

PLOWING AHEAD

AGRICULTURE & NATURAL RESOURCES

June 2024



Cooperative Extension Service
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FARM TOUR TO ALABAMA AND LOUISIANA: SIGN UP DAY JUNE 27

This year's bus tour will be headed to Alabama and Louisiana, and the dates are Sunday, September 22, through Saturday, September 28.

Tentative tour stops include:

- Alabama Beef Cattle Farms
- NASA Space Center
- Shrimp farm
- Swamp tour
- Sugarcane farm
- Antebellum Home visits
- Tour of New Orleans

Cost is \$2,500 per couple. Includes transportation, admissions, and hotels.

Sign-up day is Thursday, June 27, from 8:00 am to 12 Noon, at the Madison County Extension Office, 230 Duncannon Lane, Richmond

A deposit of \$500 is due at sign-up. You must be present to pay the deposit at sign-up.

Sign-ups are on a first come first served basis and there will be approximately 52 seats to fill.

If you have other questions, you may call tour leader **Glenn Hill** at **859-369-5815** or **859-398-0267**.

Brandon Sears

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County Extension Agent for Agriculture & Natural Resources

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MADISON COUNTY FAIR JULY 26 - AUGUST 3, 2024

Find more info at:

<https://www.themadisoncountyfair.com/>

or on Facebook:

[https://www.facebook.com/people/](https://www.facebook.com/people/Madison-County-Kentucky-Fairgrounds/100043676067250/)

[Madison-County-Kentucky-](https://www.facebook.com/people/Madison-County-Kentucky-Fairgrounds/100043676067250/)

[Fairgrounds/100043676067250/](https://www.facebook.com/people/Madison-County-Kentucky-Fairgrounds/100043676067250/)

For info on Exhibit Hall-Open Division Entries:

<https://madison.ca.uky.edu>, scroll down and look for the 2024 Exhibit Entry Catalog link.

Events this year will include the Beef Cattle show on July 30 at 6:00 pm and 4-H Country Ham Speeches on July 26 starting at 4:00 pm. Willis Exhibit Hall Open Division will be open for viewing July 26 through August 2, from 6 pm to 8 pm.

Many more events are scheduled, so visit the links above, and watch this newsletter for more details in July!



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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Lexington, KY 40506



Disabilities
accommodated
with prior notification.

PLAY THE SHORT, MEDIUM, AND LONG GAME STRATEGIES TO MAXIMIZE RETURNS

Kevin Laurent, Extension Specialist, Department of Animal and Food Sciences, University of Kentucky

The current state of the cattle market is providing unique opportunities for producers to capitalize in a variety of ways by employing a variety of short-, medium-, and long-term strategies to maximize returns.

What does “Play the Short Game” mean? Producers play the short game by maximizing pounds prior to marketing whether you market off the cow or after weaning, extra weight is extra dollars. So, how do we get extra weight?

Implant, deworm, and fly control for nursing calves: Research has shown that implanting nursing calves can result in an additional 10-30 lbs. at weaning, deworming an added 10-40 lbs. and fly control an additional 10-15 lbs. We cannot logically expect all three practices to be completely additive in response, but what if we employed all three strategies and gained a conservative estimate of an additional 30 lbs. In today’s market that extra 30 lbs. could be worth an additional \$80-100/head depending on the weight class of the calf. All three of these strategies can be done for under \$7.50/head. Not a bad return on the time and labor to work the calves in the midsummer.

What does “Play the Medium Game” mean? Producers play the medium game by employing strategies this breeding season to have a tighter calving distribution and older, heavier, and more uniform calves for the 2025 marketing season.

Easily the best method to control the calving season and play the medium game is to use CIDR inserts on late calving cows. CIDRs are T-shaped plastic devices that are coated in the hormone progesterone. CIDRs are inserted in the vagina for 7 days. Removal of the insert results in a rapid fall of plasma progesterone levels, which results in the occurrence of estrus. CIDRs can be used to advance postpartum estrus in cows nursing calves. An effective strategy is to use CIDRs in late calving cows that are at least 14 days post calving. During the UK IRM Farm program, CIDRs were inserted in 276 mature cows that were 14-21 days after calving on 19 different farms. Approximately 80% of these late calving cows calved 36 days earlier in the subsequent calving season. At 2 lbs. per day this could be an additional 60 lbs. of weaning weight or an additional \$150-180 per calf for an investment of \$15-20. The added value of more uniform marketing groups and less singles are also a benefit of tighter calving. Dr. Les Anderson has an excellent video on proper CIDR insertion that can be found at the following link: [HOW TO PLACE A CIDR DEVICE IN A COW - YouTube](#)

What does “Play the Long Game” mean? Producers play the long game by investing 2023 and 2024 profits into infrastructure improvements.

Easily the low hanging fruit in the long game is Improving grazing management through stock water development. Improving forage and grazing management are long game type strategies that take several years to fully develop. One of the first steps to implementing controlled grazing strategies is providing water access for grazing cattle. Missouri research has shown that providing water within 800 feet of the grazing animal will result in more even grazing and more uniform nutrient distribution. Water development allows the farm to be properly divided for rotational grazing strategies during the growing season and strip grazing strategies during the winter months.

Water development can be a significant investment but the long-term benefits to the grazing enterprise can position operations to extend the grazing season, better withstand droughts and survive the downturns in the markets. Several cost share type programs are available to producers to aid in stock water development. Producers should check with their local NRCS office for assistance with proper system designs and available programs. Another resource for forage and grazing management information is the UK Forage website <https://forages.ca.uky.edu/>. As always contact your local County Extension ANR Agent for more resources and educational programs.

So, what kind of game do you like to play? Are you simply concerned with “the now” or do you like to build a program that will succeed both now and into the future?

KEEP COOL IN THE SHADE

Dr. Jeff Lehmkuhler, PhD, PAS, Extension Professor University of Kentucky

As the summer weather hits full stride, take some time to focus on factors that impact animal performance during these months. Stocker calf performance reflects changes in the environment, plane of nutrition, and overall health of calves. Be mindful of the how summer weather can impact these three overarching factors and consider what you might alter or maintain to minimize the impact of these elements.

Heat stress is the first environmental factor that will impact animal performance during the summer months. The effect of heat stress is exacerbated by the alkaloids produced by the wild endophyte in Kentucky 31 tall fescue. Animals compensate during heat stress with increased respiration rate, increased skin vaporization (sweating), increased peripheral blood flow, decreased appetite to reduce metabolic heat production, and more time seeking relief by standing in the shade, congregating in water or grouped up in areas where urine and feces create a wallow. Increased respiration rate leads to greater energy expended for contraction and relaxation of the diaphragm. This doesn't seem like it would be a big loss but sit there and double your breaths per minute for five minutes and see how you feel. Now consider doubling your respiration for several hours a day and the impact this would have on energy expended. Previous research has shown that cattle at thermoneutral conditions had respiration rates of about 23 breaths per minute while under heat stress this increased to 54 breaths per minute. This increased respiration rate is a key response to heat stress as well as increasing blood flow to periphery.

Compensation of heat stress can also occur through increased sweating or evaporative heat loss as periphery blood flow increases. Skin evaporative energy loss was observed to be 50% greater under heat stress than thermoneutral. However, when exposed to wild-type endophyte, skin vaporization was not increased due to a lack of skin temperature increase which may be attributed to vasoconstriction. Accumulated heat load by animals can be dissipated later into the night when ambient temperatures decline. However, during periods of high humidity and lack of nighttime temperatures falling, animals do not have significant reductions in core body temperature before the next day begins. Successive days of heat stress and minimal dissipation of accumulated heat load leads to severe health concerns for cattle. Add into the mix, the alkaloids from the wild endophyte in tall fescue leading to vasoconstriction reducing blood flow to the skin surface during these night hours limiting heat dissipation from sweating. All these factors combine to increase animal maintenance requirements by 7-25%. If maintenance energy requirements represent 65% of normal daily intake, a 15% increase in maintenance requirements as a result of heat stress would reduce gains significantly.

Providing shade is the first management strategy to help mitigate heat stress during the summer months. Shade helps to reduce heat loading from solar radiation. Additionally, ground surface temperatures under shade have been shown to be greatly reduced compared to unshaded areas. Shade can be natural such as wooded areas or man-made. Cattle will stand more during heat stress to allow more convection heat loss as air moves around the body. Shade should ideally provide sufficient room for cattle to stand in the shade without being crowded.

Often the question is how much shade should be provided. Consider the length from tip of nose to tail and width across the ribs of a mature cow. These measurements may be near 7' x 3' or 21 square feet and these measurements will vary. Spacing between animals is important so the actual shade provided will be greater than the size of the animal. Actual allocated area under shade of 30-40 square feet per cow may be necessary. The University of Nebraska recommends 20-25 square feet per animal for voluntary shade use in feed yards and 25-30 square feet for high-risk feeders on arrival.



Figure 2. This shade structure is portable, so it can be moved with the animals. It has a shade cloth roof.

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KEEP COOL IN THE SHADE

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For man-made structures, ensure there is sufficient distance between the back of the animal while standing and the bottom of the shade structure to facilitate air movement through the structure. When possible, having shade structures that are portable will minimize wallows which can lead to high humidity under the shade from excessive urine and feces deposition. Additional information on shade structures can be found at <https://www2.ca.uky.edu/agcomm/pubs/aen/aen99/aen99.pdf>.

Consider developing shade areas during periods of higher temperatures and humidity to maintain the performance of grazing cattle if wooded areas are not readily available. Temporary electric fencing can be helpful in allocating different areas of wooded areas to minimize soil disturbance under trees and preventing development of wallows. Shade placed on ridges that have greater wind speeds will aid in moving air through the structures and cooling cattle. Ensure cattle have access to fresh, clean water as losses from sweating and increased respiration rates increase water requirements. Consider utilizing CAIP funds for shade or tree plantings for development of natural shade areas.

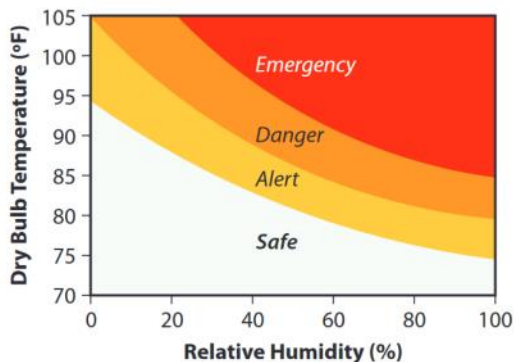


Figure 1. Livestock Heat Stress Guide. Adapted from the Livestock Weather Hazard Guide, Samuel Roberts Noble Foundation, Inc.

MANAGING PASTURES THIS SUMMER

Dr. Chris Teutsch UK Extension Forage Specialist

Setting a sustainable stocking rate. Setting the proper stocking rate, defined as animals per acre per year, is a primary determinant in grazing system success. A stocking rate set too high will result in the degradation of the entire grassland ecosystem. A stocking rate that is set too low will result in wasted forage and decreased profitability. In addition, stocking rate also impacts the amount of conserved forage that will be needed. A stocking rate set too high will result in less grazing and more hay feeding. Stocking rate depends on many factors such as forage species, soil type, soil fertility level, and grazing management. In general, supplying each cow-calf unit with 2 to 3 acres of grazable pasture is a good place to start. In most cases it is better to start with a lighter stocking rate that can be gradually increased as soil fertility increases and grazing management improves.

Grazing management. Controlled grazing or rotational stocking is a management practice that allows producers to determine how closely pastures are grazed and how long they are rested between grazing events. Leaving residual leaf area and resting pastures between grazing events allows pastures to re-grow quicker and produce up to a third more forage in a given grazing season (Sollenberger, et al., 2012). Some forage species are better adapted to close and frequent grazing than other.

Soil fertility. The soil fertility can have a profound impact on both the productivity and botanical composition of pastures. When fertility is low, improved forage species like tall fescue and orchardgrass and red and white clover become less productive and weed species that are better adapted to lower fertility fill in the gaps. Fertilizer and lime applications should ALWAYS be based on a recent soil test. If funds are limited, apply lime if needed. Lime not only reduces soil acidity, but also makes nutrients in the soil more available to plants.

Hay and silage remove large quantities of nutrients. In contrast to grazing, making hay or silage removes large quantities of nutrients. These nutrients must be replaced to maintain soil fertility, and stand health and productivity. Each ton of hay that is removed from a field takes with it approximately 15 lb of phosphate and 50 lb potash. In a good year a tall fescue-clover mix may yield 4 tons per acre and remove 60 lb phosphate and 200 lb of potash.

Successful pasture management requires an integrated approach that involves the soil, plant, and animal. This means we need to select well adapted forage species and manage them in a manner that creates a healthy and vigorous sod that excludes weeds from our pastures. When we combine this with clipping and the judicious use of herbicides, we will have a winning combination!

UGLY CORN ABOUT TO TURN THE CORNER

Dr. Chad Lee, University of Kentucky

The 2024 corn season has created some ugly cornfields around the state. Those fields are about to turn the corner if they have not already. Excessive water, cool temperatures, windy conditions, active slugs and bugs, sidewall compaction, weeds and more created many challenges for the corn planted, especially corn planted earlier.

Most of the corn is somewhere between emergence and about waist high which can be anywhere from the V8 growth stage (which has eight fully emerged leaves) to about V12. At this time of this writing, about 20% of the corn acres are still in the bag. Perhaps another 10% or more needs planted again.

Corn fields seem to be either excellent or very poor. For the very poor fields, either the plants are rather small (probably V4 or less) or the corn plants are all over the place. Some fields have corn that is nearly waist high, corn that is stunted and yellow and low areas where corn was completely killed from flooding.

Saturated soils can cause corn plants to look yellow. Most of that yellowing is from root death and the inability of the plant to take up nitrogen. Those plants need oxygen back into the rooting zone to allow for new growth of roots. Once new roots are developed, the plants will start taking up nutrients again. Plants in these fields may take one to two weeks before they start to look better.

Saturated soils can cause nitrogen losses, mostly from denitrification, when anaerobic microbes convert the nitrogen into gaseous forms lost to the atmosphere. That nitrogen loss usually is not as high as you would think. Three days of saturation are needed before microbes will be active enough to denitrify.

Even in fields that have not been saturated, several nutrient deficiency symptoms are evident this year. Sulfur deficiency is more prevalent this year. Historically, visual sulfur deficiency does not translate to yield differences. However, some recent studies in Kentucky have showed yield increases to fertilizer sulfur. No more than 30 pounds of sulfur per acre should be used and foliar applications of sulfur are not effective.



The earlier-planted corn had more problems with slugs, insects, and seedling diseases. Raul Villanueva wrote an article on slug management for the last Corn and Soybean Newsletter: https://graincrops.ca.uky.edu/sites/graincrops.ca.uky.edu/files/cornsoynewsletter2024vol06issue05_May_final_0.pdf. Kiersten Wise wrote an article about seedling diseases in the same newsletter.

The weather forecast suggests that corn will grow out of this ugly phase in most fields. Once corn gets to about the V6 or V7 growth stages, the plants will actively take up nutrients and start to look healthier. The stress of the weather on the corn before the V5 growth stage likely will have little impact on yield if the plant population has been maintained.

For those 20% of acres that needs planting, farmers should stay with their selected hybrids and populations for most fields if the corn is planted before June 15. At this point, there is only one chance to get it right and farmers will not be able to replant. As much as possible avoid planting into wet conditions that create sidewall compaction. If done correctly, there is still an opportunity for respectable yields. The corn planted in June will grow very quickly. For example, from June 7, 2024, the weather forecasts that corn will emerge in 5 days in Daviess, Hardin and Boyle counties. The longer term forecast historically suggests that corn will speed through the growth stages thereafter. If there has been 3 or 4 weeks between burndown application and planting, expect to need to apply more herbicide. Consider soil residual herbicides, accounting for what was applied earlier and accounting for crop rotation restrictions.

Farmers' Markets Have Expanded The Days They Are Open!

Madison County Farmers' Market

Open Saturdays from 9:00 am to 1:00 pm White Oak Pond Christian Church located at 1238 Barnes Mill Road in Richmond and Thursdays beginning June 6th at the Carter Building on EKU's campus from 9:00 am to 1:00 pm <https://www.facebook.com/MadisonKYFarmersMarket>

Berea Farmers' Market

Open on Saturdays from 9:00 am to 1:00 pm and Tuesdays from 3:00 to 6:00 pm at the Chestnut Street Pavilion, located at 635 Chestnut Street.

<https://www.facebook.com/bereafarmersmarket>



Catch of the Day Burgers

- 1 quart boiling water
- 1 1/2 pounds boneless white fish
- 3 eggs, beaten
- 1/3 cup grated Parmesan cheese
- 1 tablespoon chopped fresh parsley
- 1 clove finely chopped garlic or 1/2 teaspoon garlic powder
- 1/2 teaspoon salt
- 1/4 teaspoon pepper
- 1/2 cup dry panko breadcrumbs
- 1/4 cup vegetable oil
- 6 toasted whole wheat buns
- 1/8 cup tartar sauce (optional)

with a fork. Drain and flake fish. In a bowl, mix beaten eggs, cheese, parsley, garlic or garlic powder, salt, and pepper together. Combine with fish. Stir just until blended. Chill in refrigerator for at least one hour. Shape chilled mixture into 6 patties, and roll in breadcrumbs. Heat oil in skillet over medium heat. Carefully place fish patties in pan. Cook the patties for 3 minutes on each side or until browned, turning only once. Drain on paper towels. Serve on toasted buns. Optional: add tartar sauce. Note this will increase the sodium.

Yield: 6 servings

Adapted from: "Fish & Game Cookbook," Bonnie Scott, 2013.

Nutrition Facts

6 servings per recipe
Serving size 1 sandwich (239g)

Amount per serving
Calories 520

	% Daily Value*
Total Fat 23g	29%
Saturated Fat 5g	25%
Trans Fat 0g	
Cholesterol 150mg	50%
Sodium 710mg	31%
Total Carbohydrate 41g	15%
Dietary Fiber 0g	0%
Total Sugars 5g	
Includes 0g Added Sugars	0%
Protein 36g	
Vitamin D 2mcg	10%
Calcium 194mg	15%
Iron 3mg	15%
Potassium 393mg	8%

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

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USDA Supplemental Nutrition Assistance Program Putting Healthy Food Within Reach

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EFNEP

Find this Cook Wild Kentucky recipe and others for Fish, Venison, Rabbit, Dove, Frog Legs, and more at: <https://www.planeatmove.com/recipes/>, then Browse by Category, and choose Cook Wild Kentucky.

SOIL TESTING IS FREE!

Madison County Cooperative Extension Service continues to offer free soil testing year round. We need at least two cups of dry soil to run a test. If you have question on how to collect your samples, call 859-623-4072. Agricultural and horticultural samples **from Madison County residents** will be accepted. **There is a 10 sample limit per farm or home per calendar year!** (Please note: Commercial lawn care companies submitting samples do not qualify for free soil testing; call 859-623-4072 for pricing.)

We would like to thank our sponsors:

Madison County Extension District Board and Madison County Conservation District

MADISON COUNTY BEEKEEPERS ASSOCIATION

Madison County Beekeepers Association will meet Monday, June 24, at the Madison County Extension Office. For more information, call Kent, 859-623-3576 or Paul, 859-582-6172.

PLATE IT UP! KENTUCKY PROUD!

Whether it's spring, summer, fall or winter, you can Plate It Up with recipes that put a new twist on your favorite Kentucky Proud foods.

Visit <http://fcs-hes.ca.uky.edu/piukp-recipes> to find all the Plate It Up recipes using Kentucky Proud products.