

The Blueberry Bulletin

A Weekly Update to Growers

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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

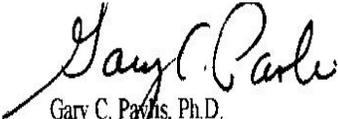
Visits to numerous farms this week have shown that bloom has started and even though the percent bloom varies between 5% and 80% as of April 15th, this should be the cue to all that the first application of fertilizer should be applied. Research has shown that application now is the most efficient use of fertilizer as the uptake by the blueberry plants is at maximum right now and will continue for the next six weeks. The blueberry plant has a very inefficient root system so research has also shown that if fertilizer applications are spread out over the next six weeks, it will result in the highest yield. The easiest method to do this of course is by the use of fertigation.

It is also not too late to adjust the pH if your fields require it. The addition of sulfur to lower the pH only happens once the soil temperature is above 55 degrees so again, now is the perfect time for application of sulfur. Soil samples taken by the IPM program have shown that most fields in Atlantic County require a lime application as the

pH levels are lower than the optimum of 4.5 to 4.8. A lime application at this time is also recommended, however the increase in pH will occur more slowly than the lowering process so it is recommended to apply as soon as possible. It is important to note that a field outside the optimum pH will be less efficient in fertilizer uptake, which costs the grower money.

I have also been asked about the small brown holes growers are seeing in the blueberry blossom corolla's(see picture below). I was first shown this by Phil Marucci many years ago. Phil told me that this phenomenon is done by carpenter bees and he called them nectar robbers. These bees do not do anything for pollination but usually do not hinder pollination either. In short, nothing to worry about.




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, Senior Program Coordinator

During the week of April 8th – 13th, 39 fields were scouted through Burlington and Atlantic Counties. **Cranberry weevil (CBW)** was reported to have a maximum of 10.6 and an average of 0.59 adults per 15 bushes per field site. The first sight of bloom was noted on April 9th.



Blueberries in bloom in Atlantic County, April 12th.

As flower petals become fully visible CBW will begin to move to other hosts and will no longer be a risk. Scouting will focus on **plum curculio** and **leafrollers** as bushes come into bloom. **Cranberry fruitworm** and **cherry fruitworm** traps were placed throughout Burlington and Atlantic Counties on April 12th.



Delta traps with pheromone lure and sticky card placed along perimeter of blueberry fields to monitor for cranberry fruitworm and cherry fruitworm.

Week Ending	CBW Adults/Site	
	Average	Maximum
4/6	0.42	8.8
4/13	0.59	10.6

DISEASES

Dr. Peter Oudemans, Professor and Extension Specialist, Plant Pathology

Blueberry blossoms are opening rapidly and the bees are arriving. Weather forecasts predict cool, wet weather and that means great growing conditions with a high risk for disease. On Monday (April 15, 2024) there was still quite a bit of variation in bloom development for Dukes (see the figure below). Farms ranged from bloom initiation to nearly full-bloom. For the next few weeks the focus will be on **Anthracnose**. If pollination slows down due to wet weather, frosts, or cool temperatures **Botrytis** will likely arise. I expect mummy strikes should also begin this week and if they occur on your farm you should spray for the secondary phase of **Mummyberry**. Also **Phomopsis** symptoms will begin in the next couple of weeks.



For **Anthracnose** management, the key is to maintain a relatively tight schedule during bloom. The bloom period is the most critical timing for anthracnose management. Protectant fungicides such as Ziram are effective and it is my experience that Ziram provides a longer residual period and a 14-day interval is reasonable. Abound is very effective for controlling but should be used in alternation with another FRAC group. Fungicides such as Omega, Pristine, Switch and Miravis Prime are effective for protecting against both Botrytis and Anthracnose. Materials such as Cevya, Proline, Quash or Quadris Top are effective against leaf drop which will require your attention in a few weeks.

Fungicides labeled for managing anthracnose on blueberry. Local restrictions may apply, always consult the label!											
<i>This table is intended to provide information on effectiveness for diseases that appear on the label plus additional diseases that may be controlled from application. — indicates insufficient data; +++ = good control; ++ = moderate control; + = some control; 0 = not recommended for use</i>											
PESTICIDE	FRAC	REI (HR)	PHI (DAY)	AERIAL	IMPORTANT NOTES	Anthracnose	Botrytis	Mummy Berry	Root Rot	Alternaria	Twig Blight
Cevya	3	12	0	Yes	Up to 3 applications permitted.	?	?	+++	0	?	?
Proline	3	12	7	No	Two applications maximum per season	+++	++	++++	0	+	+++
Quash	3	12	7	Yes	Do not exceed 3 applications per season	+++	+	+++	0	++	+++
Azoxystrobin*	11	4	0	Yes	See label for rates	+++	++	+++	0	++	0
Omega, Orbus, Lektivar	29	12	30	No	Use up to 6 applications per season. Allergic reactions may occur...see label	+++	+++	0	0	+++	++
Switch/Alterity	9 & 12	12	0	Yes	Do not use more than 56 oz/acre per season	+++	+++	++	0	0	0
Miravis Prime	7 & 12	12	0	Yes	Two applications maximum per season. Use patterns are still being established for this fungicide	++	++	+++	0	++	++
Pristine	11 & 7	24	0	Yes	DO NOT mix this fungicide. 4 applications maximum. Effective against powdery mildew	+++	+++	+++	0	++	0
Propulse	3 & 7	12	7	No	Contains same ai as Proline and Luna; 2 applications per season. A use pattern is not established for this product	+++	++	+++	0	++	+++
Quadris Top	3 & 11	12	7	Yes	Do not exceed 4 applications (see Page 22)	+++	+	+++	0	++	+++
Ziram (EPA SLN NJ-20001)	M3	48	14	No	2 applications maximum. Use a PHI of 20-30 days to avoid visible residues on fruit. The Ziram SLN is only valid in NJ.	+++	++	0	0	+	0
Captan many formulations	M4	72	0	Yes	No more than 70 lb of the 50WP or 43.75 lb of the 80WP can be applied during 1 crop cycle. Do not mix with oil or solvent based pesticides.	+++	++	+	0	+	0
*Abound, Aframe, Satori etc. There are over 30 products that contain azoxystrobin. Always read the label and be sure the formulation contains the expected concentration of active ingredient.											

More about anthracnose. It is helpful to know a little more about this disease. The fungus overwinters in outer bud scales that protect the dormant flower buds. In the diagram below you can see spores forming on these bud scales after processing in the lab. As the flower opens these bud scales will eventually drop off. The fungus will spread to the stems (pedicels) of developing fruit if no fungicide is used. This is why I recommend early fungicide applications to protect the ovaries and pedicels.



Blueberry flowers are divided into different parts shown here. The petal (or corolla), stamens and stigma will detach and drop off after pollination. The pedicel and ovaries will develop into the berry and are part of the berry cluster that are susceptible to anthracnose infections and protective materials are most effective when applied there.



Spore release is at its peak while these bud scales are present and will diminish once they are shed from the plant. Interestingly, Duke sheds bud scales much faster than Bluecrop.