Horticulture Newsletter

Martin-Gatton College of Agriculture, Food and Environment
University of Kentucky

Cooperative Extension Service
McCracken County
2025 New Holt Road
Paducah, KY 42001
(270) 554-9520
Fax: (270) 554-8283
extension.ca.uky.edu

Mary Hank
Agent for Horticulture

NOVEMBER 2023

Inside this issue:

Master Gardener Spotlight

Jane Junkerman

Master Gardener

Class of 2016

Cooperative Extension Service

Agriculture and Natural Resources
Family and Consumer Sciences
4-H Youth Development
Community and Economic Development

MARTIN-GATTON COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT

Lexington, KY 40506

Kentucky Forests Signal Season Change

Source: Billy Thomas, UK Extension Forester

If you've been waiting all year to see beautiful fall colors in Kentucky, it is almost time. Mid-October is usually the beginning of the state's brilliant fall tree color show. Actually, these brilliant colors have been there all along; they've been masked by a cloak of chlorophylls, green pigments vital to a tree's food-making process.

Trees use and replenish chlorophylls during the growing season. High replacement maintains green leaf color. As fall approaches, the green pigments are replaced at a slower rate due to complex environmental factors and the trees' genetic makeup. The dwindling supply of green pigments unmasks other pigments that were present all along, revealing the spectacular show of fall color.

We can enjoy a variety of fall colors because Kentucky's diverse climate and soil composition enable many diverse trees to grow here.

Black gum, pear, sumac, dogwood, maple, oak and sassafras trees produce various shades of red. Other trees give us a range of orange and yellow hues such as yellow-poplar, birch, hickory and beech.

Since black gum and sumac trees shut down chlorophyll production early, they are the first to reveal fall color. Both change from green to red, leaf by leaf. No leaf seems to be all green or red at the same time, giving a spotty appearance throughout the trees.

You might be surprised to know that what makes leaves change color has less to do with "Jack Frost" and more to do with shorter days activating a "chemical clock" that tells the trees to shut down chlorophyll production and prepare for winter.

When the tree completely shuts down chlorophyll production, a layer at the base of the leaf forms. This abscission layer causes the leaf to fall off the branch, leaving only the bud with next year's leaves and flowers to wait for the signal in the spring to bloom and grow.

For more information on fall tree color or other forestry topics, contact your McCracken County Cooperative Extension Service office.

Photos from pixabay.com

Fall Gardens Pop With Mums

Source: Rick Durham, Extension Horticulture Professor

Mums bring new life to the fall garden and spruce up a front porch. All around Kentucky, garden centers offer many varieties of colorful blooms.

Fewer daylight hours and longer nights trigger flowering, which make mums a popular fall choice. Nurseries often artificially do this by pulling dark cloths over the plants in late summer and early fall, which stimulates blooming. If you have mums growing in the landscape, the natural decrease in day length will do the trick as well.

Photos from pixabay.com

You have dozens of varieties from which to choose, but mums generally fall into one of two groups: garden or hardy mums and cutting mums or florist mums. Florist mums usually are tender and will not survive winter.

When buying a mum for fall color, look for the plant with tight buds that haven't flowered yet to make the plant last longer. Choose the variety you want based on the ones close to it that have already bloomed.

Water is another key to making your mum last longer. Place the mum in a larger pot when you bring it home to help it retain more water. If you leave it in its original container, check the soil at least every other day by simply putting a finger into the soil, at least to the first knuckle. If the soil is dry, your mum needs water.

Make sure water gets good contact with plant roots and the soil. Either water from the bottom up in a pan or pail of water, or from the sides of the pot with a watering can or garden hose. Watering overhead on the leaves or buds may cause them to quickly deteriorate. To avoid root rot, don't allow mums to stand in water long.

Once flowers begin to fade, "deadhead" or pick off the fading blooms, which will promote new growth and make the plant look healthier. If you want to enjoy garden mums inside, find a good location near a south-facing window, out of direct sunlight. Keep it away from heating or air conditioning vents that tend to dry the flowers. Keep the soil moist, but not soggy.

Mums prefer moderate night temperatures, about 60 degrees Fahrenheit. If you expect frost, protect outdoor mums by moving them under cover overnight.

Once the plants have finished blooming, they will stop growing. You can either add them to your compost pile or plant them in your garden. Be aware, however, even the best gardeners find that mums planted in the fall often fail to establish in our climate.

For more information about fall flowers, contact the McCracken County office of the University of Kentucky Cooperative Extension Service.

Volutella Blight of Boxwood (PPFS-OR-W-26)

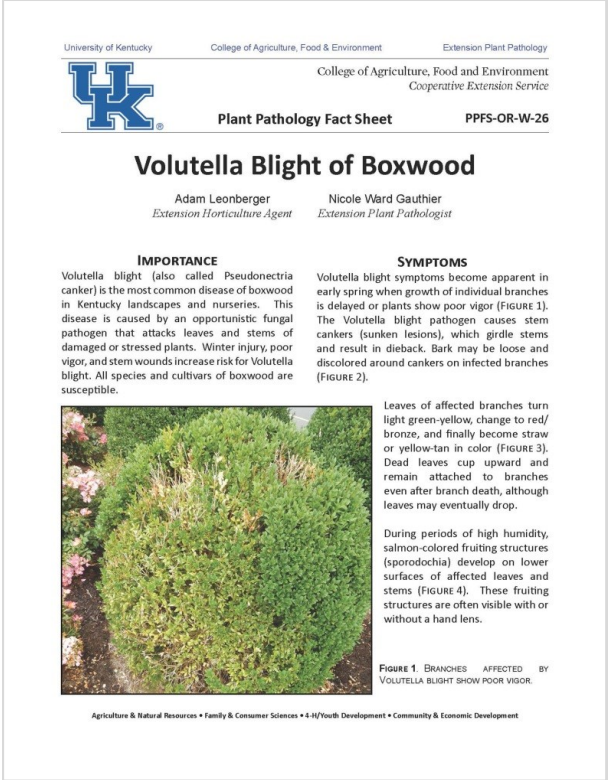
Volutella blight (also called Pseudonectria canker) is the most common disease of boxwood in Kentucky landscapes and nurseries. This disease is caused by an opportunistic fungal pathogen that attacks leaves and stems of damaged or stressed plants.

This Plant Pathology Extension fact sheet provides photos, along with descriptive text, to aid in diagnosing Volutella blight and differentiating it from other boxwood problems. In addition, disease development and management options are discussed.

Volutella Blight of Boxwood (PPFS-OR-W-26) is available online. ppfs-or-w-26.pdf (uky.edu)

For additional publications on ornamental diseases, visit the UK Plant Pathology Extension Publications webpage.

By Cheryl Kaiser, Plant Pathology Extension Support, and Paul Vincelli, Plant Pathology Extension Specialist



University of Kentucky College of Agriculture, Food & Environment Extension Plant Pathology

College of Agriculture, Food and Environment
Cooperative Extension Service

Plant Pathology Fact Sheet PPFS-OR-W-26

Volutella Blight of Boxwood

Adam Leonberger, *Extension Horticulture Agent*
Nicole Ward Gauthier, *Extension Plant Pathologist*

IMPORTANCE

Volutella blight (also called Pseudonectria canker) is the most common disease of boxwood in Kentucky landscapes and nurseries. This disease is caused by an opportunistic fungal pathogen that attacks leaves and stems of damaged or stressed plants. Winter injury, poor vigor, and stem wounds increase risk for Volutella blight. All species and cultivars of boxwood are susceptible.

SYMPTOMS

Volutella blight symptoms become apparent in early spring when growth of individual branches is delayed or plants show poor vigor (FIGURE 1). The Volutella blight pathogen causes stem cankers (sunken lesions), which girdle stems and result in dieback. Bark may be loose and discolored around cankers on infected branches (FIGURE 2).

Leaves of affected branches turn light green-yellow, change to red/bronze, and finally become straw or yellow-tan in color (FIGURE 3). Dead leaves cup upward and remain attached to branches even after branch death, although leaves may eventually drop.

During periods of high humidity, salmon-colored fruiting structures (sporodochia) develop on lower surfaces of affected leaves and stems (FIGURE 4). These fruiting structures are often visible with or without a hand lens.

FIGURE 1. BRANCHES AFFECTED BY VOLUTELLA BLIGHT SHOW POOR VIGOR.

Agriculture & Natural Resources • Family & Consumer Sciences • 4-H/Youth Development • Community & Economic Development

Pumpkin Apple Muffins

1¼ cups all-purpose flour
1¼ cups whole-wheat flour
1¼ teaspoons baking soda
½ teaspoon salt
1½ teaspoons ground cinnamon
½ teaspoon ground ginger
½ teaspoon ground nutmeg
1¼ cups honey
2 large eggs
1½ cups fresh pureed pumpkin
½ cup canola oil
2 cups Granny Smith apples, finely chopped

Preheat oven to 325 degrees F. In a large bowl, **combine** flours, baking soda, salt and spices. In a small bowl, **combine** honey, eggs, pumpkin and oil; **stir** into dry ingredients just until moistened. **Fold** in apples. **Fill** greased or paper lined muffin cups, two-thirds full. **Bake** for 25 to 30 minutes or until muffins test done. **Cool** for 10 minutes before removing from pan.

Note: Can substitute two cups granulated sugar for honey, decrease baking soda by ¼ teaspoon and increase oven temperature to 350 degrees F.

Yield: 18 muffins

Nutritional Analysis: 200 calories, 7 g fat, 0.5 g saturated fat, 35 mg cholesterol, 160 mg sodium, 35 g carbohydrate, 2 g fiber, 20 g sugar, 3 g protein

Plate it up! Kentucky Proud

Buying Kentucky Proud is easy. Look for the label at your grocery store, farmers' market, or roadside stand.

Fruit, Orchard, and Vineyard Sanitation: Cleaning Up Today May Keep Disease Away

Autumn has arrived in Kentucky, and it is time to focus on fruit, orchard, and vineyard sanitation. Good sanitation practices can help reduce disease-causing pathogens. These organisms can survive for months or years on dead plant material or in soil, causing infections in subsequent years. Elimination of disease-causing organisms reduces the need for fungicides and can improve the effectiveness of disease management practices. Following these sanitation practices both in autumn and throughout the growing season can reduce disease pressure in home and commercial fruit plantings.

Sanitation Practices

- Remove diseased plant tissues from infected plants
- Prune cankers (Figure 1) by making cuts well below visible symptoms. For plants with a history of bacterial infections, clean tools between each cut with a sanitizer, such as rubbing alcohol or household bleach. For plants with fungal infections, clean tools between rows or blocks.
- Rake and remove fallen buds, flowers, fruit, twigs, and leaves (Figure 2).
- Collect all fruit from trees, bushes, and vines. Discard diseased fruit since it can serve as a source of inoculum in subsequent growing seasons (Figure 3).
- Above and below ground portions of severely infected trees, bushes, and vines should be completely removed and destroyed.
- All discarded plant material should be burned, buried, or removed with yard waste. Do not compost diseased plant material.
- Remove weeds, including roots, which may serve as alternative hosts for pathogens.
- When treating infected plants with fungicides, remove infected tissues prior to application.

Figure 1. *Cankers can provide an overwintering site for plant pathogens. (Photo: Nicole Gauthier, UK)*

Figure 2. *Debris is a major source of infective propagules. Gather and discard fallen buds, flowers, fruit, twigs, and leaves. (Photo: Kim Leonberger, UK)*

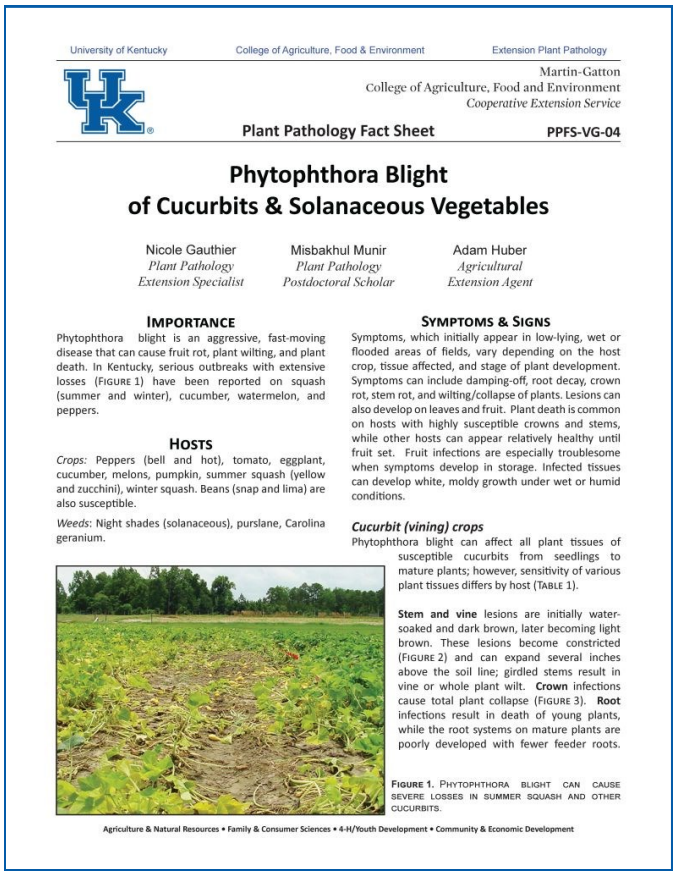
Figure 3: *Diseased fruit, whether on the ground or attached to the tree, can serve as a source of inoculum during the current and future growing seasons. (Photo: Nicole Gauthier, UK)*

Additional Information
-Fruit, Orchard, and Vineyard Sanitation (PPFS-GEN-05)
-Plant Pathology Publications

By Kimberly Leonberger, Plant Pathology Extension Associate, and Nicole Gauthier, Plant Pathology Extension Specialist

Phytophthora Blight of Cucurbits & Solanaceous Vegetables (PPFS-VG-4)

Phytophthora blight is an aggressive, fast-moving disease that can cause fruit rot, plant wilting, and plant death. In Kentucky, serious outbreaks with extensive losses have been reported on squash (summer and winter), cucumber, watermelon, and peppers.



University of Kentucky | College of Agriculture, Food & Environment | Extension Plant Pathology

Martin-Gatton College of Agriculture, Food and Environment
Cooperative Extension Service

Plant Pathology Fact Sheet **PPFS-VG-04**

Phytophthora Blight of Cucurbits & Solanaceous Vegetables

Nicole Gauthier, *Plant Pathology Extension Specialist*
Misbakhul Munir, *Plant Pathology Postdoctoral Scholar*
Adam Huber, *Agricultural Extension Agent*

IMPORTANCE

Phytophthora blight is an aggressive, fast-moving disease that can cause fruit rot, plant wilting, and plant death. In Kentucky, serious outbreaks with extensive losses (FIGURE 1) have been reported on squash (summer and winter), cucumber, watermelon, and peppers.

HOSTS

Crops: Peppers (bell and hot), tomato, eggplant, cucumber, melons, pumpkin, summer squash (yellow and zucchini), winter squash. Beans (snap and lima) are also susceptible.

Weeds: Night shades (solanaceous), purslane, Carolina geranium.

SYMPTOMS & SIGNS

Symptoms, which initially appear in low-lying, wet or flooded areas of fields, vary depending on the host crop, tissue affected, and stage of plant development. Symptoms can include damping-off, root decay, crown rot, stem rot, and wilting/collapse of plants. Lesions can also develop on leaves and fruit. Plant death is common on hosts with highly susceptible crowns and stems, while other hosts can appear relatively healthy until fruit set. Fruit infections are especially troublesome when symptoms develop in storage. Infected tissues can develop white, moldy growth under wet or humid conditions.

Cucurbit (vining) crops

Phytophthora blight can affect all plant tissues of susceptible cucurbits from seedlings to mature plants; however, sensitivity of various plant tissues differs by host (TABLE 1).

Stem and vine lesions are initially water-soaked and dark brown, later becoming light brown. These lesions become constricted (FIGURE 2) and can expand several inches above the soil line; girdled stems result in vine or whole plant wilt. **Crown** infections cause total plant collapse (FIGURE 3). **Root** infections result in death of young plants, while the root systems on mature plants are poorly developed with fewer feeder roots.

FIGURE 1. PHYTOPHTHORA BLIGHT CAN CAUSE SEVERE LOSSES IN SUMMER SQUASH AND OTHER CUCURBITS.

Agriculture & Natural Resources • Family & Consumer Sciences • 4-H/Youth Development • Community & Economic Development

This newly revised fact sheet addresses Phytophthora blight hosts, symptoms, signs, cause, disease development, and management strategies. Photos of symptoms and signs on cucurbits (vining crops) and pepper are provided to aid in diagnosis.

Phytophthora Blight of Cucurbits & Solanaceous Vegetables (PPFS-VG-04) is available online. For publications on vegetable diseases, visit the UK Plant Pathology Extension Publications webpage.

By Cheryl Kaiser, Plant Pathology Extension Support, and Nicole Gauthier, Plant Pathology Extension Specialist

Crop Protection Webinar Series Begins November 2

Beginning November 2, 2023, the University of Kentucky Martin-Gatton College of Agriculture, Food and Environment will present a series of four webinars covering field crop protection. Hosted through the Southern Integrated Pest Management Center, the webinars will feature UK Extension pest management specialists discussing plant pathology, weed science, and entomology topics.

The one-hour webinars will be held on Thursday mornings in November and will take place via Zoom at 10 a.m. EST/ 9 a.m. CST. Pre-registration is required for each webinar.

"We are excited to work with the Southern Integrated Pest Management Center again to offer these webinars to anyone who wants to learn about the latest University of Kentucky research on grain crop pest management. Information discussed in these webinars will be helpful as farmers and advisors make decisions on what practices to implement in 2024," said Dr. Kiersten Wise,UK Extension Plant Pathologist.

Details and links for pre-registration are as follows:

- **Nov. 2, 2023 – Webinar #1:** ***Do multiple corn fungicide applications pay?*** With Kiersten Wise, Extension Plant Pathologist.
Registration: https://zoom.us/webinar/register/WN_CfQFt0dQSnq5ifdnaSre7A

- **Nov. 9, 2023** – **Webinar #2:** ***What have we learned from nearly two decades of research on soybean with foliar fungicides?*** with Carl Bradley, Extension Plant Pathologist.
Registration: https://zoom.us/webinar/register/WN_3SvKPhEDSSWcYhnUnLrvsQ

- **Nov. 16, 2023 – Webinar #3:** ***Managing the offensive spread of weeds*** with Travis Legleiter, Extension Weed Scientist.
Registration: https://zoom.us/webinar/register/WN_SIOzGyibQiOk4A6pTRHGmw

- **Nov. 30, 2023 – Webinar #4**: ***Insects in field crops during two years of partial drought and heat wave*** with Raul Villanueva, Extension Entomologist.
Registration: https://zoom.us/webinar/register/WN_AqvCh08TQGCAJXvKxqdwFA

The webinars are open to agriculture and natural resource county Extension agents, crop consultants, farmers, industry professionals, and others, whether they reside or work in Kentucky or outside the state.

Participants may receive one hour per webinar in continuing education units for Certified Crop Advisers. Kentucky pesticide applicators can receive one continuing education unit in Category 1A (Ag Plant) per webinar.

For more information, contact Jason Travis by phone at (859) 562-2569 or by e-mail at jason.travis@uky.edu.

By Jason Travis, Agriculture Extension Associate

2024 TOOLBOX GARDEN SERIES

Martin-Gatton
College of Agriculture,
Food and Environment

McCracken County Extension Service
2025 New Holt Road Paducah, KY 42001
(270) 554-9520

Jan 2: Flower Arranging *RSVP*

Feb 6: Electric Canning

Mar 5: Honey Bees

Apr 2: Homesteading

May 7: Perennial Cut Flowers

Jun 4: Garrett Farms (on-site) *RSVP*

Jul 2: Fairy Garden *RSVP*

Aug 6: Fall Asters

Sep 3: Hydrangea

Oct 1: Tulips

Nov 5: Wreath Making *RSVP*

FIRST TUESDAY OF EACH MONTH 5 - 6 P.M.