College of Agriculture, Food and Environment
Cooperative Extension Service

Kentucky Nursery LISTSERV Bulletin

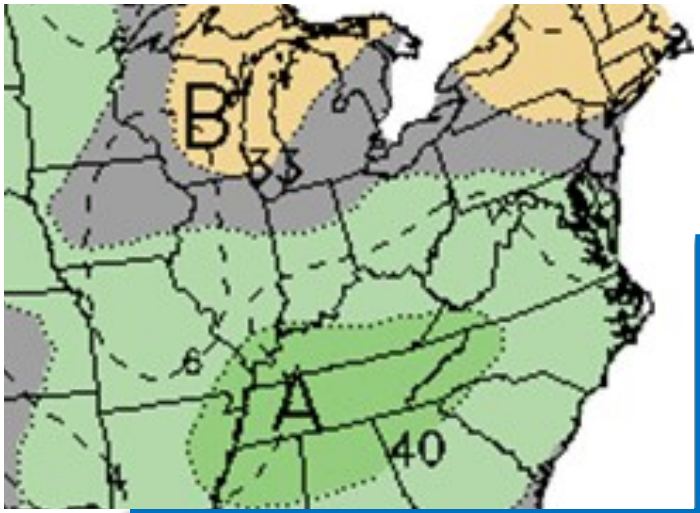
University of Kentucky Nursery Crops Team | End of May 2020

Warmer and Wetter than Average July Ahead

The forecast from the NOAA's climate prediction center is for an increased probability of warmer and wetter than average weather throughout July. Though other parts of the country, especially out west, are likely to have drier than average weather which will exacerbate existing drought conditions, the commonwealth could expect wetter than average conditions to continue for the summer and possibly even into October.

Tropical storm forecasting from Colorado State is predicting the 2020 season to have elevated activity compared to the 1981-2010 averages for the tropical Atlantic due to the elevated ocean temperature in the tropical and subtropical Atlantic this year, which may create conditions for increased precipitation in our region.

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



July 02—08 2020, Precipitation Probability
Image: NOAA Climate.gov, 24 JUN 2020

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Joshua Knight, Senior Extension Associate & Managing Editor

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Anthracnose Diseases on Shade Trees

Kimberly Leonberger, Extension Associate, Extension Plant Pathologist
Nicole Ward Gauthier, Extension Professor, Plant Pathology

The term anthracnose refers to the dark blotching (necrotic) symptom common to these diseases. When expanding leaves are affected, leaf distortion frequently results (Figure 1). Defoliation (leaf drop) often occurs during severe infections. The disease is generally not fatal, and a new flush of foliar growth immediately follows defoliation on some tree species. Causal fungi may also infect twigs and branches resulting in cankers that girdle stems (Figure 2).

Symptoms

The fungal pathogens that cause anthracnose diseases are quite host-specific, meaning that the anthracnose pathogen on oak will not infect ash, etc. Symptom appearance and severity differ with each host and with climatic conditions.

Figure 1. Early symptoms of anthracnose on shade trees include dark blotches and leaf distortion.

Photo: Nicole Ward Gauthier, UK

Ash anthracnose: Common symptoms include brown blotches along leaf edges. Leaf drop often results, and then new leaves soon emerge. Causal fungus: *Discula umbrinella*.

Maple anthracnose: Symptoms begin as leaf spots and may progress into shoot blight and shoot cankers. Leaf spots with brown, somewhat angular symptoms may be confused with tar spot (spots are round and black). Symptom development and susceptibility vary with tree species, but lesions often follow veins. Causal fungi: *Discula* sp. and *Kabatiella apocrypta*

Oak anthracnose: Not commonly observed in Kentucky. Irregular brown spots develop on leaf tips and along veins. Causal fungus: *Apiognomonia quercina*.

Sycamore anthracnose: Young, expanding leaves develop irregular dark, necrotic blotching centered along leaf veins or edges. These dark blotches may turn tan-colored as the diseased areas of leaves dry out. Blighting of twigs or shoots may follow. Trees produce new foliage rather quickly, but affected branches may remain crooked (lateral shoots become dominant when terminals are killed). Also affects London plane tree. Causal fungus: *Apiognomonia veneta*.

Figure 2. The fungal pathogens that cause anthracnose may also infect twigs and branches.

Photo: John Hartman, UK

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Management

For most trees, anthracnose disease is not lethal. However, repeated defoliation can be stressful to trees. Additionally, persistent rains and disease spread can lead to infection of twigs and branches. Good cultural practices are important to reduce disease:

- Select a planting site with a sunny eastern exposure to promote rapid foliage drying early in the day.
- Rake and destroy fallen leaves, as they can be a source of inoculum (fungal spores). Do not compost.
- Remove dead twigs and branches, as fungi can overwinter in dead wood.
- Reduce plant stress when possible.
- Avoid wounding, such as bumping with mowing equipment and making jagged pruning cuts.
- Maintain mulch 2 to 3 inches thick over the root zone and beyond the drip line (not against the trunk) to help maintain soil moisture and to protect trees from lawnmower injury.
- Protect trees from drought. Water at least once a week during hot, dry months using soakers or drip irrigation. Avoid overhead sprinklers; wet foliage favors sporulation and infection.
- Diagnose and treat insect and disease problems as soon as possible.
- Fungicides are often not recommended. They can be costly and it is difficult to effectively cover large trees. Commercial nurseries, on the other hand, should protect trees with fungicides.

Resources

- Shade Tree Anthracnose (PPFS-OR-W-23)
  http://plantpathology.ca.uky.edu/files/ppfs-or-w-23.pdf

- Landscape Sanitation (PPFS-GEN-04)
  http://plantpathology.ca.uky.edu/files/ppfs-gen-04.pdf

- Considerations for Diagnosis of Ornamentals in the Landscape (PPFS-GEN-15)
  http://plantpathology.ca.uky.edu/files/ppfs-gen-15.pdf

- Woody Plant Disease Management Guide for Nurseries and Landscapes (ID-88)
  http://www2.ca.uky.edu/agcomm/pubs/id/id88/id88.pdf

The Importance of Pesticide Labels

Joshua Kight, Extension Associate, Nursery Crops

The label is the law, and all pesticides have a warning from the federal government stating**: "it is a violation of Federal law to use this product in a manner inconsistent with its labeling."** The major function of the label is to make applicators aware of the potential risk from a pesticide.

All pesticides have undergone extensive scientific trials to collect data on potential health and environmental risks before the pesticide is made available to the industry. The Environmental Protection Agency evaluates the data, and if deemed safe, the pesticide is given a license. The EPA also ensures that the label contains directions and precautions that define who may use the pesticide, how much to apply, where it's to be applied, and how often it can be used.

Other things on the label:

- **The Brand Name:** A unique name given to the product used for advertisement. Essentially a trademarked name.
- **Product Type**: What the pesticide controls; i.e., insects, woody brush, or weeds.
- **EPA Registration number:** Indicates the EPA approved the product and label.
- **EPA Establishment Number:** Identifies what facility produces the product.
- **Manufacturer Name and Address:** Contact information for the company to obtain more information if needed.
- **Ingredient Statement:** Common or chemical names, total amount(s) of active ingredient(s) and inert ingredients in container.
- **Active Ingredient:** The actual chemical(s) that control the pest. If more than one, they are each individually listed, and a percentage is given for the amount of A.I. that is in the product.
- **Common Name:** A simple name for the product from the EPA.
- **Chemical Name:** Complex name that identifies the chemical components and the structure.
- **Net Contents:** Amount of product that a full container holds.
- **Signal Words:** These words communicate acute and relative toxicity to humans and animals and include words such as **POISON, DANGER , WARNING,** and **CAUTION.**

For more information:

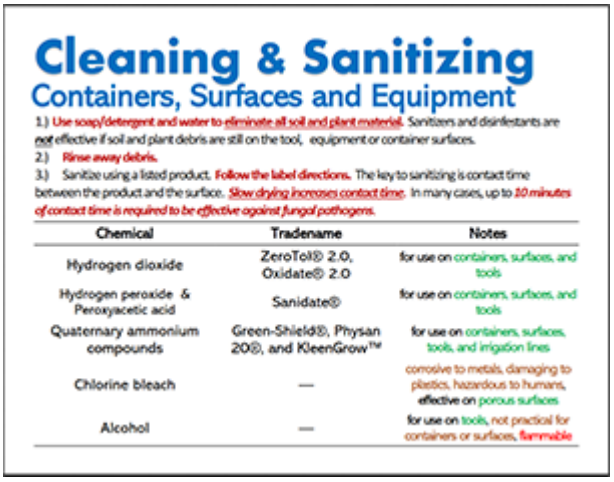
http://entomology.ca.uky.edu/uk-pesticide-safety-education-program-psep
https://www.epa.gov/pesticide-labels
https://www.kyagr.com/consumer/agricultural-branch.html
https://extension.psu.edu/what-you-need-to-know-about-reading-a-pesticide-label

Flyer Series for Nursery and Landscape Managers

Joshua Knight, Senior Extension Associate, Horticulture

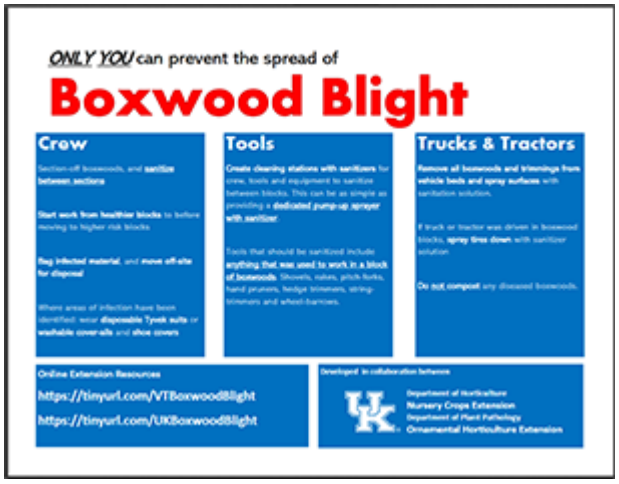
The Nursery Crops team is collaborating with Extension Professors in Plant Pathology and Entomology to develop a series of flyers on a range of topics to help nursery managers disseminate research-backed information to their employees.

These flyers are available at the link below:
https://ncer.ca.uky.edu/flyers



Each flyer is made available in standard print format of 11" x 8.5", designed to be printed in Landscape format on almost all printers. Full color and B&W versions are also available, to reduce costs. Full color versions will be made available upon individual request through Extension personnel (agents and associates) and at industry trade shows.

We recommend flyers be posted in workspaces relevant to the topic and/or other conspicuous locations where employees congregate like break areas, similar to the Federal Department of Labor posters.



At the time of this article, flyers for two topics in English have been posted: **Boxwood Blight** and **Sanitization**, though more are coming and we expect Spanish versions to be finished soon so bookmark the link.

Are there topics you would like to see a flyer developed for?

Contact myself at **joshua.knight@uky.edu** or Joshua Kight at **jdki228@uky.edu** and let us know.

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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