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

BOONE COUNTY EXTENSION SERVICE
Agriculture & Natural Resources

Ag and Natural Resources News

March 2023

Cooperative Extension Service
Boone County
6028 Camp Ernst Rd.
P.O. Box 876
Burlington, KY 41005–0876
(859) 586–6101
Fax: (859) 586–6107
boone.ca.uky.edu

Mark your calendars now!

► **Pasture Weed Management**
March 7, 2023 · 6:30pm
Boone County Extension Office

► **Beef on a Budget**
March 7, 2023 · 6:30pm
via Zoom OR
March 10, 2023 · 10:00am
Boone County Extension Enrichment Center; Upper Level

► **Bull Breeding Soundness Examinations**
April 15, 2023
By Appointment Only
Kenton County Fairgrounds

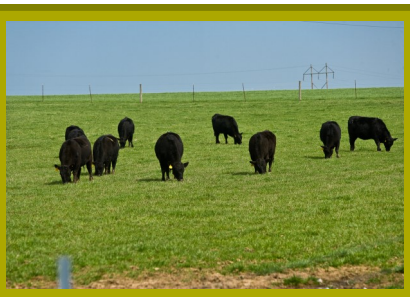
The Concerns of Losing Farmland Due to Urban Growth

The rapid pace of urbanization and population growth is a major concern for many communities, especially when it comes to the loss of farmland. Farmland is a critical resource for agriculture, providing the space and resources needed to grow crops and raise livestock. However, as cities expand and populations grow, farm land is often seen as a prime target for development, which can result in its conversion to residential, commercial, or industrial use.

One of the major concerns of losing farm land due to urban growth is the impact on food security. As farmland is developed and converted to other uses, the amount of land available for agriculture decreases, which can impact the ability of farmers to produce enough food to meet the growing demand of the population. This is particularly concerning in light of the current trend towards urbanization, which is expected to continue in the coming years, further exacerbating the pressure on farmland.

Another concern is the impact on the environment. Farmland provides important ecosystem services, such as filtering and purifying water, maintaining soil health, and providing habitat for wildlife. The loss of farm land to urbanization can result in the degradation of these important environmental functions, which can have negative impacts on the health of local ecosystems and the well-being of the local population.

(Continued on next page)



Pasture Weed Management

March 7, 2023 • 6:30pm

Boone County Extension Office
6028 Camp Ernst Rd.
Burlington, KY 41005

University of Kentucky Extension Specialist Dr. JD Green will be speaking on weed management practices to improve the productivity of grass pastures and hay fields.

Call 859-586-6101 or go online to boone.ca.uky.edu to register.

The loss of farm land also has economic impacts, particularly for rural communities. Agriculture is a significant contributor to the economy in many rural areas, providing jobs and income to farmers and other agricultural workers. As farm land is developed and converted to other uses, these economic benefits are lost, which can result in the decline of rural communities and increased poverty in these areas.

In addition to these concerns, the loss of farm land due to urban growth can also result in cultural and historical losses. Many rural communities have deep roots in agriculture, and the loss of farm land can result in the loss of important cultural and historical landmarks and traditions.

In conclusion, the loss of farm land due to urban growth is a major concern for many communities, as it can result in impacts on food security, the environment, the economy, and cultural and historical heritage. To address these concerns, it is important for communities to adopt a comprehensive approach to land use planning, which balances the needs of urbanization with the need to protect farmland and the other important benefits it provides. This can include measures such as zoning regulations, conservation easements, and land use policies that prioritize the protection of farmland and other critical resources.

Liming Pastures

Lime is an essential component of soil management, and it is particularly important when it comes to maintaining healthy pastures. Pastures are critical to many agricultural operations, serving as the primary source of food for livestock and providing valuable grazing land for a variety of animals. The health of a pasture can have a significant impact on the productivity and profitability of a farm, and liming plays a key role in ensuring that pastures are able to perform at their best.

The primary purpose of liming pastures is to adjust the pH level of the soil. Soil pH refers to the level of acidity or alkalinity, and it is an important factor in the growth and health of plants. Most plants, including grasses that are commonly found in pastures, grow best in soils with a pH between 6 and 7. However, many soils naturally tend to be more acidic, and this acidity can be exacerbated by factors such as rainfall and the decomposition of organic matter. When soil pH falls below the optimal range, it can make it difficult for plants to absorb the nutrients they need to grow and thrive.

Liming helps to counteract the effects of soil acidity by increasing the pH level of the soil. When lime is added to the soil, it reacts with the hydrogen ions that are present and raises the pH level. This allows the grasses in the pasture to access the nutrients they need, which can result in improved growth and health. Liming also has other benefits for pasture management. For example, it can improve soil structure, making it easier for roots to penetrate and access water and nutrients. It can also help to reduce the presence of certain toxic substances, such as aluminum and manganese, which can limit plant growth in acidic soils.

(Continued on next page)

The frequency with which pastures need to be limed will depend on several factors, including the initial pH level of the soil, the type of grasses growing in the pasture, and the amount of rainfall the area receives. A soil test can help to determine the current pH level of a pasture, and recommendations for how much lime to apply and how often can be provided based on the results.

In conclusion, liming is a critical component of pasture management, and it can have a significant impact on the health and productivity of the pasture. By adjusting the pH level of the soil, liming can improve the growth and health of the grasses, making it easier for livestock to access the food they need to thrive. By ensuring that pastures are healthy, farmers can improve the overall productivity and profitability of their operations.

For more information on how to test your soil, please contact the Boone County Extension Office.

Get a Jump-Start on Farm Equipment Maintenance

It may feel like spring will never truly arrive, but it will. It's a good idea to go ahead and get started on your farm equipment maintenance. Doing the repairs now can save time and aggravation later.

If you need to order parts, go ahead and do it to reduce the likelihood of delays during the critical spring days ahead.

When you check equipment, pay particular attention to rubber components, as these will sometimes become brittle and cracked during the winter.

Check implements for broken, missing or worn parts you may need to replace. Go over the machinery and tighten bolts, nuts and cap screws. Pump fresh grease into fittings to remove any condensation that may have formed in the winter. Apply touch up paint to any rusted or scratched areas.

On planters make sure moveable parts are not stuck. Also check for wear and replace any overly worn parts.

Electrical problems can lead to time-consuming breakdowns. Now is the time to check for loose connections, frayed or broken wires and repair broken gauges, lights and switches.

Remember to include sprayer maintenance in your late-winter cleaning tasks, ensuring that your spray equipment is ready for the planting season; it could save you time and money. If you take care of sprayer maintenance prior to the hectic growing season, it can prevent time-consuming equipment breakdowns, higher chemical costs, reduced pesticide effectiveness and potential crop damage. Rinse out the sprayer to remove any dirt that accumulated over the winter. Check the pump and nozzles for excessive wear and be sure the pump is operating at full capacity. Inspect sprayer lines for leaks. Clean filter screens and replace worn ones in the sprayer and in tractors. You'll need to ensure they are not restricting air flow. Replace fuel filters as they age and become clogged.

Be sure to consult your operator's manual on tractors and other equipment for additional maintenance instructions.

Easy Sheet Pan Chicken Bake

Nonstick spray
2 teaspoons chili powder
1 teaspoon paprika
2 teaspoons garlic powder
½ teaspoon salt
½ teaspoon pepper
3 tablespoons olive oil
1 pound boneless, skinless chicken breasts, sliced into strips
3 bell peppers, sliced
1 medium red onion, sliced

Preheat oven to 400˚ F. Spray a rimmed baking sheet with nonstick cooking spray.

In a medium bowl, mix chili powder, paprika, garlic powder, salt and pepper; set aside.

Place chicken and vegetables in large bowl. Drizzle with olive oil; toss to evenly coat.

Lightly coat chicken slices, bell peppers and onion in spice mix. Spread onto baking sheet.

Roast in oven, tossing halfway, until vegetables are tender and chicken has cooked through, about 20-25 minutes.

Servings:4; Serving Size:1 cup
270 calories; 13g total fat; 2g saturated fat; 0g trans fat; 85mg cholesterol; 380mg sodium; 11g carbohydrate; 2g fiber; 4g sugar; 0g added sugar; 27g protein; 0% Daily Value of vitamin D; 2% Daily Value of calcium; 6% Daily Value of iron; 15% Daily Value of potassium.

Source: Katie Shoultz, NEP Marketing and Media Specialist, University of Kentucky Cooperative Extension Service

Bee Production Considerations

Site selection and obtaining bees

Ideally, hives should be located within 1 to 2 miles of a succession of spring, summer, and fall nectar and pollen sources. While previous guidelines indicated that hives need to be in a shaded area, the latest information suggests that it is best to place them in full sunlight to help combat the small hive beetle. A source of water, such as a bird bath, should be located nearby. Avoid locations near large rivers, highways, public areas, or on hilltops. Do not place hives on highway or utility rights of way. Energy companies are responsible to the Public Service Commission and face steep fines if those areas become overgrown and impact energy to homes. Hives should be protected against cold winter winds. Hives located near cultivated crops are potentially in danger of exposure from insecticides. Obtaining the cooperation of the grower and/or pesticide applicator will be essential to avoid bee losses. The Kentucky Department of Agriculture (KDA) has a Pollinator Protection app, which beekeepers, landowners, and applicators can use to communicate the time, date, and product to beekeepers within a 5-mile range. The app is free, anonymous, and easy to use. It is available at https://www.kyagr.com/statevet/documents/OSV_Bee_Pollinator-Handout.pdf. Bees can be captured from a swarm, obtained from an established beekeeper, or purchased from a commercial bee supply company. Along with the hive and hive parts, other necessary equipment includes a smoker, hive tool, and protective gear for the beekeeper.

Sources of honey

Honey color and flavor are determined by the various plant species visited by the bees. It is not economically practical to produce a crop solely for honey production; however, cultivated plants grown for other purposes can provide an important source of nectar. Common nectar sources include agricultural crops, tree fruits, small fruits, ornamentals, and wildflowers.

Management

The beekeeper will need to regularly inspect each hive to examine the condition of the brood, check food stores, look for signs of disease and pests, and to perform various hive maintenance tasks. With erratic springs impacting mating yards, it is not unusual to have to replace queens every year. While some inspections can be brief, it is important that the hive be examined in a timely manner throughout the year. Swarming, which greatly reduces hive

strength, is most often associated with overcrowding in the hive. It can be avoided with proper management practices. However, swarming can be a source of free bees for beginning beekeepers, or a great way to expand an apiary.

Pest management

The most common brood diseases in Kentucky are chalk brood, American foulbrood, European foulbrood, and a varroa-mite-vectored disease known as snotty brood. Other diseases include nosema and several viruses strongly correlated with the presence of varroa mites. Because mites vector viruses, both varroa and tracheal mites can result in high beehive mortality. Recent successes in bee breeding have provided strains of bees that are mite-resistant and disease-resistant. Obtaining bees and queens from a reputable source, frequent inspections, and proper management helps prevent bee losses. The Kentucky Queen Bee Breeders Association works throughout the year to educate Kentucky beekeepers about queen bee selection, grafting techniques, management strategies for mating yards, etc. The small hive beetle is a widespread pest in Kentucky. Skunks and mice are common in rural areas but can be excluded with screens or other barriers at the front of the hive. Bears have also caused damage in Kentucky but can be kept away with electric fences. Fences should be built before bears locate hives. It is very difficult to build any type of fence to keep bears out after they have located a hive.

Harvesting and processing honey

Honey is considered ripe when the bees cap the honey (bees dehydrate the nectar before sealing the cell with a beeswax cap for future use by the honeybees). Supers, the chambers used to store surplus honey in the hive, can be removed from the hive once they are completely capped over. Frames are completely capped. The average yield in Kentucky is about 50 pounds of honey per hive per year. The honey should be processed soon after harvesting and then stored in sealed containers in a warm, dry place or freezer until marketed. Pieces of sealed and undamaged honeycomb can be cut into neat pieces, packaged in plastic wrap or boxes, and sold as comb honey. Liquid honey may be separated from the combs using professional extracting equipment. Small-scale beekeepers should check with their county extension office or a local beekeeping club about the availability of an extractor. Extracted honey is packaged in clear glass or plastic containers. Chunk honey is prepared by placing a portion of honeycomb in a jar and filling up the rest of the jar with the extracted liquid honey. Kentucky now has more than 60 local bee associations, many of which are glad to let members borrow extraction equipment. Beeswax foundation is usually left in the frame after harvest. It needs to be properly stored with Paramoth to prevent wax moth from destroying combs. Certain is another, newer product on the market to help beekeepers prevent wax moth damage. Beeswax can be collected after all honey has been removed from the combs and then it should be cleaned, melted down, and strained. It stores well at room temperature in the form of large chunks or can be sold to bee supply companies or candle makers.

(Continued on next page)

Labor requirements

Labor needs for beekeeping and honey production are quite variable. For example, the time spent establishing new hives will depend on materials used. In addition, considerable time can be spent simply driving between hive locations. While it is difficult to estimate exact labor times, beginning honey producers should expect to spend at least 28 hours per year managing two hives. This includes time caring for bees and harvesting. Labor time per hive should decline somewhat with experience and as more hives are added. Honeycomb processing times will vary depending on the type of honey produced. Producers should expect to spend about an hour per hive processing comb honey. Additional time will be required for further production.

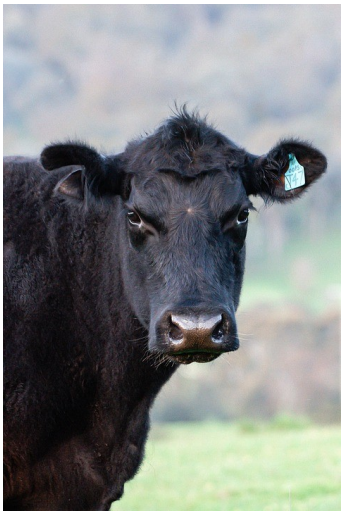
For more details on marketing and economic considerations visit https://www.uky.edu/ccd/sites/www.uky.edu.ccd/files/honey.pdf

Excerpt From Center for Crop Diversification Crop Profile's Beekeeping and Honey Production by Cheryl Kaiser and Matt Ernst

Bull Infertility: A Growing Concern in the Livestock Industry

Bull infertility is a common issue in the livestock industry, with recent studies suggesting that the average infertility rate among bulls is around 15 to 20 percent. This can have a significant impact on the productivity and profitability of a livestock operation, as it affects the ability to breed cattle and produce offspring.

There are several causes of bull infertility, including age, genetics, physical injuries, and certain health conditions. For example, older bulls are more likely to experience infertility due to declining testosterone levels and a decrease in semen quality. Similarly, genetics can play a role, as some bull lines are more prone to infertility than others. Physical injuries, such as hernias or testicular trauma, can also lead to infertility. Additionally, certain health conditions, such as sexually transmitted infections, can cause infertility.



In order to diagnose bull infertility, a veterinarian will typically perform a semen analysis. This involves collecting a semen sample and analyzing it for factors such as sperm count, motility, and morphology. Based on the results of the semen analysis, the veterinarian can determine if the bull is infertile and, if so, what is causing the infertility.

There are several treatments available for bull infertility, depending on the underlying cause. For example, if the infertility is due to a health condition, such as an infection, antibiotics may be prescribed. If the infertility is due to declining testosterone levels, hormone therapy may be used to increase testosterone levels and improve semen quality. In some cases, surgical intervention may be necessary to correct physical injuries or other structural issues.

In addition to seeking veterinary treatment, there are several steps that livestock producers can take to prevent and manage bull infertility. For example, it is important to provide bulls with proper nutrition and to avoid overfeeding, as obesity can contribute to infertility. Regular veterinary check-ups and health assessments can also help to identify and prevent health issues that can lead to infertility.

In conclusion, bull infertility is a growing concern in the livestock industry, as it can have a significant impact on productivity and profitability. By seeking veterinary treatment and taking preventive measures, livestock producers can help to manage and reduce the incidence of bull infertility. With proper management, it is possible to maintain a healthy and productive bull population, ensuring the success and sustainability of the livestock operation.

That being said, pay particular attention to the information in the newsletter about the Bull Breeding Soundness Examinations on April 15th and get signed up early.

Is your herd bull ready for breeding season?

COOPERATIVE EXTENSION

University of Kentucky
College of Agriculture, Food and Environment

Kentucky State University
College of Agriculture, Food Science, and Sustainable Systems

Is he sitting down on the job?

Bull Breeding Soundness Examinations

Saturday, April 15, 2023

at Kenton County Fairgrounds

Cost per bull for examination
$25 for NKCA members - $50 for non-members
Vaccinations are additional

- **Exams by licensed Veterinarians**
- **For all breeding age bulls (over 12 months old)**
- **Semen test**
- **Physical examinations**
- **Vaccinations and deworming available for extra charge**

APPOINTMENT REQUIRED

Please call the Boone County Extension Service at 859-586-6101
By April 8 to schedule an appointment.
(program will be cancelled if there are less than 25 bulls)

Gary Stockton
Boone County Extension Agent for Agriculture

Sponsored by:

Northern KY Cattle Association ***UK Cooperative Extension Service***

COOPERATIVE EXTENSION

University of Kentucky
College of Agriculture, Food and Environment

BEEF
on a Budget

Want to learn how to maximize your beef dollar at the grocery store? Join registered dietitian, Janine Faber, as she discusses the nutritional benefits of beef, budget-friendly beef cuts, proper storage, shopping tips when purchasing beef, and delicious recipes.

Sponsor: The Kentucky Beef Council

TUE, March 7, 2023 6:30 pm

virtually via Zoom (link will be sent day prior to session for those registered)

OR

FRI, March 10, 2023, 10:00 am

Boone County Extension Enrichment Center, Upper Level, 1824 Patrick Drive, Burlington

(859) 586-6101 or boone.ca.uky.edu to register

Learn the Trails

Environmental & Nature Center

Learn the three main trails at the Nature Center through these guided hikes so you can feel comfortable hiking on your own during Hike the Trails!

- ► May 3, 10:00 am
  Blue Trail (0.5 miles)
- ► May 24, 10:00 am
  Yellow Trail (0.7 miles)
- ► June 21, 10:00 am
  Red Trail (2 miles)

Hike the Trails

10:00 a.m.—2:00 p.m.

Environmental & Nature Center

- ► *Every Wednesday from May-October*

Enjoy exploring the Nature Center on your own. You must sign-in and out at the large Shelter House. **Rain may cancel—Call the Extension Office 859-586-6101 for updates.**

Gary Stockton,
Boone County Extension Agent for Agriculture
gary.stockton@uky.edu

Lacey Kessell,
Boone County Extension Agent for Natural Resource & Environmental Education
lacey.laudick@uky.edu