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

Cooperative Extension Service
McCracken County
2025 New Holt Road
Paducah, KY 42001
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extension.ca.uky.edu

Mary Dossett
Agent for Horticulture

MAY
2024

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Master Gardener Spotlight

Lee Rust

Public Relations

Class of 2022

Cooperative Extension Service

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MARTIN-GATTON COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT

Lexington, KY 40506

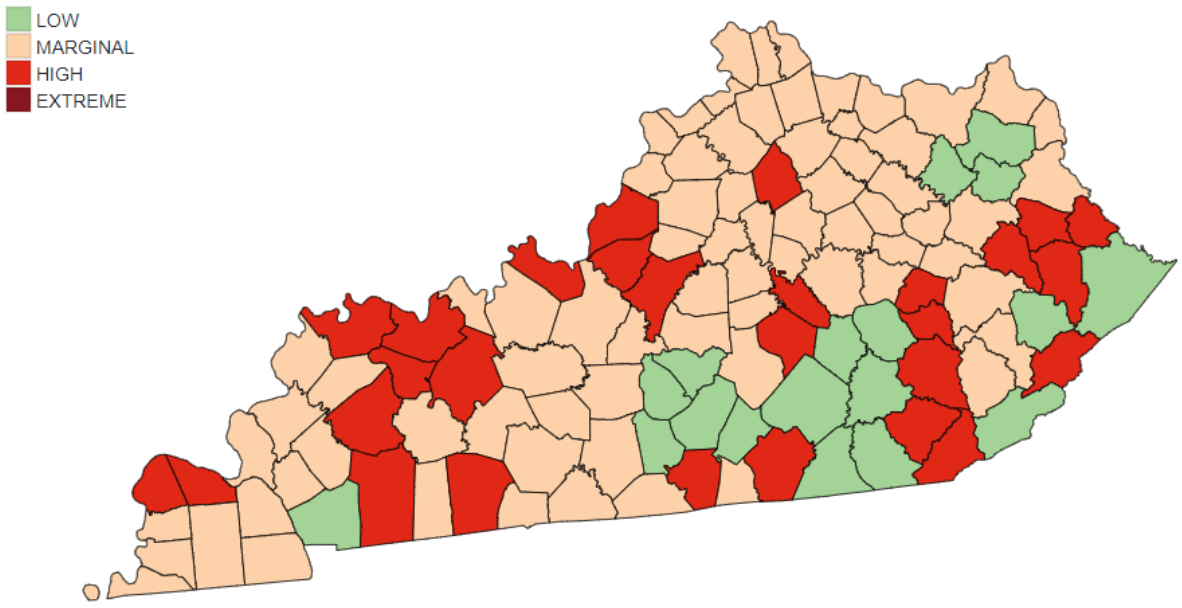
Fire Blight Alert

Apple and pear trees are at or approaching bloom. Infection by the fire blight bacterium occurs during bloom, thus, protectant antibiotics should be applied when risk is high.

Risk for infection can be assessed using the Fire Blight Disease Prediction Model http://weather.uky.edu/php/fire_blight.php . Growers can assess local risk by selecting their county and orchard history. This model incorporates the previous 4 days of weather data plus adds a 7-day forecast for estimating leaf wetness and temperature (thereby estimating risk for bacterial growth and infection). There are 66 Mesonet weather stations throughout Kentucky, thus, weather information for the model is based on data from the closest weather station. A mobile (phone or tablet) friendly version of this site is at http://weather.uky.edu/dim.html .

Remember that apple and pear trees **must be in bloom** for predictions to be accurate. The map overview presented here indicates fire blight risk as of April 1, 2024 (Figure 1). According to the current assessment, risk is low for all counties across the state. Growers are encouraged to check the model regularly for the most accurate analyses and county-specific forecasts.

Additional Resources
Information regarding prevention and management of fire blight can be found in:
Using Prediction Models to Manage Diseases in Fruit (PPFS-FR-T-07)
Commercial Fruit Pest Management Guide (ID-232)
Backyard Apple Disease Management Using Cultural Practices (PPFS-FR-T-21)
Fire blight (PPFS-FR-T-12)
Fire blight of Apple (Video) https://www.youtube.com/watch?v=PdcDXNftoWg



Fire Blight Risk Evaluation 03/31/2024 - 03/28/2024

Dr. Nicole Gauthier (pronounced Go-*Chay*), Extension Plant Pathologist For Fruit Crops, Vegetables, and Hemp, University of Kentucky Department of Plant Pathology

EPA IPM Webinar: Fungal Disease Management for Ornamental Plants

Fungal pathogens are imported into the U.S. on ornamental plants with regularity. These pathogens can have significant impacts on the ornamental plant and landscape industries. In this webinar, participants will receive an introduction to common fungal diseases of ornamental plants and their prevention and management. The origins of fungal pathogens on imported plants, their identification, as well as the causes of occurrences with plant production facilities will be discussed. An expert will describe the importance of Integrated Pest Management, including the role of cultural practices, non-chemical controls, and the selective use of fungicides. Highlights of current research and practical control experiences will be shared.

This webinar will be offered May 7, 2:00 to 3:30 P.M. (ET). The webinar will feature one speaker, Dr. Jean Williams-Woodward, Ph.D., Extension Plant Pathologist, University of Georgia Department of Plant Pathology. The presentation will be followed by a question-and-answer session.

Participants will:

- Learn about the impact of fungal diseases in ornamental plant production.
- Discover the origins of fungal diseases and how they spread.
- Learn to manage irrigation to prevent fungal proliferation.
- See ways to remove fungal pathogens from soil media using sterilization and pasteurization.
- Know how to identify common fungal diseases.
- Gain exposure to the latest fungal disease prevention strategies.
- Learn about IPM strategies that have been developed to control fungal diseases.
- Gain knowledge of the fungicides registered for use against these pathogens.

Kentucky pesticide CEU credits have been requested. By registering and participating in this session, you can earn free CEU credits from the Kentucky Department of Agriculture that can be applied toward the renewal of your commercial pesticide certification.

You will need to preregister for this webinar at https://register.gotowebinar.com/register/3726637867889702232

By Ric Bessin, Extension Entomologist

GROUNDING YOGA

INSTRUCTED BY SIERRA IRWIN

OUTSIDE ON THE LAWN.
IF INCLEMENT WEATHER,
SESSION WILL BE CANCELED.

PLEASE BRING A
MAT AND WATER.

SAVANNAH GILBERT
HORTICULTURE ASST.
SAVANNAH.GILBERT@UKY.EDU

APRIL 9 MAY 14 JUNE 11

11:00 - 12:00

LIMITED SPACE. PLEASE RSVP BY CALLING (270)554-9520

PAT & JIM BROCKENBOROUGH ROTARY HEALTH PARK

LOCATED AT 14TH AND MADISON
IN THE HISTORIC FOUNTAIN AVENUE NEIGHBORHOOD

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PECAN GRAFTING DEMONSTRATION

May 4, 2024
10:00 a.m. - 2:00 p.m.
Skip & Jennie Shearouse
Pecan Farm
3474 State Route 1684
Boaz, KY 42027
(Graves County)

Bring a lawn chair, pecan scion wood to swap, and your picnic lunch!

If you have questions, contact:

John Strang
Mobile: 859-396-9311
jstrang@uky.edu
Jennie Shearouse
Mobile: 270-210-3169
shearouse@wk.net
Miranda Rudolph
Office: 270-247-2334,
miranda.rudolph@uky.edu

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MASTER GARDENER TOOLBOX

PERENNIAL CUT FLOWERS

Free Range flowers of Martin Farms will be educating the public on easy perennials to grow your own cut flower garden. This event is free and open to the public.

MAY 7TH, 2024 5PM-6PM CST

EXTENSION AGENT FOR HORTICULTURE

MARY DOSSETT
MARY.DOSSETT@UKY.EDU

**MCCRACKEN COUNTY EXTENSION SERVICE
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McCracken County Extension Service

Horticulture Walking Club

Meets : Every Wednesday (May 8th– July 31st)
Time : 11AM–12PM
Location : Greenway Trail
*Meet at Skate park entrance

Call our office at (270) 554-9520 to sign up!

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UNUSUAL HAPPENINGS in 2024

Martin-Gatton College of Agriculture, Food and Environment

By : Mary Dossett
Agent for Horticulture

Brood 19 - Cicada emergence

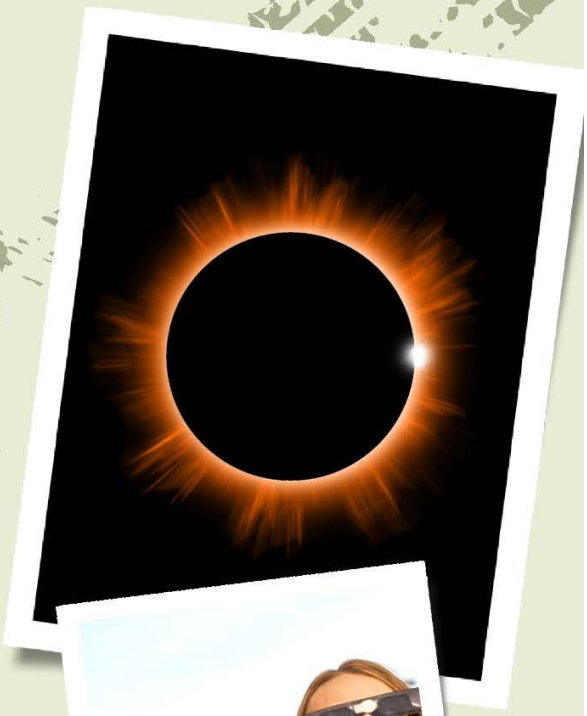
The emergence of millions of cicadas provides a striking visual image and the sounds they produce can be overwhelming. The high-pitched sound comes from the male cicada using specialized structures on the abdomen. They sit in high branches and sing to attract females with distinctive sounds that vary by species. Periodical cicadas have black bodies, red eyes, and red-orange wing veins in two pairs of clear wings that are held roof-like over the abdomen as shown above. They are active in late April until June. Theses insects can be unnerving especially with their bright red eyes and sounds but they cannot sting and will not harm humans, livestock, and pets. During year 2024, you can expect to see the Brood 19 Cicada in the Pennyrile and Green River areas. There is a low potential for the Purchase and rest of the state. While these insects won't harm you, there is a potential they will harm your trees. They can cause problems for orchards, vineyards, nurseries, home and commercial landscapes.

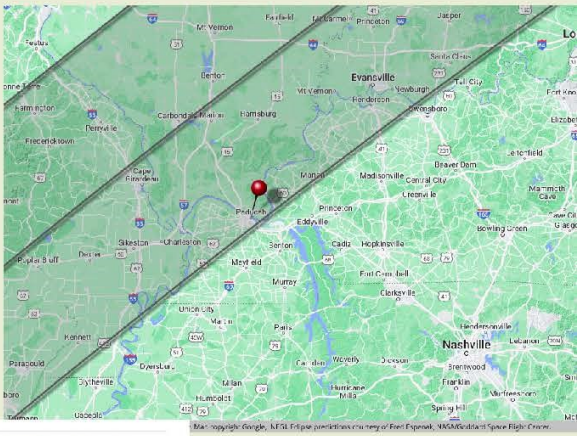
The females slit twigs to insert batches of eggs. The twigs break at these weak spots, turn brown and die. The Life Cycle is very interesting for these insects. Mature nymphs begin to emerge when the soil temperature reaches 64 degrees, usually in late April or early May. This process usually takes about three weeks for all of them to come out. Full-grown nymphs dig up to the surface and may build a 6" to 8" tall mud "chimney". After leaving the soil, nymphs crawl up to a vertical surface and molt to the adult stage. You will find their empty brown shell usually in the side of trees.

Solar Eclipse

On April 8, 2024, a total solar eclipse will trace a narrow path across thirteen states. A solar eclipse occurs when the moon gets between Earth and the sun, and the moon casts a shadow over Earth. It can only take place at the phase of new moon, when the moon passes directly between the Sun and Earth and its shadows fall upon Earth's surface. A total solar eclipse occurs when the Moon's apparent diameter is larger than the Sun's, blocking all direct sunlight, turning day into darkness.

On the map below, you can see the bottom line that passes over Paducah, Kentucky. The bottom line outlines the limits of the path of totality in the states. The middle line represents the eclipse centerline, where totality lasts the longest. Because our eyes adjust to the darkness and thus our pupils dilate and are striving to let light in as much as they can, a sort of shock can be produced if the Sun "surprises" you. While watching the solar eclipse make sure to use proper eyewear such as "Eclipse" glasses or welders googles, solar telescopes, solar binoculars, or pinhole projector. Without protection, the sun could cause permanent eye damage.





http://entomology.ca.uky.edu/ef446

https://nineplanets.org/solar-eclipse/

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Effective Strategies to Prevent Plant Diseases in your Garden

Source: Rick Durham, Extension Professor, Department of Horticulture

In the unseen sphere of our vegetable gardens, plant pathogens including fungi, bacteria, nematodes and viruses are ever-present threats. However, with proactive measures, gardeners can successfully manage these threats and maintain healthy vegetable gardens.

Photo from Pixabay.com

Selecting the right location for your garden is the first step in prevention. Opt for a sunny area with well-drained soil to discourage the growth of pathogens. Raised beds can be an effective solution for improving drainage and air circulation around plants. It's also crucial to clear out old plant debris, which can harbor diseases from the previous season.

When choosing plants, prioritize disease-resistant varieties and inspect any transplants for signs of disease before introducing them to your garden. For seeds, consider those that have been treated with fungicide to give them a better chance of thriving. Planting in warm soil and ensuring proper spacing between plants are additional measures that can minimize stress and disease susceptibility.

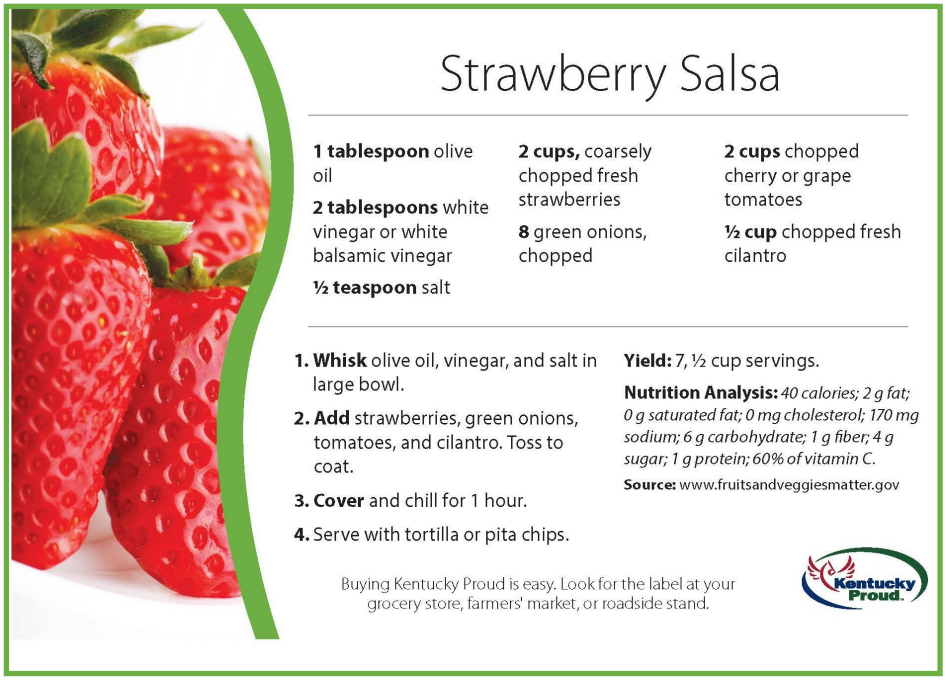
Crop rotation is an invaluable strategy, especially in smaller gardens. Changing what's planted in a specific area every few years can prevent the buildup of soil-borne diseases. For crops that are particularly disease-prone, consider skipping their cultivation for a few years or growing them in containers separate from the garden.

Maintaining a weed-free garden throughout the growing season is essential. Weeds can serve as hosts for pests and diseases, transferring them to your vegetable plants. Proper watering techniques can also make a significant difference; water at the base of plants to avoid wetting foliage, and if overhead watering is necessary, do so early in the day to allow leaves to dry.

Avoiding mechanical injury to plants, such as from gardening tools or rough handling, can prevent openings for pathogens. Furthermore, refraining from working in the garden when plants are wet can reduce the spread of diseases.

By taking these steps gardeners can effectively manage plant diseases. This approach not only protects the garden from the myriad of pathogens waiting to attack but also leads to a bountiful and healthy harvest.

For more information on keeping a health garden, contact the McCracken County office of the University of Kentucky Cooperative Extension Service.



Pythium Diseases of Vegetable Crops

Pythium diseases can affect a large number of vegetable crops. Vegetables produced in structures, such as greenhouses or high tunnels, may be at an increased risk for disease losses once the pathogen is introduced. Infections may impact above and below ground plant parts, resulting in plant decline or fruit rot. Cultural management strategies and fungicides may be used to limit the impact of Pythium diseases.

Pythium Disease Facts

- Pythium diseases can impact plant roots, stems, and crowns. Root infections result in brown, rotting roots (Figure 1), while stem infections appear as lesions that girdle stems or crowns. Both types of diseases can result in wilting, stunting, reduced vigor, yield reduction, nutrient deficiency-like symptoms, and plant death. Early plant infections cause damping-off.
- Pythium diseases can also cause damage to fruit. Symptoms include sunken, wet, or slimy lesions. Over time, a white, cottony growth can cover infected portions of fruit (Figure 2). Disease development frequently occurs where fruit are in contact with soil. Disease development can occur in the field or in storage.
- Wet soils from excess irrigation or rainfall are conducive for disease development.
- Infested soil, water, tools, and plant debris can harbor disease causing pathogens.
- Caused by multiple species of *Pythium*, a fungus-like pathogen called a water mold.

Figure 1: *Brown, rotting roots are a symptom of Pythium infection. (Photo: Penn State Department of Plant Pathology & Environmental Microbiology Archives, Penn State University, Bugwood.org)*

Figure 2: *Fruit infected with Pythium develop a white, cottony growth. (Photo: Cheryl Kaiser, UK)*

Management Options

- Improve soil drainage.
- Avoid overwatering.
- Avoid introduction of natural soil into hydroponic systems.
- Use clean, new soil for seeding and transplanting.
- Clean and sanitize pots, tools, and structures.
- Avoid movement of infested soil. Work in clean fields first and infested sites last to avoid spread.
- Wash and disinfect tools, equipment, shoes, and clothing after working in infested fields, greenhouses, or tunnels.
- Apply a mulch layer to limit contact between fruit and soil.
- Infected fruit may not show symptoms at harvest, but disease may develop in storage. Damaged, wounded, and diseased materials should be discarded.
- Use approved fungicides labeled for *Pythium* spp. Commercial growers can find information on fungicides in the *Vegetable Production Guide for Commercial Growers* (ID-36) and the *Southeast U.S. Vegetable Crop Handbook*. Information on fungicides available to homeowners is available in *Home Vegetable Gardening Guide* (ID-128).

Additional Resources

Home Vegetable Gardening (ID-128)
Southeast U.S. Vegetable Crop Handbook (Link) https://www.aces.edu/blog/topics/vegetable-crops/southeastern-us-vegetable-crop-handbook/
Vegetable Production Guide for Commercial Growers (ID-36)
Scouting Guides for Problems of Vegetables Website (Link) https://veggiescout.ca.uky.edu
Cleaning & Disinfecting Home Garden Tools & Equipment (PPFS-GEN-17)
Cleaning & Sanitizing Commercial Greenhouse Surfaces (PPFS-GH-07)

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

2024 TOOLBOX GARDEN SERIES

Martin-Gatton College of Agriculture, Food and Environment

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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 6: Wreath Making *RSVP*

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

November session will be on a Wednesday