

# The Blueberry Bulletin

*A Weekly Update to Growers*

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- \* Visit the Blueberry Bulletin webpage at [www.njaes.rutgers.edu/blueberry-bulletin](http://www.njaes.rutgers.edu/blueberry-bulletin)
- \* The 2021 Commercial Blueberry Pest Control Recommendations for New Jersey is available on [njaes.rutgers.edu](http://njaes.rutgers.edu)

## WEEDS

*Thierry E. Besancon, Ph.D, Extension Weed Science Specialist, Rutgers University*

**Late summer / early fall applications of systemic herbicides for controlling troublesome perennial weeds**

The blueberry season may be over but **late summer and fall are perfect times to work on tough-to-control perennial weeds such as Virginia creeper vine, bindweed, greenbrier, Canada thistle, goldenrod, and poison ivy.** These perennials are among the most difficult weeds to eradicate, especially because of their ability to generate new shoots from their root systems. Successful management strategies will mostly rely on herbicide that can move from the leaf to the below-ground plant parts. Timely initial application and consistency at controlling any regrowth with follow-up spot treatments are crucial for long-term control of



Field bindweed (upper left), goldenrod (lower left) and greenbrier (right) are some tough weed species of NJ blueberry and will warrant extra time for achieving successful control

these weeds. More herbicide will be translocated to underground storage parts of the plant in late summer or fall than with early season applications, increasing your chance of successfully controlling these perennial weeds.

Glyphosate (Roundup or other generic products) is the only postemergence herbicide labeled on blueberry that can provide good control of perennial weeds. Late summer and fall are good times for applying glyphosate as plant sap movement is mostly directed toward the roots where nutrients will be stored in anticipation of next season. Therefore, large volume of glyphosate can easily be translocated from the leaves to the roots, improving the efficiency of the herbicide at killing below-ground storage organs. It is **VERY IMPORTANT** for glyphosate to be applied when weed leaves are still green before fall colors appear.

Use extreme care not to contact green blueberry tissues (stems and leaves) with glyphosate. Glyphosate absorbed by blueberry leaves and green bark moves within the bush and can kill whole canes or bushes. Weeds such as bindweed, Virginia creeper, and greenbrier may need to be pulled out of bushes so they can be treated safely. This may seem too slow to be practical, but consider what these weeds cost in lost income. Bushes covered by Virginia creeper vine may yield just 20% of their potential. This easily equates to a \$5 to \$10 loss per bush. The loss is incurred each year and increases as the vines spread to neighboring bushes. Investing 15 minutes to carefully pull vines out of that bush and safely treat them on the ground is money well spent.

Glyphosate should be applied through low pressure spot treatment to limit drift movements. Glyphosate absorption will be improved if ammonium sulfate (17 lbs / 100 gal water) is added to your spray mixture. For effective control, at least 50% of the foliage should be wet with glyphosate applied as a 2% solution (see your product's label for rate necessary to reach this concentration).

Consider also "cut stump" applications for Virginia creeper or poison ivy that have large diameter stems. Apply a 2% glyphosate solution to the cambium (inner bark area) **IMMEDIATELY** after cutting the stem. Don't let time for cutting to dry as this would prevent glyphosate absorption and translocation to below-ground plant parts.

Always apply glyphosate on weeds that are actively growing and not under drought stress.

Always refer to the commercial product label for rates and additional information.

## **DISEASES**

***Peter Oudemans, Small Fruit Pathology, Rutgers, The State University***

# Mycosphaerella Leaf Drop aka Black Gum Disease

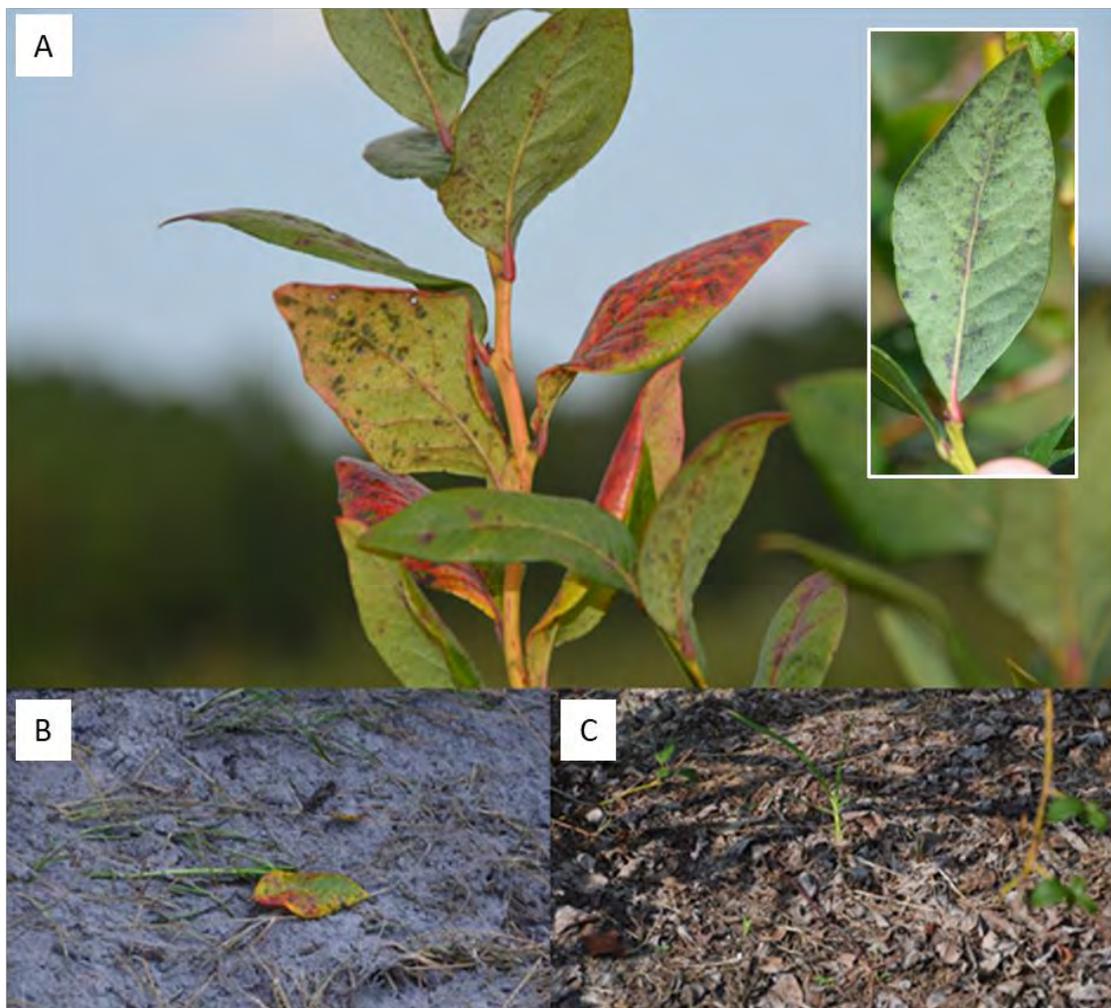
*Peter Oudemans  
Small Fruit Pathology  
Rutgers, The State University*

WHAT to look for:

- Leaf symptoms develop in August (A)
- Leaves fall as symptoms increase (B)
- Fallen leaves accumulate on ground forming the reservoir for next year (C)

WHAT you can do now:

- Eliminate or reduce reservoirs
  - Leaf clean-up, especially in heavily infected areas.
- Identify areas for fungicide treatment next year



## 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*

**General:** All fruit has been harvested. Therefore, we are only concerned with post-harvest pest issues. These include: 1) Spray timing for 2<sup>nd</sup> generation sharpnosed leafhoppers, 2) Treating any fields that had or have putnam scale populations – timing for crawler activity, and 3) Post harvest applications of fungicides for black shadow control.

**Putnam Scale:** Crawler traps have been placed in fields where known populations of Putnam scale were present during June. Crawler activity will dictate the timing for the second generation treatments in the near future.

**Sharpnosed Leafhopper (SNLH):** Insecticides are timed for the second generation of adults, since these are the primary motile forms and spread the bulk of blueberry stunt disease (Figure 1). Traps are being monitored, but counts are low. This indicates that few second generation adults have matured, and sprays are not needed at this time.

*Life cycle* – SNLH feeds and reproduce on blueberry, huckleberry, cranberry, and other related plants. SNLH feeding causes little direct damage but it transmits the phytoplasma that causes **stunt disease** in blueberries. They are small brown insects with a pointed head. SNLH picks up the disease while feeding on infested bushes and carries it to other plants in subsequent feedings. Usually only adults will carry the disease from plant to plant, since



Figure 1. Adult sharpnosed leafhoppers

nymphs are wingless and can't fly. This insect completes two generations in New Jersey. Adults

are abundant in the woods, where many alternative hosts are present, and may move to commercial blueberry fields in the spring. Eggs overwinter inside fallen leaves and hatch in mid-May. Nymphs complete 5 instars. Nymphs from the first generation reach adult stage in mid-June, while nymphs from the second generation reach adulthood in early August (this time of the year). Adults move back to the woods in the fall. Monitoring these generations is critical for timing of control strategies.

*Monitoring and control* – Adults (Figure 1) are monitored using yellow sticky traps. First generation SNLH is often controlled with sprays targeted against other pests such as plum curculio, aphids, cranberry fruitworm, and spotted-wing drosophila. Treatment decisions for the 2<sup>nd</sup> generation should be based on individual population levels, as well as any history of stunt disease on your farm. Because adults disperse from woods, monitoring should be

intensified in, and sprays should be directed to, the perimeter of fields to control migrants carrying the disease. Insecticides are usually applied just prior to peak flight, which will probably be sometime near the end of August to early September. If needed, we recommend use of Assail, Actara, imidacloprid (e.g. Admire Pro), Lannate, or Malathion. It is also important to remove all plants that show symptoms of stunt disease. Removal of bushes should be done after insecticide treatment to avoid movement of leafhoppers from infested to healthy plants, thereby facilitating spread of the disease.

**Black Shadow:** On an average, throughout both Atlantic and Burlington Counties, we are finding black shadow presence on 26% of canes per bush and a high of 98% of canes per bush. Those growers with significant black shadow on their bushes may wish to follow recommendations published earlier by Dr. Peter Oudemans. For more information please see earlier articles on black shadow:

<https://njaes.rutgers.edu/blueberry-bulletin/pdfs/2020/bb-v36n23.pdf>

<https://njaes.rutgers.edu/blueberry-bulletin/pdfs/2021/bb-v37n01.pdf>