College of Agriculture, Food and Environment
Cooperative Extension Service

Kentucky Nursery LISTSERV Bulletin

University of Kentucky Nursery Crops Team | End of September 2019

Warmer, Wetter Than Average Start to October

The NOAA's long range forecasting is predicting an above average chance of warmer and wetter than average weather for the first two weeks of October. The warmer trend continues into the latter half of the month, though precipitation rates should be closer to normal.

Thirty tear rolling averages are how the NOAA defines "normal". For reference, the average temperatures for Kentucky in September and October are 68.6°F and 57.6° F respectively. So, while relief from 90° days is coming, conditions should still be warmer than normal overall.

See **UKAg Weather's Long Range Outlooks** for a variety of forecasts of temperature and precipitation probabilities.

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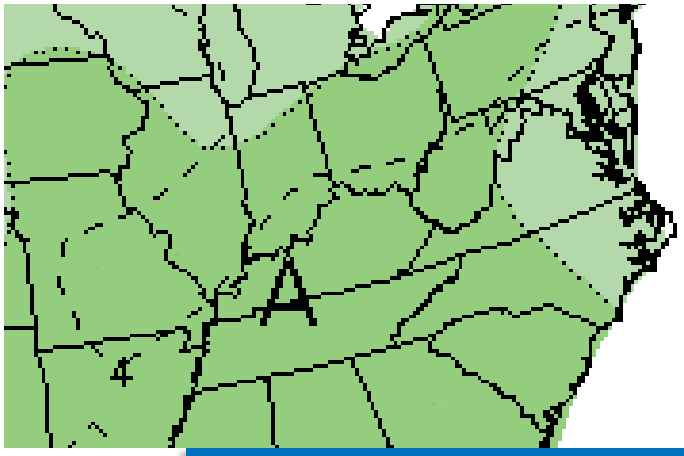

October 07-19, Precipitation Probability
Image: NOAA Climate.gov, 29 SEPT 2019

Bacterial Leaf Scorch Can Torch Landscape Trees

Kim Leonberger, Extension Associate, Plant Pathology
Nicole Ward-Gauthier, Extension Professor, Plant Pathology

Kentucky's landscapes are populated by many trees that are susceptible to bacterial leaf scorch. This disease may not kill trees instantly, but over time, it can have devastating effects. Pruning and reducing stress can prolong the life of infected trees; however, there are currently no methods to prevent or cure bacterial leaf scorch.

Figure 1. Premature leaf browning of a pin oak tree branch infected with bacterial leaf scorch.

Photo: John Hartman, University of Kentucky

Bacterial Leaf Scorch Facts:

- Infected trees exhibit premature leaf browning (Figure 1), marginal necrosis, and defoliation. In subsequent years additional branches will present the same symptoms until the entire tree becomes prematurely brown (Figure 2).
- Symptom development typically occurs in mid- to late summer
- Symptoms of bacterial leaf scorch can resemble abiotic/stress, so confirmation by a diagnostic lab is advised.
- Trees such as sycamore, maple, and oaks are susceptible. Pin oak and red oak are the most commonly reported hosts in KY.
- Caused by the bacterium *Xylella fastidiosa*
- Spread by leafhopper and treehopper insects.

Figure 2: Pin oak tree that has turned entirely brown prematurely from many years of bacterial leaf scorch infection.

Photo: John Hartman, University of Kentucky

Management Options

There is no cure for bacterial leaf scorch, and trees will eventually die once infected. The following suggestions may help preserve the appearance and life of diseased trees:

- Prune newly infected trees to preserve appearance.
- Water trees in the heat of summer to reduce stress
- Tree-injections can be costly and do not cure the disease; however, they may prolong the life of the tree.

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Replace infected trees with species that have shown resistance to the disease. Suggestions include:

- European beech
- Kentucky coffeetree
- Shagbark hickory
- Common sassafras
- Tuliptree

Additional Information

Bacterial Leaf Scorch (PPFS-OR-W-12)
http://www2.ca.uky.edu/agcollege/plantpathology/ext_files/PPFShtml/PPFS-OR-W-12.pdf

Rhizosphaera Needle Cast May Lead to Skimpy Spruce

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Rhizosphaera needle cast is often to blame for brown or thin spruce in the landscape. In Kentucky, Rhizosphaera needle cast is the most common disease of spruce; it also affects some pine species. This disease causes needle drop on lower branches, resulting in a distinct thinned appearance. Management options include reduction of plant stress, good sanitation practices, and timely use of fungicides.

Rhizosphaera Needle Cast Facts

- Becomes evident in summer when needles on lower branches turn purplish or brown (Figure 1).
- Needles fall within a few weeks and lower limbs are left bare (Figure 2).
- Small, dark fruiting bodies (called pycnidia) form in stomata (pores in needles) and can be used to confirm diagnoses (Figures 3 & 4). Pycnidia are most easily recognized with a hand lens, but are also visible with the naked eye.
- Caused by the fungus Rhizosphaera kalkhoffii.
- Spread by rain; moisture is needed for infection.
- If defoliation occurs over 3 to 4 consecutive years, branch death is likely.

Figure 1. Needles infected with *Rhizosphaera* turn purplish brown during summer.

Photo: USDA Forest Service Archive, bugwood.org

Management Options

- Stressed trees are more susceptible to infection than healthy plants, so steps should be taken to maintain plant vigor.
- Properly space plants to improve air circulation, thereby encouraging rapid drying of needles.
- Practice good sanitation habits.
- Apply fungicides that contain chlorothalonil, copper, or mancozeb during needle emergence (mid-April). During rainy seasons or in plantings with a history of disease, fungicides may be applied two consecutive years during spring when fungi are most active.

Figure 2. Needle drop and thinning of lower canopy are classic symptoms of Rhizosphaera needle cast in spruce

Photo: Minnesota Dept. of Natural Resources Archive

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Additional Information

- Needle Cast Diseases of Conifers (ID-85)
  http://www2.ca.uky.edu/agc/pubs/id/id85/id85.pdf
- Homeowner's Guide to Fungicides (PPFS-GEN-07)
  http://www2.ca.uky.edu/agcollege/plantpathology/ext_files/PPFShtml/PPFS-GEN-07.pdf
- Landscape Sanitation (PPFS-GEN-04)
  http://www2.ca.uky.edu/agcollege/plantpathology/ext_files/PPFShtml/PPFS-GEN-04.pdf

Reasons to Belong to a Professional Organization

Joshua Kight, Extension Associate, Nursery Crops

There are many benefits to being active in professional organizations in any industry, especially the green industry. Professionals in the green industry are extremely busy with responsibilities that must be juggled constantly. However, participating in a professional organization is important for your business and the industry as a whole.

Kentucky Nursery & Landscape ASSOCIATION

https://KNLA.org/

Wikipedia defines a professional organization as a group to further the particular profession, and the interest of individuals engaged in that profession. Some basic member benefits of a professional organization include networking, education, conferences, newsletters/blogs and tradeshows. There are also many indirect benefits from supporting professional organizations that represent your interests in legislative and regulatory actions, advancing the industry's impact on local, state and national economies and promoting

https://KY-ISA.org/

professionalism to the consuming public. Promotion of professionalism in your industry may include certification programs, such as the internationally recognized certified arborist program.

The importance of networking cannot be over emphasized because the green industry is characterized by relational marketing and free exchange of production and management information. Networking is simply getting to know other people in the industry. Connection to veterans of the industry can help understand and address problems and opportunities that arise in your business. Also, it provides a sense comradery and community in the industry.

AmericanHort

https://americanhort.org

Education is important for any industry, as things are ever changing. It is important to stay current with the latest research or new technology. A professional organization helps promote new trends, research, technology, and gets the information to members to ensure the success of the industry. Professional organizations achieve this by, hosting online webinars, newsletters, and conferences.

Conferences and trade shows in most cases are combined in the green industry. The vendors present are showcasing products that can be purchased. There are also speakers at the conferences that are experts in their field and often drop nuggets that can increase the profitability of your business. Conferences and tradeshows also make a great environment for continued networking.

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Examples of professional organization in our industry that should be considered are the Kentucky Nursery and Landscape Association, the Kentucky Arborist Association, AmericanHort, Southern Nursery Association and several others.

Southern Nursery Association

https://SNA.org/

The University of Kentucky's **Nursery Crop Extension Research Team** is based out of two locations across the bluegrass to better serve our producers.

The **University of Kentucky Research and Education Center (UKREC)** in **Princeton** serves western Kentucky producers while our facilities and personnel on main campus in **Lexington** serve central and eastern Kentucky producers.

Check out our YouTube Channel!

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