



Cooperative Extension Service  
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*A monthly newsletter on Extension Service programs and events.*

# Extension News —

*Agriculture - Family & Consumer Sciences - 4-H Youth Development*



## *In this Issue —*

- **4-H Camp “Save the Date” May 28-31, 2024.**
- **Family & Consumer Sciences Program Highlights; Bingocize; Laugh & Learn;**
- **Upcoming Programs—Drop it Like It’s Hot; Outdoor Cooking; Homemaker Council Meeting; Happenings**
- **Kentucky Tick Surveillance Project; Ticks in Kentucky; Fire Blight; Symptoms & Signs; Causes & Disease Development; Management**

***Call the Extension Service for your home gardening questions!!***

### **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**

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Disabilities accommodated with prior notification.



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 LEXINGTON, KY 40546



Disabilities  
 accommodated  
 with color verification

View this link for information on 4-H Camp — <https://4-h.ca.uky.edu/camp>

# Family and Consumer Science Program Highlights & Announcements

## Diabetes Support Group



Every Wednesday &  
Friday at 1 PM



**Laugh & Learn  
Playdate**

**DATE:** APRIL 25TH **TIME:** 3:30 P.M.

**FOR:  
AGES 5 & UNDER**



Laken Campbell, CEA for Family & Consumer Sciences Education

MoneyWise Newsletter view link - [https://fcs-hes.ca.uky.edu/files/moneywise\\_april\\_2024.pdf](https://fcs-hes.ca.uky.edu/files/moneywise_april_2024.pdf)

# Family and Consumer Science Program Announcements

## Upcoming Dates

Drop it like its hot: Weekly weigh in

- \*Bingocize: @1 PM 4-3-24
- \*Council meeting: @4:30 PM 4-3-24
- \*Board meeting: @5:30 PM 4-3-24
- \*Outdoor Cooking@10 A.M. 4-4-24
- \*Homemaker Council Meeting:  
@@11 AM 4-4-24
- \*Bingocize: @1 PM 4-5-24
- \*Bingocize: @1 PM 4-10-24

- \*Bingocize: @1 PM 4-12-24
- \*Bingocize: @1 PM 4-17-24
- \*Bingocize: @1 PM 4-19-24
- \*Bingocize: @1 PM 4-24-24
- \*Laugh & Learn: @3:30 4-25-24
- \*Bingocize: @1 PM 4-26-24
- \*Diabetes Support Group: @6 4-30-24
- \*Bingocize: @1 PM 5-1-24
- \*Bingocize: @1 PM 5-3-24



## Outdoor COOKING

Date: April 4th Location: Lee Extension Office Time: 10:00 A.M.

This lesson will cover steps for food safety and fire safety when cooking outdoors. Participants will explore various categories of outdoor meals such as picnics, front country camping (at established campsites), and backcountry camping (more remote, undeveloped campsites). Enjoy seeing outdoor equipment like the Cast iron Dutch oven that has been around for generations. Have fun also exploring ways to cook and bake outdoors. Vicki Boggs, Leslie County FCS agent, will be presenting this lesson.

Reminder to  
weigh in weekly!

**DROP IT  
LIKE  
IT'S  
HOT**

# CHINESE FRIED RICE

SERVINGS:6SERVING SIZE:2/3 CUP

## Ingredients:

- 2 cups brown rice
- ¼ cup oil
- 1 small onion, chopped
- 2 cloves garlic, chopped
- ¼ teaspoon ground ginger
- ½ cup carrots, chopped
- 1 zucchini, sliced
- ½ cup frozen peas
- 1 egg plus 1 egg white, beaten
- ¼ cup low-sodium soy sauce



## Directions:

- Cook the rice according to package directions. Set aside.
- In a large skillet, heat oil.
- Add the onion, garlic, ginger, carrots, zucchini and peas.
- Cook until the vegetables are tender, about 5 minutes.
- Remove the skillet from the heat and put the vegetable mixture into a large bowl.
- Add the beaten eggs to the skillet, cook eggs until scrambled.
- Add eggs to mixed vegetables.
- Put the cooked rice in the skillet, and stir while reheating.
- Add the soy sauce to the rice, and add vegetables and egg mixture to the skillet with rice.
- Stir until heated through.

Source: LEAP...for Health: Recipes for Life. University of Kentucky Cooperative Extension Service, Nutrition Education Program.

**NUTRITION FACTS PER SERVING:** 210 calories; 11g fat; 1.5g saturated fat; 0g trans fat; 25mg cholesterol; 430mg sodium; 23g carbohydrate; 2g fiber; 2g sugar; 0g added sugars; 5g protein; 0% Daily Value of vitamin D; 2% Daily Value of calcium; 6% Daily Value of iron; 6% Daily Value of potassium.



# Homemaker HAPPENINGS

## Self Care & Self Pamper



Make plans to attend the 2024 KEHA  
State Meeting  
at Sloan Convention Center  
and Holiday Inn University Plaza in  
Bowling Green!

May 7-9, 2024

Blazing the Way with  
KEHA

If you are interested in attending the state  
meeting, call our office. The deadline for  
early bird registration is April 9th.

Reminder  
→  
Log those volunteer  
hours!

## Passport Challenge

Interested in participating  
in our challenge? Log all  
locations, events, and  
more in your travel  
booklet. **Lets explore KY!!**  
You can pick up booklets  
at the Lee County  
Extension Office.





## LEE COUNTY

# Homemakers

It's time again for the Annual State Homemakers Meeting. This year it will be hosted in Bowling Green, Ky. The State is asking for each Area to bring a few items.

**1: Silent Auction items.** If anyone has anything they would like to bring for the silent auction item you can bring it to the office by May 3rd.

**2: Door Prize Basket.** If you would like to donate items for the basket our theme is a car washing basket or anything car-related. Bring to the office by May 3rd.

**3: Quilt Squares showcase and auction:** Anyone looking to participate should make a 12-inch finished quilt square (Finished means piece the square, put the batting, put on the backing, and finish the edges just like you would a completed quilt. Finished applique squares are also eligible) This special showcase is an opportunity to highlight quality work from KEHA members across the state. As you prepare your quilt square(s), consider designs that you would want to purchase. Bring the 12-inch finished square(s) to the state meeting (Or give them to Laken Campbell) Please write your name and county on a small slip of paper and attach it to the back of the square. (You won't be getting them back, it is a donation) Bring to the office by May 3rd.

If you are interested in attending the State Meeting contact Laken Campbell for more information. 606-464-2759

# Kentucky Tick Surveillance Project accepting submissions, advancing public health research and safety —

The Kentucky Tick Surveillance Project, housed in the University of Kentucky's Department of Entomology, offers a unique opportunity for the community to contribute to tickborne disease understanding — furthering public health research in the state.



The Kentucky Tick Surveillance Project directly contributes to the understanding of tickborne diseases. Photo by Getty Images / Risto.

The [Kentucky Tick Surveillance Project](#) is now accepting tick-testing submissions from Kentucky residents. This project, produced by the University of Kentucky [Martin-Gatton College of Agriculture, Food and Environment](#), aims to improve knowledge about where ticks are found and the diseases they might carry.

The results help further public health research at the state level and alleviate concerns for citizens worried about tickborne illnesses.

*"The Kentucky Tick Surveillance Project directly contributes to our understanding of tickborne diseases and their distribution across the state," said Jonathan Larson, UK [Department of Entomology](#) assistant professor. "By the community participating, Kentuckians are not only aiding in crucial public health research but are also taking proactive steps toward safeguarding their own health and their neighbor's."*

By Jordan Strickler

Published on Mar. 19, 2024



- **Do Not Mail Live Ticks:** Ensure that ticks are not alive when sent.
- **Avoid Liquid Alcohol:** Do not send samples in containers of liquid rubbing alcohol.
- **Proper Packaging:** Avoid using only paper envelopes for mailing ticks as they may get damaged in mail processing machines.
- **Avoid Taping Ticks:** Do not place ticks between pieces of tape.

Participants must complete a submission form before sending their tick sample. This form is crucial for processing and can be found at <https://bit.ly/49SixpO>.

Samples without a completed form will not be accepted. Detailed instructions for preparing the tick sample, including necessary supplies and packaging steps, ensure samples arrive in good condition for testing.

### Important Considerations:

- **Selective Testing:** Ticks will not be tested for all possible pathogens. The project focuses on gathering data for surveillance purposes.
- **Notification Process:** Submitters will only be contacted if their submissions test positive for pathogens. There is no notification of negative results.
- **Backlog and Time:** Due to the project's volunteer nature, there is a testing backlog. Participants should expect delays.
- **Not a Substitute for Medical Care:** If a tick has bitten you and has symptoms, seek immediate medical attention. Do not rely solely on submitting the tick for health decisions.

"Community involvement is the backbone of the Kentucky Tick Surveillance Project," Larson said. "Every tick submitted is a piece of the puzzle in understanding our state's tickborne disease landscape. We thank everyone who participates for their contribution to this important work."

**Please send all ticks to the address below:**

**Tick Surveillance Program  
C/O Subba Palli  
Department of Entomology  
S-225 Ag Science Center North  
Lexington, KY, 40546-0091**



For more information on the Kentucky Tick Surveillance, visit — <https://entomology.ca.uky.edu/ticksurveillance2022>.

**Ticks In Kentucky — Lone Star Tick (Amblyosomma americanum) Seasonality:** Adults and nymphs active March through September, with larvae active in the later summer and fall months. **Habitat:** Can be found in woodland and forest areas, and open areas with dense vegetation. **Identification:** Reddish brown body color with a triangular scutum on adult females. Adult females also have one white dot on their dorsal side. Adult males have smaller white markings along the posterior end of the dorsal side at the end of their scutum. Mouthparts are long. **Nymphs and larvae are reddish brown and have a circular body shape. Diseases:** Bourbon virus, Ehrlichiosis\*, Heartland virus, red meat allergy\*, Rocky Mountain Spotted fever\*, Southern tick-associated rash illness (STARI), Tularemia\*. **Fun facts:** Lone star ticks are active questers meaning they will chase their host. This species is very common in Kentucky and is often present in large numbers.



# Fire Blight

Nicole Gauthier

*Plant Pathology Extension Specialist*

Cheryl Kaiser

*Plant Pathology Extension Support*

## INTRODUCTION

Fire blight is a highly destructive disease of apple and pear that can occur in commercial orchards and residential plantings. Many landscape trees and shrubs in the rose family are also susceptible to fire blight (TABLE 1). Because precise conditions are needed for infection, disease appearance may seem erratic from year to year. However, when conditions are favorable, fire blight can quickly cause severe damage.

## SYMPTOMS & SIGNS

### Blossom & Spur Blight

The earliest disease symptoms are evident when blossoms are infected and become water-soaked, wilted, and darkened. As blooms collapse, infection spreads rapidly into other blossoms in the cluster, causing the entire spur to wilt suddenly and die (FIGURE 1). Small creamy white to amber droplets of bacterial ooze may be present on infected blossoms during periods of rain or high humidity. Diseased tissues usually remain attached to trees.



### Cankers

Infections frequently spread from blossoms to supporting spurs and branches, resulting in stem lesions or cankers (FIGURE 2). Fire blight cankers eventually become sunken with a dark brown to purple color. As cankers increase in size, they girdle branches, and tissues above these infection sites die.

### Shoot Blight

Bacterial cells can build up during the blossom and spur blight phases of fire blight and subsequently infect rapidly growing shoots. Leaves on infected shoots initially blacken along the midrib and veins before completely turning brown. Blighted leaves remain attached to shoots, which gives trees a 'scorched by fire' appearance (FIGURE 3). Infected shoots wilt from the tip and develop a crook or bend at the growing point, commonly referred to as a 'shepherd's crook' (FIGURES 4 & 6), a characteristic symptom of fire blight. Droplets of bacterial ooze may be present during warm, humid weather.

### Rootstock/Trunk Blight

Trunk infections can develop near the rootstock graft union from internal movement of the pathogen within water conducting-tissue or via infected water sprouts. The bark at these infection sites becomes water-soaked, discolored, and cracked (FIGURE 5); the wood beneath develops a reddish-brown discoloration. Rapid tree death follows.

**FIGURE 1.** BLOSSOMS SERVE AS THE PRIMARY SOURCE OF INOCULUM FOR FIRE BLIGHT INFECTIONS. SPUR BLIGHT RESULTS WHEN BACTERIAL INFECTIONS SPREAD FROM BLOSSOMS DOWN TO THE SPURS.



**FIGURE 2.** CANKER FORMATION OFTEN BEGINS AT THE BASE OF AN INFECTED SPUR.

**FIGURE 3.** FIRE BLIGHT SYMPTOMS ARE MOST APPARENT DURING THE SHOOT BLIGHT PHASE, WHICH CAN RESULT IN SIGNIFICANT DAMAGE. BLIGHTED SHOOTS GIVE TREES THE APPEARANCE OF BEING SCORCHED BY FIRE.

**FIGURE 4.** THE 'SHEPHERD'S CROOK' SYMPTOM OF THE SHOOT BLIGHT PHASE OCCURS WHEN BACTERIA INFECT SHOOT TIPS.

**FIGURE 5.** TRUNK INFECTIONS NEAR THE ROOTSTOCK GRAFT RESULT IN RAPID TREE DEATH.

## CAUSE & DISEASE DEVELOPMENT

The fire blight bacterium, *Erwinia amylovora*, survives from one year to the next at the margins of previously formed branch and trunk cankers. Surviving bacteria multiply and ooze from canker margins in spring. Insects attracted to the bacterial ooze, along with wind-driven rain, are the primary means for dispersal from overwintering cankers to blossoms.

### Primary Infections

Blossom infections serve as the source of inoculum for primary infections. The pathogen quickly multiplies in these nutrient-rich tissues and spreads via splashing rain and insects to other blossoms and to susceptible shoots.

### Secondary Infections

As fire blight progresses and disease symptoms develop, bacterial populations multiply. New infections continue through petal fall and/or until shoot elongation stops, as long as environmental conditions are conducive.

### Trauma Blight

High impact events, such as wind-driven rain and hail, can result in an increase in disease incidence. These events result in wounds that serve as portals of entry for the fire blight bacterium. Symptoms may appear within 1 to 2 weeks of the event.

### Conditions Favoring Disease

Fire blight is generally favored by:

- High relative humidity or rainy conditions.
- Temperatures between 65°F and 70°F, although disease may develop at temperatures outside of this optimal range.

Under these conditions, bacterial populations can build-up rapidly. At 70°F, numbers of bacterial cells double every 20 minutes; one cell can become one billion cells overnight, each capable of causing a new infection.



**FIGURE 6.** FIRE BLIGHT SYMPTOMS ON COTONEASTER RESEMBLE THE DISTINCTIVE SYMPTOMS FOUND IN APPLE AND PEAR.

## DISEASE MANAGEMENT

The key to fire blight management is preventing blossom infections; once infected, blossoms serve as a source of inoculum for the rest of the tree, as well as other trees in the planting or orchard. Disease management requires an integrated approach that relies primarily on cultural practices and is supported by the judicious use of bactericides.

### Resistant Cultivars

While few cultivars of apple, pear, or the various ornamental host species are immune to fire blight, some cultivars are more resistant or tolerant than others. Whenever possible, plant tolerant cultivars and cultivar/rootstock combinations. For information on cultivars and rootstocks with fire blight resistance, refer to the publications listed under Disease Resistant Cultivars in Additional Resources.

### Cultural Practices

Implementing cultural practices is important in managing fire blight:

- Avoid production practices that stimulate rapid tree growth; young succulent tissue is susceptible to infection.
  - Avoid excess fertilization. Apply fertilizers (especially nitrogen applications) that are adequate for tree health without promoting rapid growth and prolonged succulence.
  - Avoid aggressive pruning that will stimulate tissue growth. Selectively prune trees to improve air circulation and to promote rapid drying of foliage.
- Do not plant new trees downwind from or near already infected trees.
- Remove and/or destroy prunings; do not leave them in the orchard.

**TABLE 1.** COMMON AND SCIENTIFIC NAMES OF SOME FIRE BLIGHT HOSTS IDENTIFIED IN KENTUCKY.

<b>Common Hosts</b>	
Apple	<i>Malus domestica</i>
Cotoneaster	<i>Cotoneaster</i> spp.
Crabapple, flowering	<i>Malus</i> spp.
Hawthorn	<i>Crataegus</i> spp.
Mountain ash	<i>Sorbus</i> spp.
Pear	<i>Pyrus</i> spp.
Pear, callery	<i>Pyrus callaryana</i>
<b>Additional Hosts</b>	
Blackberry, thornless	<i>Rubus</i> spp.
Christmas berry	<i>Photinia villosa</i>
Firethorn	<i>Pyracantha coccinea</i>
Plum, flowering	<i>Prunus triloba</i> var. <i>plena</i>
Quince, cultivated	<i>Cydonia vulgaris</i>
Quince, flowering	<i>Chaenomeles japonica</i>
Raspberry, red & black	<i>Rubus</i> spp.
Rose	<i>Rosa</i> spp.
Serviceberry	<i>Amelanchier canadensis</i>
Spirea	<i>Spirea vanhouttei</i>
Stranvaesia	<i>Stranvaesia davidiana</i>

### Pruning Infected Tissue

Pruning can play an important role in a comprehensive fire blight management program, and when done properly, should reduce inoculum and tree damage. However, while removal of sources of the pathogen is desirable, pruning when the bacterium is active can further spread the pathogen. Thus, removal of fire blight strikes during the growing season is a controversial issue. Due to the high risk of bacterial spread, UK currently recommends that pruning blighted twigs and cankered branches be delayed until winter.

#### *Pruning during dormancy*

Diseased limbs may be flagged or painted during the growing season so they can be easily identified during winter. During late winter or early spring:

- Prune carefully so that ALL infected branches are removed.
- Blighted twigs should be pruned at least 6 to 8 inches below cankers and infected areas, preferably down to the branch union.
- Remove and destroy pruned material to eliminate potential sources of inoculum for subsequent growing seasons. Do not leave prunings on the orchard floor.

[View this link for the Kentucky Beef Book—](http://www2.ca.uky.edu/agcomm/pubs/ID/ID108/ID108.pdf)

<http://www2.ca.uky.edu/agcomm/pubs/ID/ID108/ID108.pdf>