problem. In most cases it is due to grubs. Watch this newsletter for timing of grub control. To save a plant with no leaves and a heavy fruit load three things must be done, 1.

strip all the fruit off, 2. keep the plant well watered as it has a low percentage of functioning roots, 3. control the grubs. The second most numerous symptom I am seeing is stem blight. One or more canes in a plant suddenly die with all the leaves turning brown but still hanging on to the plant. Again the plant is under the stress of ripening the fruit load with increasing temperatures and the canes are infected with this disease. As a result they shut down and die quite rapidly. Growers need to stay on top of pruning these canes out. If they don't the disease moves down into the crown and kills the entire plant. Lastly, visits to numerous blueberry fields have shown that Duke yields are minimal in some areas. I believe this is due to cold episodes during bud swell and frost events that occurred during bloom. Bluecrop doesn't seem to be affected, probably because Bluecrop was in a later stage of development. The affected Duke plants look fine and do not show any symptoms other than a decreased crop load. It was also noted that the fruit that was present contained very few seeds which points to a lack of pollination, probably because the flowers were damaged. There is really nothing a grower can do to remedy this situation.


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

PEST MANAGEMENT

Blueberry Insects

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

Leps (Lepidoptera larvae – green fruitworms, leafrollers, spanworms, and spongy (= gypsy) moth) and Plum Curculio (PC): During this past week’s scouting, Leps and PC averages have decreased.

Cranberry Fruitworm (CBFW) and Cherry Fruit (CFW) Traps: Traps in both Atlantic County (AC) and Burlington County (BC) have been catching both CBFW and CFW. CFW trap counts average 12.1 adults per trap, with a high of 27 adults/trap for AC, and averaging 13.5 adults per trap, with a high of 35 adults/trap for BC. CBFW trap counts have increased; averaging 2.6 adults per trap in AC, with a high of 24 adults/trap, and averaging 3.25 adults per trap in BC, with a high of 13 adults/trap.

Now that the bees are out and post-bloom sprays have been done, our attention is mainly towards aphids followed by spotted wing drosophila (SWD). Please see below:

Aphids: This week’s scouting for aphids shows an average of 8.3% infested terminals, with a high of 40%.

SWD Traps: A minimal number of traps was set last week; the first SWD male was caught on May 24 in Atlantic County area.

By the Numbers Summary:

	% Shoot Infestation Leafroller		% Terminals Infested Aphids	
	Avg	Max	Avg	Max
5/28	0.16	2	8.3	40

	Leafroller/Tray		Spongy (= Gypsy) Moth/Tray		PC		Thrips	
	Avg	Max	Avg	Max	Avg	Max	Avg	Max
4/30	0.03	0.2	0	0	0	0	0	0
5/7	0.05	0.4	0.44	5	0.06	0.3	0	0
5/13	0.05	0.2	0.05	0.4	0.04	0.4	0	0
5/21	0.009	0.1	0.01	0.5	3.6	0.4	0	0
5/28	0.01	0.2	0.01	0.3	0.04	0.5	0	0

	% Leafroller fruit Injury		% PC fruit Injury	
	Avg	Max	Avg	Max
5/21	0.03	0.2	0.34	3.2
5/28	0.02	0.7	0.39	2.5

	CBFW AC		CBFW BC		CFW AC		CFW BC	
	Avg	Max	Avg	Max	Avg	Max	Avg	Max
4/8	0	0	0	0	0.1	1	0.25	1
4/14	0	0	0	0	0	0	0	0
4/20	0	0	0	0	0.2	1	0	0
4/29	0.1	1	0	0	0.9	3	0.25	1
5/7	0	0	0	0	7.1	15	4.5	15
5/13	0.1	1	0	0	9.1	22	10.25	17
5/21	2.3	14	0	0	19.1	40	14.5	20
5/28	2.6	24	3.25	13	12.1	27	13.5	35

Key: PC = plum curculio adults per bush & % injured berries, CBFW = cranberry fruitworm adults per trap, CFW = cherry fruitworm adults per trap. BC = Burlington County, AC = Atlantic County.

DISEASES

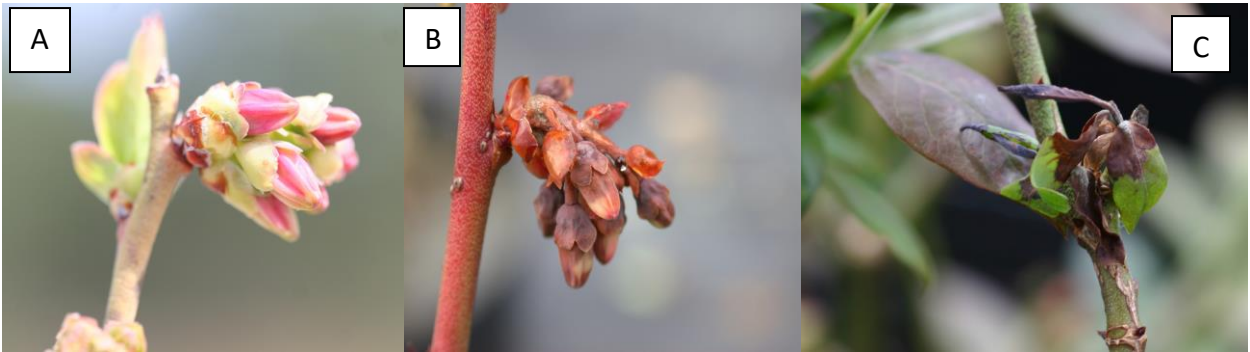
*By Peter V. Oudemans, Ph.D.
Professor and Extension Specialist
Plant Pathology*

Weather forecasts suggest variable temperatures and the date of harvest is somewhat elusive. At this point Duke will not require additional fungicide sprays for anthracnose as long as an effective in-bloom program was followed. Susceptible cultivars such as Bluecrop will benefit from continued fungicide applications although the interval can be increased to 10-14 days.

Blueberry scorch symptoms have been 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 incurable it is recommended that plants be removed so that the virus does not spread.

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 should be treated with a Phytophthora fungicide soon. Since the blueberry plant is starting to produce new roots and the disease could be severe in areas with poor drainage. If *Phytophthora* was present last season, improve drainage in the field as a first step. There are two types of fungicides labeled for phytophthora management. Phosphite fungicides labeled for blueberry include: Aliette, K-Phite, Phostrol, Prophyte and Rampart. 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. Ridomil is labeled for soil applications only. 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.