

Bourbon County Horticulture News

October 2022



University of Kentucky
College of Agriculture,
Food and Environment
Cooperative Extension Service

Cooperative Extension Service

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Why Leaves Change Colors in the Fall

Fall is one of the most beautiful seasons of the year, as tree leaves change colors to bright oranges, vibrant reds and eye-popping yellows. Trees that change color in the fall are deciduous trees. They go dormant in the winter to protect the tree from freezing temperatures and will generate new leaves in the spring.

Three factors cause the tree leaves to change color at this time of year: length of night, leaf pigments and weather. Length of night is the only constant of the three. Following the summer solstice in June, the daylight shortens in the Northern Hemisphere and nights become longer. It is the increasing length of night that triggers certain reactions in trees and leaves.

Chlorophyll, which produces the green color in leaves, and carotenoids, which gives us the orange, yellows, and browns, in conjunction with sunlight, are working all summer to produce food for the tree. After the solstice, night length steadily increases, causing excess plant sugars to build up, chlorophyll production to slow down and eventually stop in the

leaf. When chlorophyll production ceases, the carotenoids pigments are unmasked and any anthocyanins in the leaf start producing the reddish, purple colors in response to bright light, giving the leaves their fall colors.

As time passes, a cell layer between the leaf petiole, where it connects to the stem of the tree, begins to close. Once that cell layer completely closes, the leaf drops, closing off any openings into the tree and protecting it from winter's freezing temperatures and harsh winds.



Fall color vividness depends on temperature and moisture. Sunny, warm days, cool nights and soil moisture in early fall produce the most color. This combination of moisture and temperature produce a vast array of color and that's why no two

autumns are ever alike.

Contact the Bourbon County office of the University of Kentucky Cooperative Extension Service for information on trees.

Source: Sharon Flynt, UK extension horticulture agent

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LEXINGTON, KY 40546



Disabilities
accommodated
with prior notification.

MONEY FOR FARM
IMPROVEMENTS AVAILABLE...



Bourbon County Extension Office
603 Millersburg Rd.
Paris, KY 40361
(859) 987-1895

Please stop by the office or visit
<http://bourbon.ca.uky.edu>
for program details.

2022 COUNTY AGRICULTURAL INVESTMENT PROGRAM (CAIP)

Applications will be available for Bourbon County's CAIP program to assist farmers in making important on-farm investments.

Informational Meeting:
Wednesday, October 12th at 6:00 p.m.
Bourbon County Fairgrounds, Legion Hall

Application Period:
October 6 – 28, 2022
*No applications will be accepted after
Friday, October 28th at 4:30 p.m.*

Application Availability:
Bourbon County Extension Office
Monday – Friday, 8:00 a.m. – 4:30 p.m. or
online at <http://bourbon.ca.uky.edu/content/caip>

*All applications are scored, based on the scoring criteria set
by the Kentucky Agricultural Development Board.*

Leaf Spot Diseases of Cucurbits

Alternaria leaf blight, angular leaf spot, and anthracnose are leaf spotting diseases that commonly affect cucurbit vegetables in Kentucky. Each of these disease has its preferred host range in the cucurbit family (crops include cucumber, gourd, muskmelon, watermelon, summer squash, winter squash, and pumpkin). Losses can occur in both commercial and residential plantings.

This newly revised fact sheet (formerly Foliar Diseases of Cucurbits) covers host range, symptoms, cause, disease development, and management options.

Leaf Spot Disease of Cucurbits: Alternaria Leaf Blight, Angular Leaf Spot & Anthracnose (PPFS-VG-10) is available online at <https://tinyurl.com/mr2zk5wz>.

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

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

University of Kentucky College of Agriculture, Food and Environment Extension Plant Pathology
 College of Agriculture, Food and Environment
Cooperative Extension Service
Plant Pathology Fact Sheet PPFS-VG-10

Leaf Spot Diseases of Cucurbits: Alternaria Leaf Blight, Angular Leaf Spot & Anthracnose

Nicole Gauthier
Plant Pathology Extension Specialist

Colby Guffey
County Extension Agent for Agriculture

INTRODUCTION

Leaf spot diseases indirectly result in yield losses in cucurbits by reducing photosynthetic surfaces, which in turn, negatively impact size, quality, and quantity of fruit. In addition, premature defoliation exposes fruit to sunscald, followed by secondary fruit decay. In severe cases, foliar diseases can cause plant death.

Vegetable crops in the cucurbit family include cucumber, gourds, muskmelon (cantaloupe), summer squash, winter squash, and pumpkin. These cucurbit vegetables are susceptible to diseases of which Alternaria leaf blight, angular leaf spot, and anthracnose are the most common. Each disease, however, has a preferred host range within the cucurbit family. Cucurbit leaf spot diseases can develop in commercial fields, high tunnels, greenhouses, and residential gardens.

ALTERNARIA LEAF BLIGHT

Hosts

Alternaria leaf blight primarily affects watermelon and muskmelon (cantaloupe), but it may also occur on cucumber, gourds, pumpkin, and squash.

Symptoms

Disease symptoms first appear on older leaves as small, water-soaked spots. Enlarging spots become light to dark brown and may be surrounded by a yellow halo (FIGURE 1). A concentric ring pattern may be evident in older, large spots (FIGURE 2). Expanding lesions merge (coalesce) to form large, blighted areas (FIGURE 3). As symptoms progress, leaves curl, die, and drop prematurely, which leaves vines partially to completely defoliated. Affected fruit decays, often starting at the blossom end.

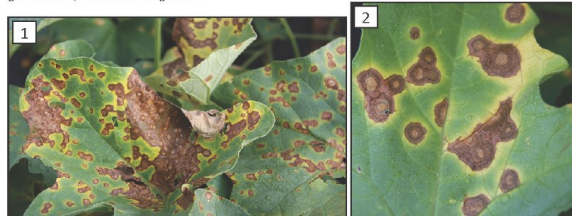


FIGURE 1. ALTERNARIA LEAF BLIGHT ON MUSKMELON APPEARS AS BROWN SPOTS WITH YELLOW HALOS. LARGE BLIGHTED AREAS MAY RESULT WHEN SPOTS ENLARGE AND COALESCE. FIGURE 2. SPOTS OFTEN HAVE DISTINCT CONCENTRIC RING PATTERNS.
[PHOTOS: GERALD HOLMES, SPRAWBERRY CENTER, CALIFORNIA SAN LUIS OBISPO; BUDWOODLORE]

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

Winter Protection for Tree Trunks

Sun scald is a condition that affects the trunks of trees. I see this type of injury all the time here in Bourbon County!

It is characterized by elongated areas of dead bark on the south or southwest side of the trunk. Sun scald is a type of winter injury that occurs on very cold but clear days. As the sun's rays strike the surface of the trunk, the trunk's surface and underlying tissue can warm substantially, even to the point that the cambium tissue under the bark will become active.

The damage occurs when the sun's rays are blocked abruptly by something such as a building, hill, or cloud cover. This will promote rapid cooling and freezing of the trunk surface tissue and result in injury to the underlying cambium.

Young trees, newly planted trees, and trees with thin bark are especially susceptible to sun scald as are trees that have had their lower limbs



Sun scald is a type of winter injury that occurs on very cold but clear days. Young trees, newly planted trees, and trees with thin bark are especially susceptible to sun scald.

removed so that the trunk is now more exposed to the sun. Also, trees that have recently been transplanted from a shady area to a more sunny location tend to be very susceptible.

Older trees are generally less susceptible since their thicker, and sometimes furrowed bark

will offer some insulation from the warming of the sun.

If you have trees susceptible to sun scald, here are some options for their protection. Trunk



If you have trees susceptible to sun scald, trunk wraps are the most common form of protection.

wraps are the most common form of protection. They are light in color and so reflect much of the sun's radiant heat and keep the trunk a more constant temperature. Wraps should be applied in fall and removed in spring after the danger of frost is over. Wrap young, newly planted trees for at least two winters or until thicker bark has formed.

Thin-barked trees should be wrapped for at least 5 winters. If you have many trees to protect, say in a fruit orchard, it may be easier to apply a coat of light-colored latex paint to the trunk. Dilute the paint with an equal volume of water before applying. Some people even shade the trunk temporarily on cold days by leaning a board against the south exposure during cold weather.

If sun scald does develop, remove the dead tissue in spring by cutting into the bark until live tissue is encountered. Cut a smooth outline around the damaged area and leave the wound open to heal. Sprays advertised to aid in healing wounds rarely do and should not be applied to the cut surface. It is also unnecessary to wrap the area. Simply leave it open to heal. Only treat the area if disease or insect damage becomes apparent. Your county extension agent can assist in making a proper diagnosis if this occurs.

Christmas Trees 101 WEBINAR



THURSDAY,
OCTOBER 27, 2022



9 AM - 1 PM
EASTERN



Scan code with your
smartphone camera to register

INTERESTED IN LEARNING MORE ABOUT CHRISTMAS TREE PRODUCTION IN KENTUCKY?

Join us for a discussion on site selection, planting, fertility management, pruning and marketing your crop

Register now:

<https://KYChristmasTrees101.eventbrite.com>



Fusarium Wilts of Vegetable Crops Fact Sheet Available

Fusarium Wilts of Vegetable Crops

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Extension Support

INTRODUCTION

Fusarium wilts are common vascular diseases that clog and eventually destroy water conducting tissues, resulting in wilt symptoms and eventual plant death. While not all Fusarium wilts are caused by the same strain of the pathogen, symptom development within the various vegetable hosts is similar. Crop losses can occur in commercial fields, greenhouses, high tunnels, and residential plantings.

HOSTS

Tomato is the solanaceous crop most frequently affected by a Fusarium wilt disease in Kentucky, but Fusarium wilts can also occur on eggplant and pepper. Affected cucurbit crops include cucumber, watermelon, and occasionally muskmelon. Common weeds that may serve as alternative hosts for the pathogens include pigweed, mallow, and crabgrass.

SYMPTOMS

The first visible symptom of a Fusarium wilt disease occurs when whole or partial plants wilt slightly, especially during the hottest part of the day. Plants may initially recover during the cool of the evening or on mild/rainy days, but eventually wilt becomes permanent.

Wilt is followed by yellowing (FIGURE 1), which may initially develop on only one side of a shoot or branch (FIGURE 2), and then necrosis (browning) of leaf tips (FIGURE 3). Symptoms may begin on lower leaves and move up plants until entire plants are yellowed and necrotic (FIGURE 4).



FIGURE 1. FUSARIUM WILT OF TOMATO SYMPTOMS BEGIN AS WILTING, FOLLOWED BY YELLOWING AND NECROSIS.
FIGURE 2. SYMPTOMS ARE OFTEN FIRST EVIDENT ON ONE SIDE OR PORTION OF A SHOOT OR BRANCH.

Fusarium wilts are common vascular diseases affecting a number of vegetable crops. In Kentucky, tomato, peppers, eggplant, cucumber, watermelon, and occasionally muskmelon (cantaloupe), are most frequently affected. Crop losses can occur in commercial fields, greenhouses, high tunnels, and residential plantings. This new publication provides information on hosts, symptoms, causes, disease development, management options, and additional resources. Color images aid in disease diagnosis.

Fusarium Wilts of Vegetable Crops (PPFS-VG-15) is available online at <https://tinyurl.com/5n6r4jdj>

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

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

The Fall Invasions Begin...

If you have had problems with brown marmorated stink bugs (BMSB) using your home as their overwintering hotel, now is the time to be sure your home is invasion-proof. Shorter day length is a trigger for many insects to begin searching for protected places to pass the winter, and for some stink bugs, ladybugs, and boxelder bugs, that can mean your home! The best method to deal with fall insect invaders is prevention: pest-proofing your home to keep them out in the first place.

In Kentucky, there are a number of insects that may choose to move into homes for the winter, including brown marmorated stink bug, multicolored Asian lady beetle, boxelder bug, western conifer seed bug, and cluster flies. Of these, brown marmorated stink bug is usually the first to search for protected places to spend the winter. Multicolor Asian lady beetle begins seeking refuges a month or more after the stink bug. Homes that have had a history of unwanted fall invaders should expect problems in the future.

Preventing Entry

BMSB will begin to gather on structures and vegetation around some structures late in the afternoon on sunny days in late August and September before attempting to gain entry. There are a number of steps to properly pest proof your home, but the primary method is to exclude pests by sealing places through which they enter. Here are steps to reduce problems with fall insect invasions.

- Seal cracks around doors, windows, and dryer vents with caulk. Cracks as small as 1/8" will permit some insects to pass.
- Seal openings for pipes and wires in the foundation and siding with caulk, expandable foam for larger openings, or other suitable material.
- Check the seal under doors. While lying on the floor, look for light filtering underneath. Replace door sweeps and thresholds as needed.
- Replace torn or damaged window screens.



Figure 1. Brown marmorated stink bug can squeeze through cracks less than 1/6 inch wide

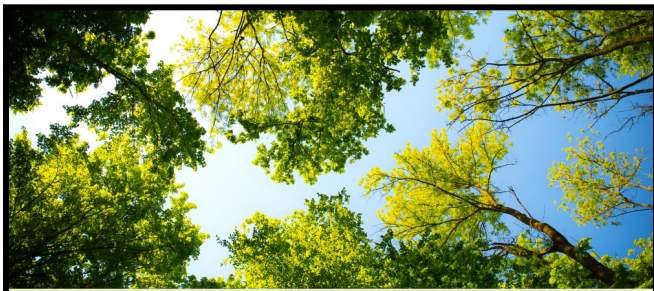
(Photo: Ric Bessin, UK)

- Consider adding a chimney cap to exclude brown marmorated stink bug and other wildlife.
- Cover attic and roof vents with hardware cloth. The cloth needs to be 1/6 inch or smaller to exclude BMSB.
- Apply a barrier insecticide to the exterior of the home. Treat areas underneath and around doors, windows, utility openings, and around the base of the foundation. Read and follow all label directions.

After Entry

Indoors during winter, BMSB try to congregate in various places inside structures. This can be in chimneys, closets, window air conditioning units, attics, behind books on a shelf, etc. Insecticides are not recommended inside the home to control pests after they have entered. The best way to remove them once inside is with a vacuum. A knee-high stocking can be used in the suction tube of the vacuum to reduce the number of bags needed. Just drop the stink bugs into soapy water. Various types of light-baited/funnel traps and soapy water traps have been used successfully to remove them from dark areas in a home.

Source: By Ric Bessin, *Extension Entomology Specialist*



October Classes

- October 12: How to Help your Trees Thrive
- October 19: Tree Risk Assessment
- October 26: Great Native Alternatives to Invasive Trees

Register at www.tinyurl.com/22octHWW

STAY INFORMED!

Please check the Bourbon County-UK Horticulture Extension Facebook page or visit the Extension website at www.bourbon.ca.uky.edu to stay up-to-date.



Ray Tackett
County Extension Agent
for Horticulture

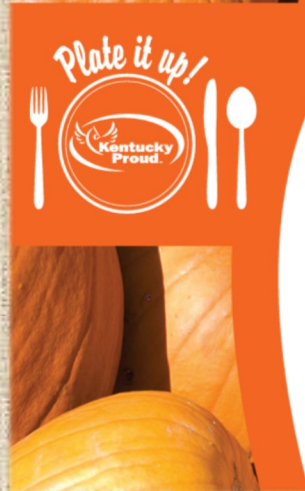
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Ray Tackett



Plate It Up! Kentucky Proud Recipe



Fall Spiced Pumpkin Bread

- | | | |
|-----------------------------------|--------------------------------------|------------------------------|
| ½ cup all-purpose flour | 2 teaspoons pumpkin pie spice | ½ cup honey |
| 1¼ cup whole-wheat flour | ½ teaspoon salt | 2 cups pumpkin puree |
| 1½ teaspoons baking powder | ½ cup melted margarine | ⅓ cup olive oil |
| 1 teaspoon baking soda | ½ cup sugar | 2 eggs |
| | | ⅓ cup chopped walnuts |

Heat oven to 350 degrees F. **Mix** flours, baking powder, baking soda, pumpkin spice and salt; set aside. In a large mixing bowl, **whisk** together margarine, sugar, honey, pumpkin puree and olive oil. **Blend** in eggs. **Add** flour mixture. **Stir** until dry ingredients are moistened. **Spray** a 8-by-4 inch loaf pan with non-stick cooking spray. **Pour** batter into pan; **sprinkle** walnuts on top of batter. **Bake** for 1 hour. **Remove** from oven

and **cover** with foil. **Return** to oven and **bake** an additional 20 minutes or until toothpick inserted in center comes out clean. **Cool** for 10 minutes and **remove** from pan.

Yield: 16 slices

Nutritional Analysis: 220 calories, 13 g fat, 2 g saturated fat, 30 mg cholesterol, 270 mg sodium, 26 g carbohydrate, 1 g fiber, 14 g sugars, 4 g protein.