

# Ag and Natural Resources News

May 2023

Cooperative Extension Service  
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## Mark your calendars now!

### ► **Watering Options for Livestock**

May 11, 2023 · 7:00pm  
Kenton County Extension Office  
10990 Marshall Rd., Covington

### ► **Farmers Market Opening**

May 13, 2023 · 9am—5pm  
Boone County Farmers Market  
1961 Burlington Pike, Burlington

### ► **Family Friendly Community Activities Fair**

May 20, 2023 · 9am—1pm  
Boone County Farmers Market  
1961 Burlington Pike, Burlington

Monday, May 29, 2023



## Fertilizing Pastures

Fertilizing pastures is an essential part of maintaining healthy and productive grazing land for livestock. However, not all pastures require the same type or amount of fertilizer, and it's important for pasture managers to understand the different types of fertilizers available and the factors that affect their application. Here are some key considerations for fertilizing pastures:

### Soil Testing

Before fertilizing pastures, it's important to conduct a soil test to determine the nutrient content of the soil. Soil tests can help identify nutrient deficiencies or imbalances, which can affect plant growth and animal health. Soil testing should be done every 2-3 years, and samples should be taken from various locations in the pasture to get an accurate picture of soil nutrient levels.



### Types of Fertilizers

There are two main types of fertilizers: organic and inorganic. Organic fertilizers include manure, compost, and other natural materials that provide nutrients to the soil. Inorganic fertilizers, on the other hand, are synthetic materials that are formulated to provide specific nutrients to the soil. Inorganic fertilizers are often preferred by pasture managers because they provide a more precise nutrient profile and are easier to apply.

### Nutrient Requirements

The nutrient requirements of pastures depend on a variety of factors, including soil type, plant species, and the type and number

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# Cabbage Roll Stew

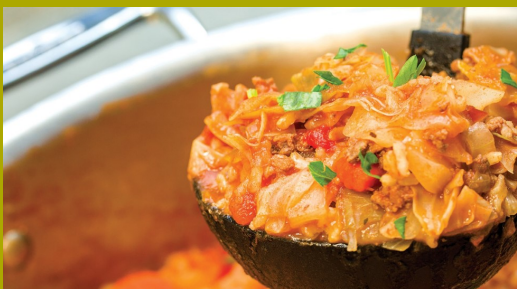
- 1 pound ground beef
- 1 onion, chopped
- 1 (14.5 ounce) can carrots, drained
- 1 medium cabbage head, finely chopped or shredded
- 1 tablespoon garlic powder
- 2 cups low-sodium beef broth
- 1 (28 ounce) can tomato sauce
- 1 (15 ounce) can, no-sodium added, diced tomatoes
- 1 teaspoon oregano
- 1 teaspoon ground thyme
- 1 cup dry brown rice
- ½ teaspoon salt
- ½ teaspoon pepper

Heat a large pot over medium heat. Add beef and cook until brown, breaking up large pieces of beef. Remove from pot and set aside.

Discard the fat, saving two tablespoons in the pot. Add onion and carrots. Sauté for two minutes. Add cabbage and garlic powder. Cook 3-4 minutes.

Add beef broth, tomato sauce, diced tomatoes, oregano and thyme. Stir to combine. Bring to a light boil. Add rice and the cooked beef. Cover pot and reduce heat to medium-low. Simmer until rice is cooked, about 25 minutes, stirring occasionally. Stir in ½ to 1 cup of water if soup is too thick. Season with salt and pepper.

*Makes 8 servings Serving Size: 1 ½ cup  
Per serving: 290 calories; 9g total fat; 3g saturated fat; 0g trans fat; 50mg cholesterol; 710mg sodium; 34g carbohydrate; 8g fiber; 10g sugar; 0g added sugar; 21g protein; 0% Daily Value of vitamin D; 8% Daily Value of calcium; 20% Daily Value of iron; 20% Daily Value of potassium.*



of livestock grazing on the land. Different plants require different nutrients, and livestock require specific levels of nutrients for optimal health and growth. The most important nutrients for pasture growth are nitrogen (N), phosphorus (P), and potassium (K).

## Timing of Fertilization

Fertilization should be timed to coincide with the periods of greatest plant growth. This is usually in the spring and fall, when temperatures are moderate and rainfall is abundant. Fertilization in the summer can lead to nitrogen loss through evaporation or leaching, while fertilization in the winter can be ineffective because plants are dormant.

## Application Rates

The application rates of fertilizers depend on the nutrient requirements of the pasture and the nutrient content of the fertilizer. Nitrogen is the most commonly applied nutrient, and application rates vary depending on the type of fertilizer and the desired results. Over-fertilization can lead to nutrient runoff and pollution, while under-fertilization can result in poor plant growth and reduced animal performance.

## Methods of Application

Fertilizers can be applied using several different methods, including broadcasting, banding, and topdressing. Broadcasting involves spreading fertilizer over the entire pasture, while banding involves placing fertilizer in rows or bands in specific areas. Topdressing involves spreading fertilizer on the surface of the soil after grazing or mowing. The method of application should be chosen based on the type of fertilizer, the nutrient requirements of the pasture, and the desired results.

## Environmental Considerations

Fertilizer application can have environmental impacts, including nutrient runoff and pollution. To minimize these impacts, pasture managers should follow best management practices for fertilization, including avoiding application during rainy or windy weather, using the correct application rates, and avoiding over-fertilization. Additionally, it's important to consider the potential impacts on nearby water sources and to follow local regulations for fertilizer application.

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In conclusion, fertilizing pastures is an essential part of maintaining healthy and productive grazing land for livestock. By understanding the types of fertilizers available, the nutrient requirements of the pasture, the timing and rates of application, and the environmental considerations involved, pasture managers can create healthy and productive pastures that support the health and growth of their livestock. By following best management practices for fertilization and working with local agricultural extension offices, pasture managers can create sustainable and profitable grazing operations that benefit both their livestock and the environment.

## Rotational Grazing

Rotational grazing is a method of managing pastureland by dividing it into smaller paddocks and rotating livestock through them. This approach provides several benefits, such as improved forage quality and quantity, reduced soil erosion, and increased animal performance. Here is a step-by-step guide on how to do rotational grazing:



### Step 1: Plan your grazing system

Before implementing rotational grazing, it is crucial to plan the grazing system. Factors to consider include the type and number of animals, pasture size and quality, soil type and fertility, and climate. Create a grazing plan that accounts for the seasonal variations in forage growth and animal nutritional requirements.

### Step 2: Divide the pasture into paddocks

Divide the pasture into smaller paddocks using electric fencing or permanent fencing. The size of the paddocks will depend on the number and size of the animals and the forage growth rate. As a general rule, the paddocks should be large enough to provide sufficient forage for the animals for a few days, but not so large that they can overgraze the area.

### Step 3: Implement the grazing rotation

Rotate the animals through the paddocks according to the grazing plan. The length of time the animals spend in each paddock will depend on the forage growth rate and the nutritional requirements of the animals. Ideally, the animals should graze the paddock down to around 50% before being moved to the next paddock. This allows the forage to recover before the animals return to the area.

### Step 4: Monitor forage growth and animal performance

Regularly monitor forage growth and animal performance to ensure that the grazing system is working effectively. Adjust the grazing rotation as needed based on the amount of forage available and the nutritional requirements of the animals. Keep detailed records of the grazing system to evaluate its effectiveness and make informed management decisions in the future.

### Step 5: Maintain the pastureland

Proper pastureland management is essential for a successful rotational grazing system. This includes regular soil testing and fertilization, weed control, and proper grazing management. Rest the pastureland periodically to allow forage regrowth and prevent soil erosion.

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## How to Create a Riparian Buffer

**Delineate the Area:** Inspect the area adjacent to streams after storm events. The flooded area makes a good outline area for fencing. Installing fence outside the flooding area will decrease fence damage from flooding debris and reduce maintenance costs. The flood-prone area might include a large area of land, so remember that even a 20-foot buffer along a stream will provide some streambank stabilization.

**Prepare the Site:** Pastures dominated by endophyte-infected fescue may require preparation prior to tree planting. Consult AGR-172 for renovation instructions.

**Select Trees, Shrubs, and Grasses to Plant:** Native tree and shrub species appropriate to your location should be selected for planting in the riparian buffer. Native species are best suited to local soils and weather conditions (i.e. flooding and drought), and they offer multiple values, including streambank stabilization, timber, and wildlife habitat. Non-native invasive species should be avoided.

**Plant Vegetation:** Tree seedlings may be planted by hand or with a tree planter.

**Maintain the Buffer:** Riparian buffers enrolled in cost-share programs must meet the criteria of the programs. Maintenance may include removal of non-native vegetation.

**Fence the Buffer:** Riparian buffers should be protected by fencing to limit livestock access.

Rotational grazing is a beneficial method of pastureland management that can improve forage quality and quantity, reduce soil erosion, and increase animal performance. By following the steps outlined above, you can implement a successful rotational grazing system on your farm or ranch. Remember to plan the grazing system, divide the pasture into paddocks, implement the grazing rotation, monitor forage growth and animal performance, and maintain the pastureland for long-term success.

## Riparian Areas and Cattle Production

Cattle are naturally attracted to riparian areas. They will often use them at higher rates than adjacent uplands, mostly because of the availability of water and lush forages that are found in these areas. They may also loaf around one or two large trees, taking advantage of the shade in warmer months. The increased residence time of cattle in riparian areas leads to increased sediment deposits and erosion of stream banks caused by foot traffic. In addition, there is a higher concentration of manure being deposited in these areas. When cattle are located in riparian areas for extended periods of time, pastures cannot be utilized effectively. The vegetation in the riparian area can become degraded, the soil compacted, and the stream contaminated. Therefore, cattle should be excluded from riparian areas to improve pasture utilization and protect water quality.

The two main pollutants to waterways that can be attributed to cattle production are pathogens and sediment. In addition, manure can also cause nutrient and other water quality impairments. These water quality impairments occur as a result of cattle reducing or eliminating the vegetation around streams, compacting the soil, degrading the stream banks by entering and exiting the stream, and loafing and defecating in the stream. Moving cattle away from a riparian area reduces the amount of potential contaminant runoff and deposition in the stream. In addition, moving cattle off the riparian area may better utilize forages within a pasture. As part of the Kentucky Agriculture Water Quality Act (KAWQA), livestock producers are encouraged to implement best management practices (BMPs) to restrict or limit livestock access to streams. Appropriate BMPs for cattle operations include controlling access to streams by installing riparian fences, cattle crossings, and alternative water sources (Photo 1).

Shade structures, mineral supplement, and alternative water sources can also be used to lure cattle away from riparian areas. Rotational grazing practices can also restrict livestock from riparian areas and improve pasture utilization. Using combinations of these BMPs can improve the stream system and water quality. A producer may not want to exclude the riparian area because of cost, loss of

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pasture, or the trouble to move temporary fences. However, the pastures should be divided into smaller pastures to take advantage of improved animal and pasture productivity using rotational grazing.

Cost share opportunities exist for rotation grazing and to create or enhance riparian buffers on farms. The Conservation Reserve Program (CRP), the Conservation Reserve Enhancement Program (CREP), the Conservation Stewardship Program (CSP), and the Environmental Quality Incentives Program (EQIP) pay producers either through cost share dollars or annual rental payments to convert highly erodible and environmentally sensitive land into riparian buffer areas. These federal conservation programs are administered by the Farm Service Agency (FSA) and the NRCS (American Farmland Trust, 2004). State and local cost-share programs are also available through local conservation districts and the Kentucky Soil and Water Conservation Commission. Depending on the size of the floodplain, the loss of pasture from implementing a riparian area could be minimal and even negligible for a much larger pasture system.



(Photo 1) Photo Credit: AEN-101: Stream Crossings for

The cost can also be reduced by using temporary fencing systems. This practice allows a producer to practice flash grazing techniques to utilize the forage in the riparian area on a temporary basis. As a rule, the location of the exclusion fence should not be based on distance, but by the area covered by a typical flood. A system of gates on both sides of the stream crossings can be used to either completely exclude the animals from the stream or to provide a limited access to the stream for drinking water. Because cattle productivity is greater when animals drink clean water, it is important that the water supply be protected and/or tested depending on your management style. Producers may want to have the water source tested for contaminants such as nutrients and pathogens. For more information about riparian buffers, the KAWQA, and cost share programs for implementation of buffers, contact your local USDA Service Center or your local conservation district office.

*Excerpt from: Riparian Buffers: A Livestock Best Management Practice for Protecting Water Quality. Amanda Gumbert, Steve Higgins, and Carmen Agouridis*<http://www2.ca.uky.edu/agcomm/pubs/id/id175/id175.pdf>

*Adapted by Lacey Kessell, Boone County Extension Agent for Natural Resources and Environmental Education*

## **So You Want to Be a Farmer**

Farming is one of the oldest and most vital professions in the world. It provides food and resources for the population, and it is a rewarding and fulfilling career path. If you're interested in becoming a farmer, here are some things to consider:

### **Do your research**

Before embarking on a farming career, it's essential to do your research. Learn about the different types of farming, the required equipment, the market trends, and the regulations. Attend farming conferences, talk to experienced farmers, and read farming publications to gain insights into the industry.

### **Start small**

Starting a farm can be a significant investment, so it's advisable to start small. Consider growing a few crops, raising a few animals, or even starting a small garden to get a feel for the work and lifestyle. This approach can help you develop the skills and knowledge needed to expand your operation later on.

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## Develop a business plan

Farming is a business, and like any business, it requires a plan. Develop a business plan that outlines your goals, strategies, and financial projections. Include information about your crops or animals, marketing plan, and budget.

## Secure funding

Farming requires capital, and securing funding can be a challenge. Consider your options, such as loans, grants, and partnerships. Develop a strong business plan and seek advice from a financial advisor or agricultural consultant.

## Learn from experience

Farming is a hands-on profession, and learning from experience is essential. Seek out mentors, join farming groups, and attend workshops to learn new techniques and gain insights into the industry. Take advantage of online resources and research to stay informed about the latest trends and technologies.

## Embrace technology

Technology has revolutionized farming, and it's essential to stay up-to-date with the latest tools and equipment. Consider investing in precision farming tools, such as GPS technology and drones, to optimize crop yields and save time and resources.



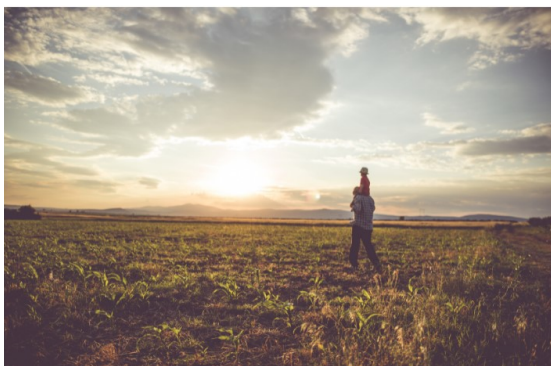
## Be prepared for hard work

Farming is a physically demanding job that requires long hours and hard work. Be prepared to work in all weather conditions, including extreme heat and cold, and to put in the effort required to achieve your goals.

Farming is a rewarding and fulfilling career that requires a combination of knowledge, hard work, and dedication. By doing your research, starting small, developing a business plan, securing funding, learning from experience, embracing technology, and being prepared for hard work, you can achieve success as a farmer.

# Transferring Your Farm to the Next Generation

The average age of farm operators in Kentucky is increasing, and over the next several years, many farm families will consider transitioning their farm to the next generation. The decision of when and how to begin the farm transition process can be difficult; often, farm families avoid the issue because it can be a difficult topic to discuss.



It is important to realize that at some point every farm business will experience a transfer of ownership, either with or without owner participation. The farm business can transfer in one of two ways: either as a viable farm business or as a set of assets. Typically, the goal of many families is to successfully transfer a viable farm business. But only about 30 percent of family farm businesses successfully transfer to the second

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generation, with less than 10 percent successfully transferring to the third generation. The majority of failures occur following the owners death due to limited foresight, planning and capital. However, with proper planning and family communication your farm business is less likely to become a failed statistic.

Creating a will or an estate plan is a step in providing a way to distribute assets. However, a comprehensive farm transition plan takes a more in-depth look at the farm business. For many with a family farm, the primary goal of a comprehensive plan is to facilitate the transfer of ownership and management of the farming operation. However, transition planning is also a tool to reduce estate taxes, help secure the financial future of both the new and retiring generations, develop management skills, and to establish goals for your farm, such as keeping your land in agriculture. Ultimately, a sound farm transition plan can provide peace of mind about the future plans for your operation.

Good family communication is one of the key factors to a successful transfer. Farm family transitions are typically

smoother if heirs can provide input and when family members have a shared vision. You may find it difficult to treat all heirs equally during the transition; however, it is possible to treat all heirs fairly. Good communication can help both on-farm and off-farm heirs understand the reasoning behind decisions. Each family is unique, and it's important to be conscious of the relationships between heirs and spouses, as well as the family business needs.



To ensure your goals for the family farm reflect the vision of other family members, the first step is to schedule a family meeting and start an open dialogue about the process. A good family meeting typically takes place at a neutral location, not at the kitchen table or in the barn. Everyone needs to feel comfortable enough to share their opinions. Additionally, do not try to tack a family meeting onto another family event such as a holiday dinner. Schedule it just as you would other important business meetings.

During the first family meeting, begin a conversation about transitioning the family farm. Talking points to start the conversation include discussing how each heir perceives their role on the farm. Talk with them about what role they would like to play during the transfer process and ask them about their goals for the future of the operation. Find out if your goals are similar to their future goals.

Once you begin the dialogue, you can address more detailed issues and key questions. You may find it helpful to work with a transition team to develop and implement the plan. Team members may include a facilitator, accountant, attorney and an extension educator. Each member of the team can provide expertise in establishing a transition plan that will work for your family.



College of Agriculture,  
Food and Environment  
Cooperative Extension Service

# WATERING OPTIONS FOR LIVESTOCK

**MAY 11, 2023  
7:00 P.M.  
10990 MARSHALL RD  
COVINGTON, KY**

Join Steve Higgins from University of Kentucky as we discuss how to ensure a good source of water for your livestock operation. We will discuss ways to capture water, waterer designs, how to make water available in your back pastures, and how water quality affects the health of your herd.

**REGISTER  
TODAY!**

**Call (859)356-3155  
or visit  
[kentontyextension.org](http://kentontyextension.org)**



## Boone County Farmers Market

### Boone County Farmers Market

Seven days a week, 9:00 a.m.—5:00 p.m. May through October  
1961 Burlington Pike, Burlington, KY 41005

- ▶ **Opening Day May 13th**  
Fresh, high-quality fruits and vegetables from local Northern Kentucky farmers!
- ▶ Join us **May 20, 9am to 1pm** for the **Family Friendly Community Activities Fair!** FREE EVENT!! Giveaways—Community Information—Bounce House & Slide—Ask A Master Gardener!

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