



# Agriculture & Natural Resources Newsletter

Magoffin County  
15 Rockhouse Fork Rd  
Salersville, KY 41465  
(606) 349-1236  
magoffin.ca.uky.edu

## A message from your ANR Agent:

4-H Camp is fast approaching! We have an orientation for campers and their grown ups on June 7th at 4pm. This meeting will answer all of your camp questions and concerns. We will be attending 4-H Camp from June 20-23 this year. We also welcomed Stefaine Back as our new KSU 4-H Agent last month!

Our office will be closed for Juneteenth on Monday, June 19th.

If you are interested in selling fresh produce, eggs, honey, or handmade artisan crafts call our office at 606-349-1236 for more information on how to join the Magoffin County Farmers' Market. As you tend to your gardens and care for your animals, remember that your hard work and dedication are essential to sustain life. Each seed you sow, each animal you nurture, contributes to a greater harmony that connects us all. Even in moments of fatigue or uncertainty, know that your efforts bring beauty, nourishment, and joy to our world. Take pride in your role as a steward of the land. Happy Summer!



*Kristen Stumbo*  
Kristen Stumbo

County Extension Agent for  
Agriculture & Natural Resources



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# Water Safety Reminders

There is nothing like cooling off with a day at the lake or nothing as relaxing as going fishing. As you enjoy Kentucky's wonderful waterways this summer, remember to take measures to stay healthy.

While many of our waterways are safe to swim in or eat fish from, some are not due to unsafe levels of pollutants and bacteria. It is important to check water quality advisories before heading to your favorite waterway for recreation. You can see the latest advisories for swimming, fishing and harmful algal blooms on the Kentucky Energy and Environment Cabinet's website <https://eec.ky.gov/Environmental-Protection/Water/Pages/Advisory.aspx>. Do not swim in or consume fish from rivers, lakes, ponds, creeks or streams with an advisory.

Any waterway in which you spend time can potentially affect your health. If you come in contact with contaminated water, you may experience symptoms like gastrointestinal issues, skin rashes, respiratory issues or eye or ear infections. If you experience these symptoms or suspect you have come in contact with water pollutants, contact your primary care physician.

To minimize your risk of getting a water-related illness, the Kentucky Department for Public Health and Kentucky Division of Water recommend you avoid ingesting or inhaling water. When you leave for the day, make sure you thoroughly wash your hands and any other body parts that came in contact with water. Do not put open wounds in the water, as it could cause the wound to get an infection. Do not get in water that smells bad or has surface scum. Avoid getting in water after a heavy rain event, especially in dense residential, urban or agricultural areas. Steer clear of waterways located below wastewater treatment facility outfalls, animal feedlots, straight pipes or other obvious pollution sources.

Also pay close attention to the water your pets and livestock consume. Do not let them drink from water sources with a bright green or blue surface scum. It can cause them to experience gastrointestinal issues. Keep your livestock from loafing in ponds or other waterways. Their urine and feces contaminate the water. Consuming this water can give them gastrointestinal issues. It can also lead to a fish kill.



More information on water quality and water safety is available at the Magoffin County office of the University of Kentucky Cooperative Extension Service.

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# Replacing or Rescuing Damaged Shrubs

The extreme cold spell at the end of December 2022 caused severe damage to many shrubs and bushes around Kentucky homes. With plants greening up this spring, you may be wondering what to remove and what to attempt to rescue in your landscape.

The cold is just one part of the puzzle when shrub health declines. Other factors include soil pH, soil volume, too much or too little water and light availability.

Some shrubs may just need a good pruning and time to recover from the winter stress. If you want to try to revive the shrub through pruning, you'll need to trim it down with sturdy pruning shears. Don't remove more than one-third of the plant in a season. If the plant is healthy, it will soon produce new green shoots. If your shrub has more brown branches than green at the core, it may be time for you to remove it. When shrubs become too woody in the middle, start over with another plant.

Well-established shrubs may have large, complex root structures. Make sure to completely remove them before planting something new. Use the transition time to do a soil test so you know what amendments it will need before you bring home new plants.

If you must replace landscape shrubs and plants, Kentucky has more than 1,200 nurseries and retailers selling hundreds of types of trees, shrubs, groundcovers and perennials. With 120 counties of resources, you can buy locally without driving very far. The Kentucky Department of Agriculture's Kentucky Proud program allows individuals locate local retail garden centers that market Kentucky-grown trees and shrubs. Search the garden center database at <https://www.kyagr.com/agbus/products.aspx?group=19&category=112>. Retailers looking to stock their garden centers with Kentucky-grown trees and shrubs may use the Landscape Plant Availability Guide <https://www.kyagr.com/marketing/plant/common-name-search.aspx>.

Kentucky also has many qualified nursery growers, retailers, landscapers and arborists. The Cooperative Extension Service offers many green-industry classes throughout the year. Kentucky nursery growers and retailers are a very well-trained group of horticulturists. They are familiar with Kentucky soil types, weather and other factors playing a role in plant performance. When you visit a local nursery to choose new plants, make sure and read the tags and note the light, water and soil requirements. Ensure the new plants fit your landscape.

To learn more about transplanting container plants, check out the University of Kentucky Cooperative Extension publication *Planting Container-Grown Trees and Shrubs in Your Landscape*, HO-114. You can find it online here: <https://tinyurl.com/24fx9j9p>. For more information about horticultural topics or classes near you, contact the Magoffin Cooperative Extension Service.

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# Spring Tornado Safety

By Jane Marie Wix - National Weather Service Jackson, KY  
(in coordination with Kentucky Emergency Management)



Each year, the United States experiences an average of 1,200 tornadoes. Many strike rural areas and cause little damage, and most have paths well under one mile in length and winds under 100 mph. However, a few tornadoes can become large and violent, with wind speeds approaching 200 mph, tracking tens of miles and leaving swaths of destruction and death. In Kentucky, tornadoes have occurred during every month of the year and at every hour of the day. However, they occur most frequently from March through June and typically between 3 and 10 PM. Nighttime tornadoes are often more dangerous as they are harder to see and most people are sleeping.

So what do you do if there is a tornado? How do you stay safe?

## Before a Tornado

- Have a family tornado plan in place and practice a family tornado drill at least once a year.
- Have a predetermined place to meet after a disaster.
- Learn the signs of a tornado: dark, greenish sky; large hail; dark, low clouds; and loud roaring sounds.
- When a tornado watch is issued, practice your drill and check your safety supplies.
- Increase your situational awareness by monitoring the weather on [weather.gov](http://weather.gov), watching local TV, or listening to NOAA Weather Radio.
- Flying debris is the greatest danger in tornadoes; so store protective coverings (e.g., mattress, helmets, sleeping bags, thick blankets, etc) in or next to your shelter space, ready to use on a few seconds notice.
- Tornado rule of thumb: Put as many walls and floors between you and the tornado as possible!
- If you are planning to build a house, consider an underground tornado shelter or an interior "safe room".
- **In a mobile home: GET OUT!** Go to a neighbor's house, underground shelter, or a nearby permanent structure. Most tornadoes can destroy even tied-down mobile homes.

## During a Tornado

- Wear a bicycle or motorcycle helmet to protect your head and neck or cover your head with a thick book.
- **In a house with a basement:** Avoid windows. Get in the basement and under some type of sturdy protection (heavy table or workbench), or cover yourself with a mattress or sleeping bag. Know where very heavy objects rest on the floor above (pianos, refrigerators, dressers, etc.) and do not go under them. They may fall down through a weakened floor and crush you.
- **In a house without a basement, a dorm, or an apartment:** Avoid windows. Go to the lowest floor, in a small interior room (like a bathroom or closet), under a stairwell, or in an interior hallway with no windows. Crouch as low as possible to the floor, facing down. A bath tub may offer a shell of partial protection. Even in an interior room, you should cover yourself with some sort of thick padding (mattress, blankets, etc.), to protect against falling debris in case the roof and ceiling fail.



# Spring Tornado Safety Continued...

- **In a car or truck:** If you are caught by extreme winds or flying debris, park the car as quickly and safely as possible - out of the traffic lanes. Stay in the car with the seat belt on. Put your head down below the windows; cover your head with your hands and a blanket, coat, or other cushion if possible. If you can safely get noticeably lower than the level of the roadway, leave your car and lie in that area. Avoid seeking shelter under bridges.
- In the open outdoors: **lie flat and face-down on low ground, protecting the back of your head with your arms. Get as far away from trees and cars as you can.**

## After a Tornado

- Remain calm and alert, and listen to the radio or TV for instructions from authorities.
- Keep your family together and wait for emergency personnel to arrive.
- Carefully render aid to those who are injured.
- Stay away from downed power lines.
- Watch your step to avoid broken glass, nails, and other sharp objects.
- Stay out of any heavily damaged houses or buildings.
- Do not use matches or lighters, there might be leaking natural gas pipes or fuel tanks nearby.



Image Courtesy of the Lexington Herald Leader (Lexington, KY)

## Development of the Chick

Source: Tony Pescatore and Jacquie Jacob, Animal and Food Science

Poultry eggs are part of a unique reproductive system. The egg serves to protect and provide nutrients to the developing embryo. Since the embryo receives no additional nutrients from the hen, the egg must contain all the nutrients essential for life. Nutrients are found in the yolk, the albumen, and the shell of the egg. The egg is a convenient, self-contained package for studying embryology.

An egg consists of a yolk, albumen, shell membranes, shell, and a single reproductive cell called the germinal disc or ovum. The ovum appears as a small white dot on the surface of the yolk. The ovum contains half the genes of a new chick. The other genes come from the rooster and are found in the sperm cell. The union of the ovum with a sperm cell is called fertilization and is the beginning of a new individual. After fertilization, the embryo begins to grow by cell division. By the time the egg is laid, the initial single cell has developed into 4,000 to 6,000 cells.

Once the chicken egg is laid, temperatures below 68°F (20°C) will stop embryo development. The embryo will remain at rest until the egg is re-warmed by either a brood hen or an incubator. This temperature (68°F/20°C) is referred to as “physiological zero.” The ideal incubation temperature of the chicken is 99°F/100°F (37°C-38°C). If the temperature of the egg goes above physiological zero, embryonic development can occur. Above physiological zero but below optimal incubation temperatures will result in weaker embryos and higher mortality.

Table 1. Incubation Periods of Different Poultry Species.

Species	Incubation period (days)
Chicken	21
Chukar partridge	24
Duck (except Muscovy)	28
Muscovy duck	35
Goose (except Canada and Egyptian)	28-32
Canada and Egyptian geese	35
Grouse	25
Guinea fowl	28
Peafowl	28
Pheasant (ringneck)	24
Pigeon	17
Quail-Bobwhite	24
Quail-Japanese (Cortunix)	16-18
Turkey	28

Once rewarmed to the correct incubation temperature, the chicken embryo will grow and develop over a 21-day period and then emerge from the egg as a fully developed chicken. Other types of birds have different incubation periods, as shown in Table 1.

During incubation, the embryo develops in a predictable manner with specific events occurring at specific times.

In order to develop, the embryo must have a way to receive nutrients from the egg. The embryo develops extra-embryonic membranes for this function. The extra-embryonic membranes are the yolk sac, the amnion, and the chorio-allantoic membrane. The yolk sac is a membrane that spreads over the yolk and transports food from the yolk to the embryo. The amnion is a fluid-filled sac that covers the embryo and protects it from physical shocks and injury. The chorio-allantoic membrane has four functions:

1. It is a respiratory organ that provides oxygen to the embryo.
2. It is a storage area for the waste products the embryo produces.
3. It provides food from the albumen to the embryo.
4. It brings calcium from the egg shell to the embryo.

Once these extra-embryonic membranes have made contact with the food supplies and shell, the embryo proceeds to grow at a rapid rate. The development of an embryo is a fragile process that is easily disturbed. A list of common incubation problems and their causes is presented in Table 3. Many of these problems can be prevented by maintaining proper temperature, humidity, ventilation, and by turning the egg regularly.

The temperature in a still-air incubator should be 100°F to 101°F (37.8°C to 38.3°C). In a forced-air incubator (one that is equipped with a fan), the temperature should be 99°F to 100°F (37.2°C to 37.8°C). Overheating the eggs will reduce the number of chicks that will hatch. The relative humidity in the incubator should be 70 percent. Use a wet-bulb thermometer and the chart in Table 4 to measure humidity. Each incubator is equipped with ventilation holes. These holes should be opened to allow fresh air to enter the incubator. Chicken eggs should be turned at least three times per day from Day 2 to Day 18 of incubation. Do not turn the eggs after 18 days of incubation. The study of the development of the chick is a fun and interesting project that can be done by all ages.

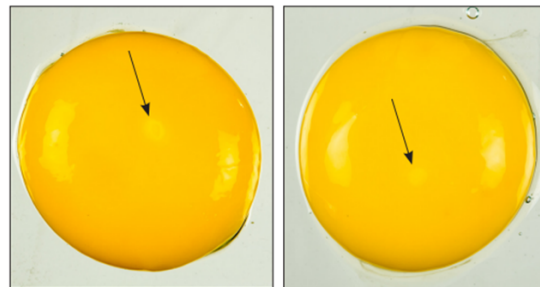


Figure 1. Yolk from a fertile egg (left) versus yolk from an infertile egg.

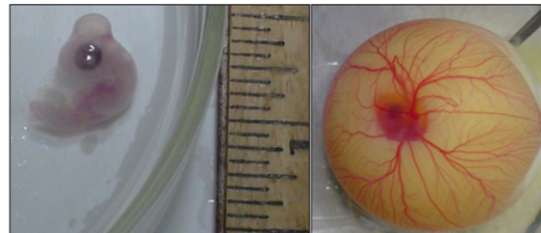


Figure 2. Day 6 embryo.



Figure 3. Day 4 embryo.



Figure 5. Newly hatched chick.

Table 3. Common Incubation Problems.

Symptoms	Causes
Many eggs with no embryo	Problems with parents Eggs stored too long Eggs stored above 55°F (12.8°C)
Blood rings	Improper temperature in the incubator Improper care of eggs
Dead embryos	Temperature too high or too low Improper turning of eggs Poor ventilation
Pipped eggs not hatching	Low humidity
Chicks hatching too early	Temperature too high
Late pipping of eggs	Low temperatures
Eggs pipped by chick take a long time to hatch	Temperature too high
Short down on chicks	High temperature Low humidity
Rough navels	High temperature Low humidity
Shell sticking to chicks	Low humidity during hatch
Mushy, bad-smelling chicks	Bacteria in the incubator
Crippled and deformed chicks	Heredity Possible nutrient deficiency in the breeder flock



# Water is Nutrient Number 1 for Horses

Horses rely on many nutrients to thrive including protein, fat, carbohydrates, vitamins and minerals. However, water is the most important nutrient. Water accounts for nearly 75% of a horse's body weight. Most horses need at least 6-8 gallons every day, but the amount required will vary based on weather or diet. In hot weather, horses will need more water, and a horse eating hay requires more than one on pasture. Lactating broodmares always require more water.

Always prioritize fresh, clean water for your animals for many reasons. Adequate hydration reduces the risk of colic and plays a vital role in digestion. Water helps horses regulate their body temperature, lubricates joints, assists in muscle contraction strength and get rid of waste.

Most horse managers easily prioritize clean, fresh water in the barn. They have a daily routine of checking, cleaning and filling water buckets. But outside water may end up being more accidental than routine. You can't rely on streams and ponds for your water source. Horse traffic can break down stream banks, contaminate the water source and even cause animal injuries. Regularly check stock tanks and troughs, frequently change the water and clean the container.

Stock tank water may get a bit warmer than what some horses prefer, so watching the capacity of the watering device can help. Keep water cooler by changing it more often or having the water refreshed in the waterer more often. This can help provide water horses want to drink. Carefully consider where to dump dirty water in the field so you don't create muddy areas.

Forages contain moisture and grazing horses will get some daily hydration while munching on pasture. However, still offer free-choice water sources for horses to visit throughout the day.

Learn to recognize dehydration signs in your horses. By the time you see the signs, your horse may have already lost 5% of its body weight. Dehydrated horses appear weak, have sunken eyeballs, dry mucous membranes, slow capillary refill time and an increased heart rate. Pinch the horse's skin near the base of their neck for two seconds. If the skin stays pinched, your horse most likely needs water and possibly electrolytes.

For more information about horse management, contact the Magoffin Cooperative Extension Service.

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# Forage Timely Tips: June

Source: Kentucky Forage News

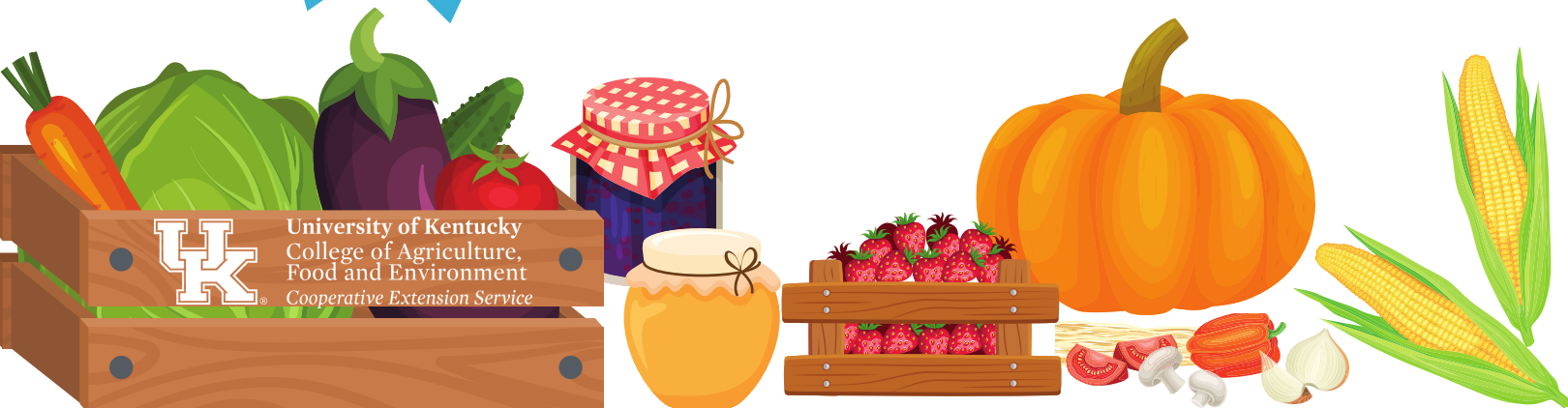
- Continue hay harvests. Minimize storage losses by storing hay under cover.
- Clip pastures for weeds and seedheads as needed.
- Use slower grazing rotations allowing for a longer recovery periods.
- Use portable fencing to decrease paddock size and increase paddock number.
- Do NOT graze below the minimum desired residual height (4 in for most forages).
- When present, johnsongrass can provide high quality summer forage when managed.
- Crabgrass, a warm-season annual grass, can provide high quality summer grazing. It is a annual grass highly preferred by livestock. If desired, remember crabgrass needs some annual soil disturbance to keep coming back.
- Begin grazing native warm-season grasses. Start at 20-24" and stop at 8-10 inches.

## Vendors Meeting for the MAGOFFIN COUNTY FARMER'S MARKET

**June 6th  
@ 5:30pm**

Calling all Magoffin County Farmers,  
Gardeners, Crafters, and Beekeepers!

If you are interested in selling homegrown or handmade goods at the Magoffin County Farmer's Market join us on June 6th at the Magoffin County Extension Office for our Farmer's Market Vendors Meeting, we would love to have you join for the 2023 market season! Call our office at 606-349-1236 for more information.







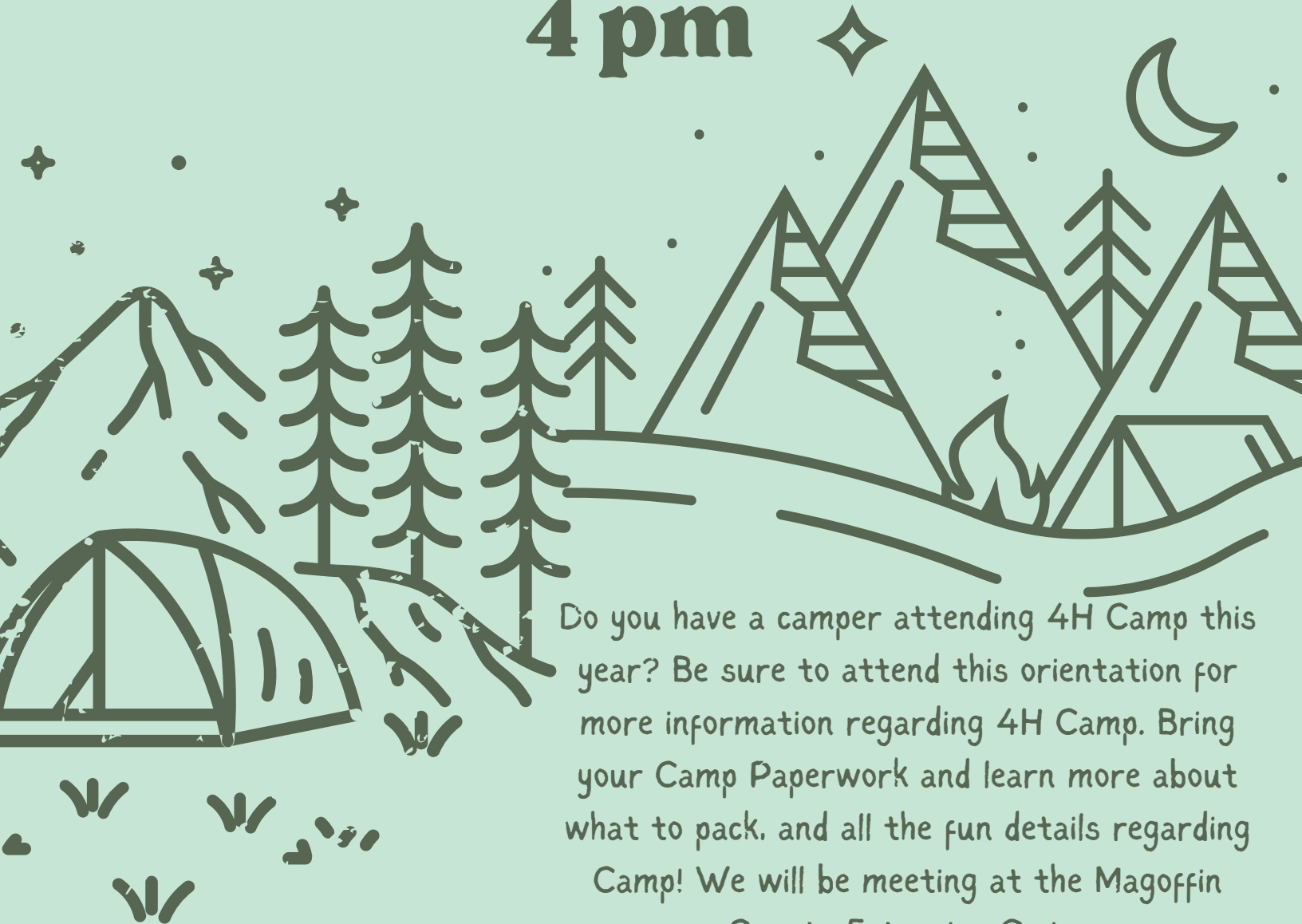
University of Kentucky  
College of Agriculture,  
Food and Environment  
Cooperative Extension Service

# 4H CAMP

## Camper Orientation

### June 7th

### 4 pm



Do you have a camper attending 4H Camp this year? Be sure to attend this orientation for more information regarding 4H Camp. Bring your Camp Paperwork and learn more about what to pack, and all the fun details regarding Camp! We will be meeting at the Magoffin County Extension Office

**Cooperative Extension Service**  
Agriculture and Natural Resources  
Family and Consumer Sciences  
4-H Youth Development  
Community and Economic Development

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LEXINGTON, KY 40546



Disabilities  
accommodated  
with prior notification.



COOPERATIVE EXTENSION



# BACK TO 4-H CAMP

MONTH

DAY

YEAR

06

20

20

23

TO

06

23

20

23

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Agriculture and Natural Resources  
Family and Consumer Sciences  
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LEXINGTON, KY 40546



Disabilities accommodated with prior notification.



# Kentucky Woodland Owners Short Course

June - July 2023

## Kentucky Woodland Owners Short Course



### On-line Sessions

Via Zoom

7 - 8:30 p.m.  
Eastern



**June 20**  
Your Trees, Your Woodlands, Your Options



**June 22**  
Woodlands and Climate Change



**June 27**  
Wildlife and Woodlands



**June 29**  
Woodland Health

Registration for all 4 on-line sessions: \$10 per person

Registration for all 4 on-line sessions, 1 field session with lunch, a clipboard binder, and reference resources: \$20 per person/\$30 couple



Field Session Locations (9:30 a.m. - 3:30 p.m.):

**July 15** - Pennyryle State Forest (Christian County - Central time)

**July 29** - Elk Caves Farm (Boyle/Casey counties - Eastern time)

### Contact Us:

Forestry.Extension@uky.edu

859.257.7597

<https://wosc.ca.uky.edu/>

 College of Agriculture,  
Food and Environment  
Forestry and Natural Resources Extension

Register at <https://wosc.ca.uky.edu/>

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## Blackberry Coffee Cake

<b>1 cup</b> all-purpose flour	<b>1/3 cup</b> margarine	<b>2 eggs</b>
<b>1 cup</b> whole wheat flour	<b>1/3 cup</b> applesauce	<b>1 teaspoon</b> vanilla
<b>1 1/2 cups</b> white sugar	<b>1/2 teaspoon</b> cinnamon	<b>2/3 cup</b> 1% milk
<b>2 teaspoons</b> baking powder	<b>2 tablespoons</b> brown sugar	<b>2 cups</b> blackberries, washed
<b>1 teaspoon</b> salt		

**Preheat** oven to 350 degrees F. **Grease** and **flour** a 9-by-13- inch baking pan. In a large bowl, **combine** flours, sugar, baking powder and salt. Using a pastry blender, cut margarine and applesauce into the mixture until it resembles coarse crumbs. **Stir** in the cinnamon and brown sugar. **Set aside** 3/4 cup of crumb mixture to be used as a topping for the cake. In a medium bowl, **mix** together eggs, vanilla and milk. **Blend** into remaining flour mixture. **Spread** batter into prepared pan. **Sprinkle** blackberries evenly over the

batter. Gently **press** blackberries into the batter. **Sprinkle** reserved crumb mixture over fruit and gently pat down. **Bake** in preheated oven for 25-30 minutes or until a toothpick inserted into the center of the cake comes out clean.

**Yield:** 15 servings.

**Nutritional Analysis:** 170 calories, 5 g fat, 1 g saturated fat, 1 g trans fat, 30 mg cholesterol, 280 mg sodium, 32 g carbohydrate, 2 g fiber, 18 g sugars, 3 g protein.

